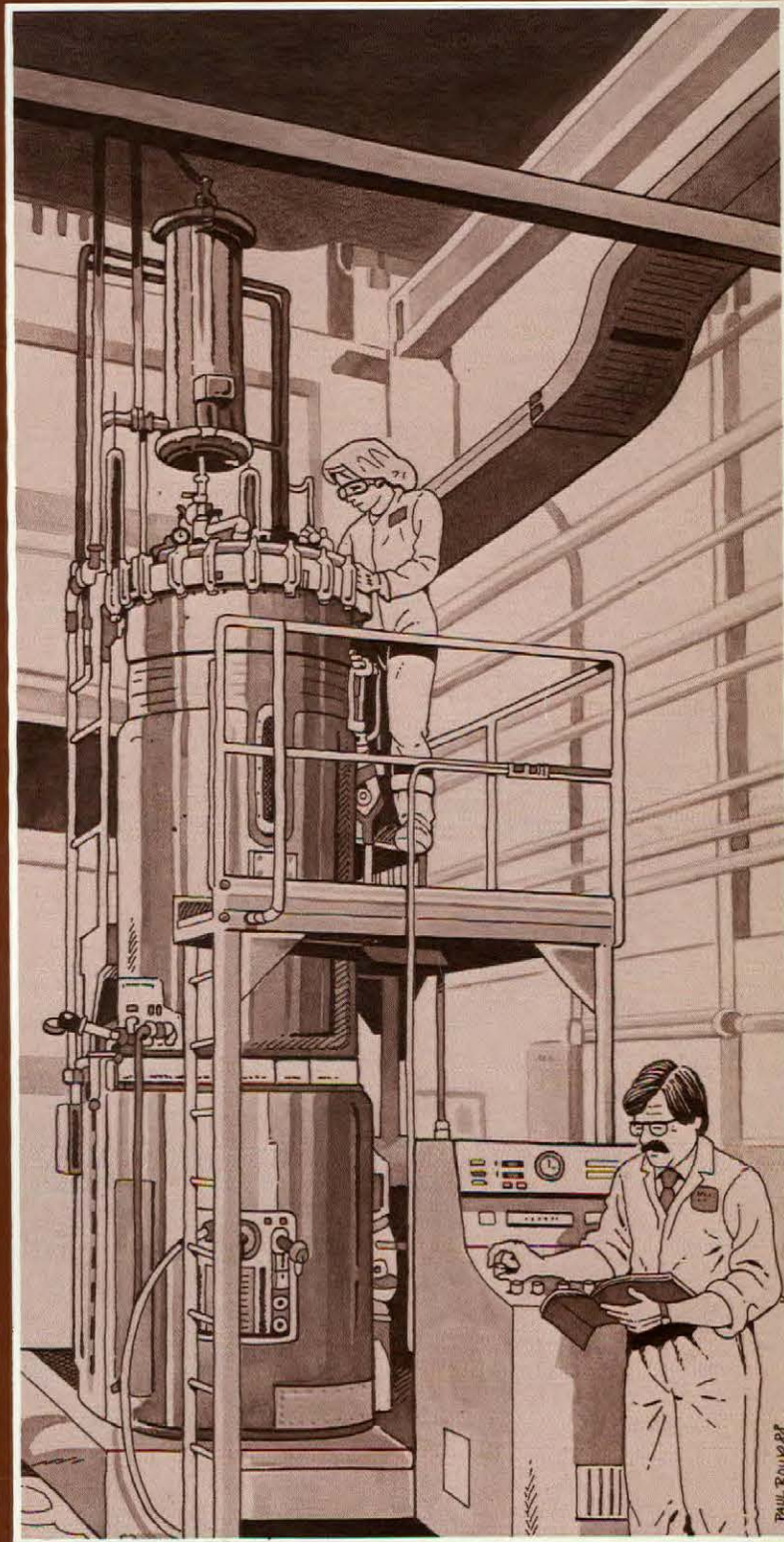
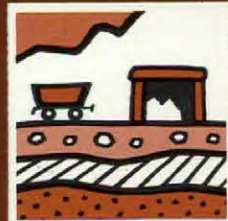


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# 1988 Canadian Biotechnology Industry Sourcebook



Canada

PAUL ROUSSIER

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1988 Canadian Biotechnology  
Industry Sourcebook

Prepared for the National Biotechnology Advisory Committee and the  
Interdepartmental Committee on Biotechnology by:

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Although we feel that we have made a thorough search across Canada for companies actively involved in biotechnology, there remains the possibility that we may have missed some companies; any such omission is unintentional. In addition, we have made every attempt to see that the information provided for the Sourcebook was entered faithfully and should there be errors or omissions, we apologize, and request that corrections be forwarded to us.

All corrections or suggestions for future editions of the Sourcebook should be addressed to:

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## 1988 Canadian Biotechnology Industry Sourcebook

### Introduction

There is no doubt that the Canadian biotechnology industry is growing rapidly. The first sourcebook compiled by this Ministry and released in November 1986, listed 110 commercial organizations involved in biotechnology research, development or manufacturing. This edition lists 218. Of those listed in the first edition, 16 did not wish to be listed in the current sourcebook, for one reason or another, while 4 others have had a name change. In compiling the information, at least 100 additional organizations were contacted; however, their current R&D or manufacturing activities were determined not to fit within the scope of the sourcebook. To be listed in this edition, an organization had to be a commercial enterprise actively involved in researching or using biotechnology, i.e. the use of microbial, plant or animal cells for the production of goods and services.

In addition, the R&D emphasis of the firms listed involves the relatively new techniques of genetic engineering, monoclonal antibodies, plant and tissue culture and novel fermentation processes. Some difficulty was experienced in determining the extent of involvement by some companies in the new techniques as opposed to conventional methods. As a result, the companies were asked to address the question of whether or not their activities could be classified as biotechnology and a review panel made the final selection to ensure consistency.

A few companies indicated that their biotechnology activities had applications to all sectors of the economy, while many others listed several sectors of application. Index II provides a listing of all sectors specified by the companies; however, for the purpose of the analysis and statistics, only the principal focus of activity for each company was used.

## ANALYSIS

The definition of biotechnology, for the purposes of this Sourcebook is, the utilization of biological processes involving microbial, plant or animal cells or their constituents to provide goods and services. Stress is placed on the new techniques of genetic engineering, enzymes and enzyme systems, monoclonal antibodies, plant cell culture and fermentation development as opposed to conventional procedures. The geographical distribution of commercial organizations active in biotechnology is shown in Figure I; values for 1986 are shown in parentheses.

In this update, applications of R&D are given by economic sector, rather than by discrete field of application as in the 1986 Sourcebook; therefore, some figures are not directly comparable, this applies especially to the fermentation area. In addition, information on biotechnology researchers and expenditures which was previously unavailable is presented. In this edition, applications of R&D activities are divided into 9 sectors: agriculture; aquaculture; chemicals and alternative energy; mineral resources; food and beverages; forestry and forest products; health care (animal, fish and human); waste treatment and other. For the purposes of analysis, Tables I and II, the principal sector of application was used; however, Table III contains a list of all possible sectors of applications identified by the respondents.

The majority of companies indicated that applications of their biotechnology activities are pertinent to multiple sectors. However, in the health care sector 49% of the reporting companies claim applications of their research which are unique to this sector; in agriculture the similar figure is 27%; for all others less than 20% of the companies involved have applications which are unique to one sector. This underlies the enabling and cross-sectoral characteristic of the specific technologies.

Figure II indicates that, in Canada, companies actively involved in biotechnology are concentrated in the health care sector followed by agriculture and, most interestingly, waste treatment. Figures III and IV give further evidence of the eminence of the health care sector in terms of expenditures and researchers. On the basis of confidential as well as published information provided by 173 of the companies, there are 1478 persons involved in biotechnology and 174 companies reported R&D expenditures to be approximately \$164 million. By extrapolation, for the total population surveyed in this report, there are estimated to be almost 1850 persons involved in biotechnology in Canada and annual expenditures for R&D are approximately \$200 million or double the figure of 2 years ago.

Figure III summarizes the distribution of R&D expenditures by sector based on the 80% of companies which reported this information. The concentration of R&D funds are in the health and agriculture sectors, with waste treatment, a distant, but important third.

In the 1986 Sourcebook, 85% of the 90 companies which reported on research personnel employed between 1-15 biotechnology researchers and only a few reported 50-150 researchers. Figure IV describes, by sector, current information from companies reporting personnel involved in biotechnology. The results mimic the R&D expenditures, except that the food and beverage sector is slightly ahead of waste treatment.

The 173 companies which reported information on the number of employees involved in biotechnology R&D were sized arbitrarily, by the number of biotechnology employees, as small (0-10), medium (11-20) or large (21 and over). The majority, 144 (83%), are in the small category, with an average of 3.8 employees; there are thirteen or 8% in the middle category with an average of 16 employees; while sixteen or 9% had an average of 45 employees. Only Allelix Inc. (3 Divisions) and Connaught Laboratories each reported over 100 employees carrying out biotechnology R&D activities. Typically, biotechnology companies or the research groups within large companies, are small. Table I provides summary figures for biotechnology expenditures and research personnel by reporting companies.

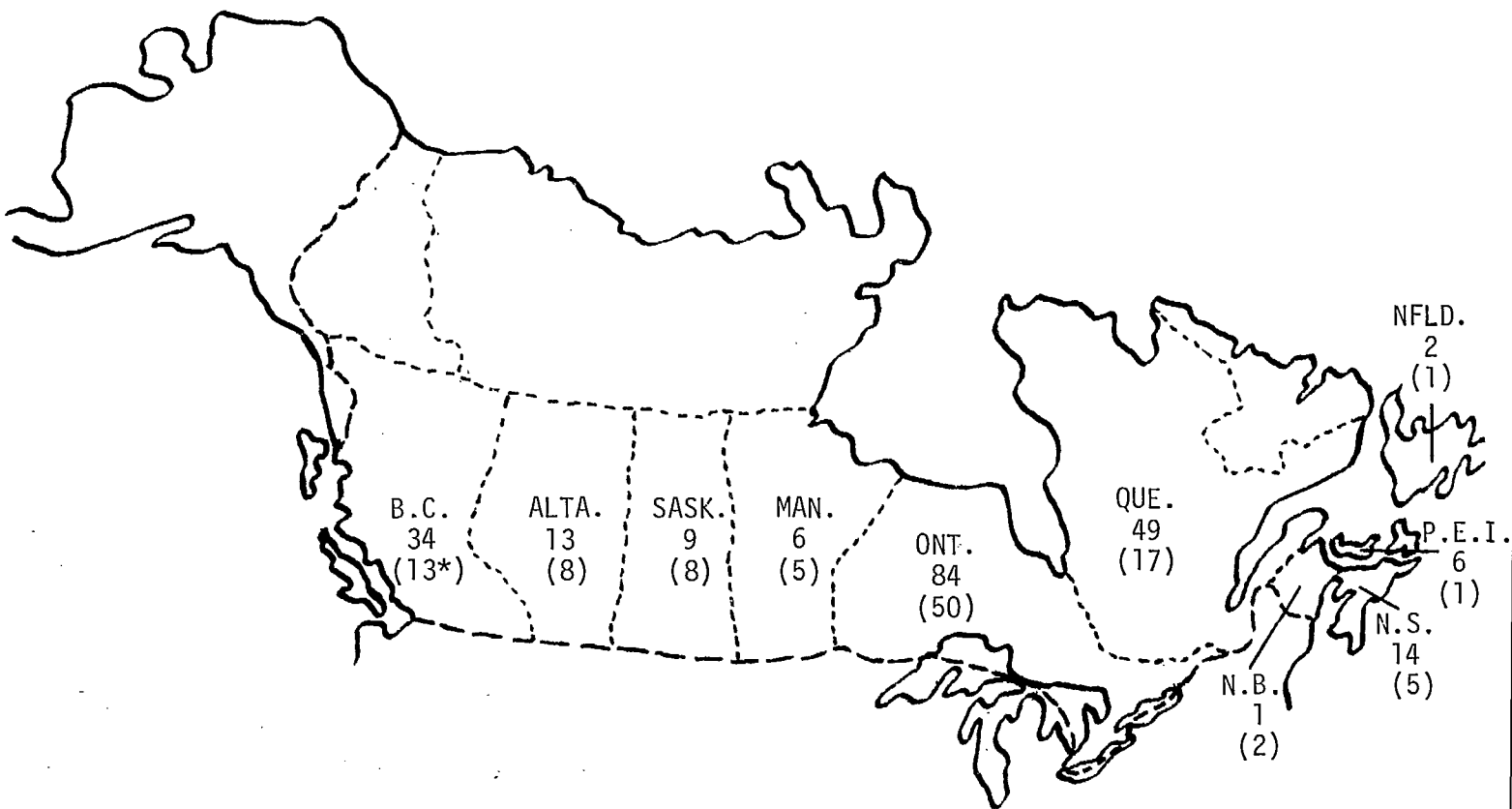
There has been an obvious growth both in terms of expenditures and numbers of personnel involved in biotechnology since the release of the 1986 sourcebook: indeed, the number of companies involved in biotechnology R&D between 1986 and April 1988 has increased 16%, (Figure V). The data indicate that, in this decade, 1984 was the single year in which the largest number of companies in biotechnology were begun (22); the average number of start-ups was 13 (Figure VI).

The reader must bear in mind when comparing this update to the 1986 sourcebook, that the former was not an exhaustive coverage of commercial organizations carrying out biotechnology R&D. Therefore, Table II must be examined with caution. However, it is apparent that there is a significant increase in R&D expenditures by Canadian companies and that biotechnology is a young and expanding industrial activity in Canada.

Figure 1

Geographical Distribution of Organizations  
Carrying out Biotechnology R&D Activities  
Listed in 1988 Biotechnology Sourcebook

N=218



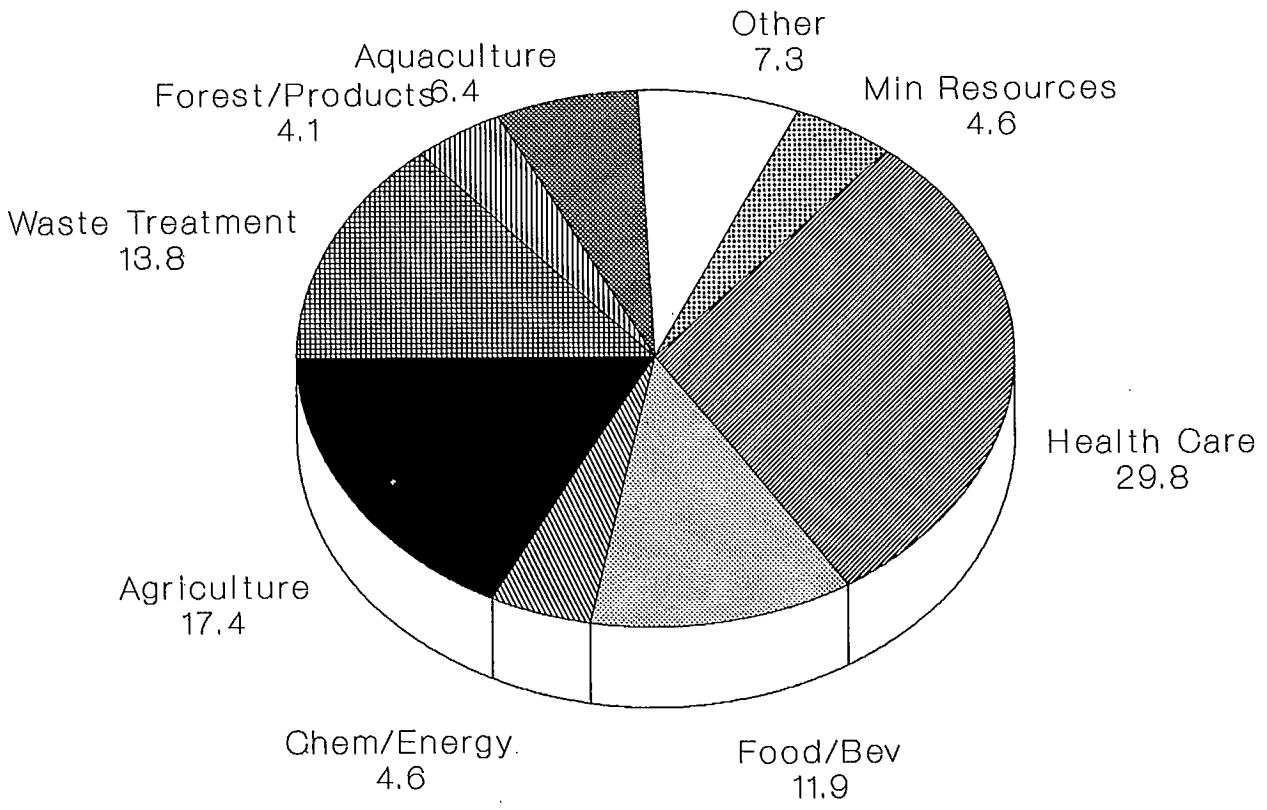
\* Figures in parentheses are for 1986: N=110



Figure II

Companies by Principal Sector of Applicaton \*

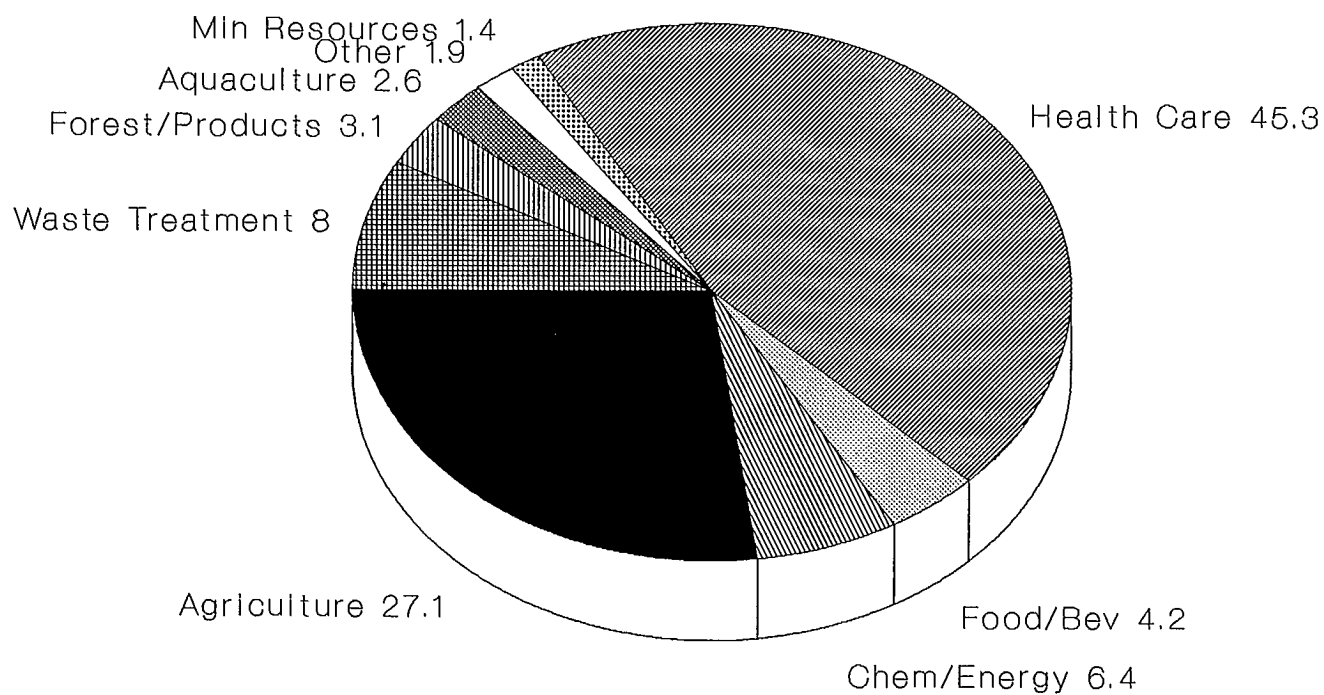
(% of Total)



\* N = 218

**Figure III      Biotechnology R&D Expenditures  
by Sector \***

(% of Total)

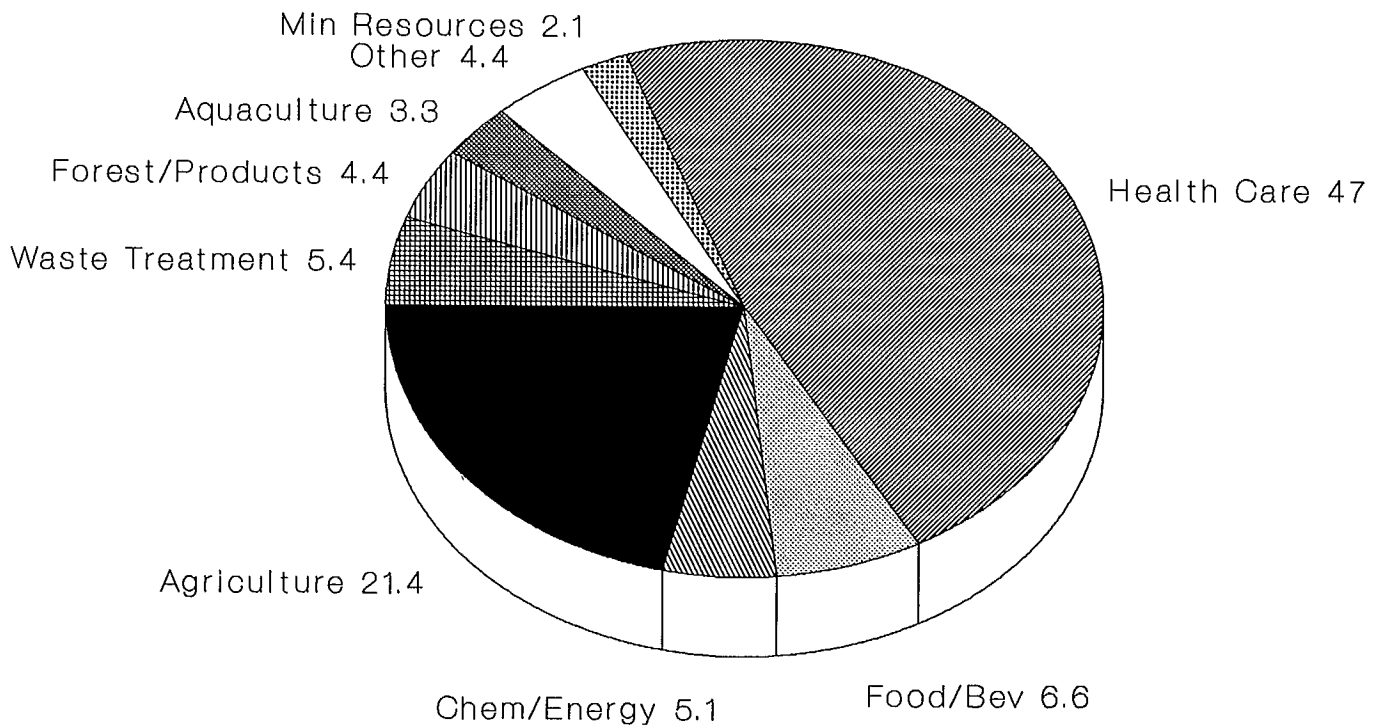


\* Based on 174 (79.8%) companies reporting biotech expenditures

Figure IV

Biotechnology R&D Employees  
by Sector \*

(% of Total)



\* Based on 173 (79.4%) companies reporting  
biotech R&D employees

Figure V

### Companies Currently Performing Biotechnology R&D

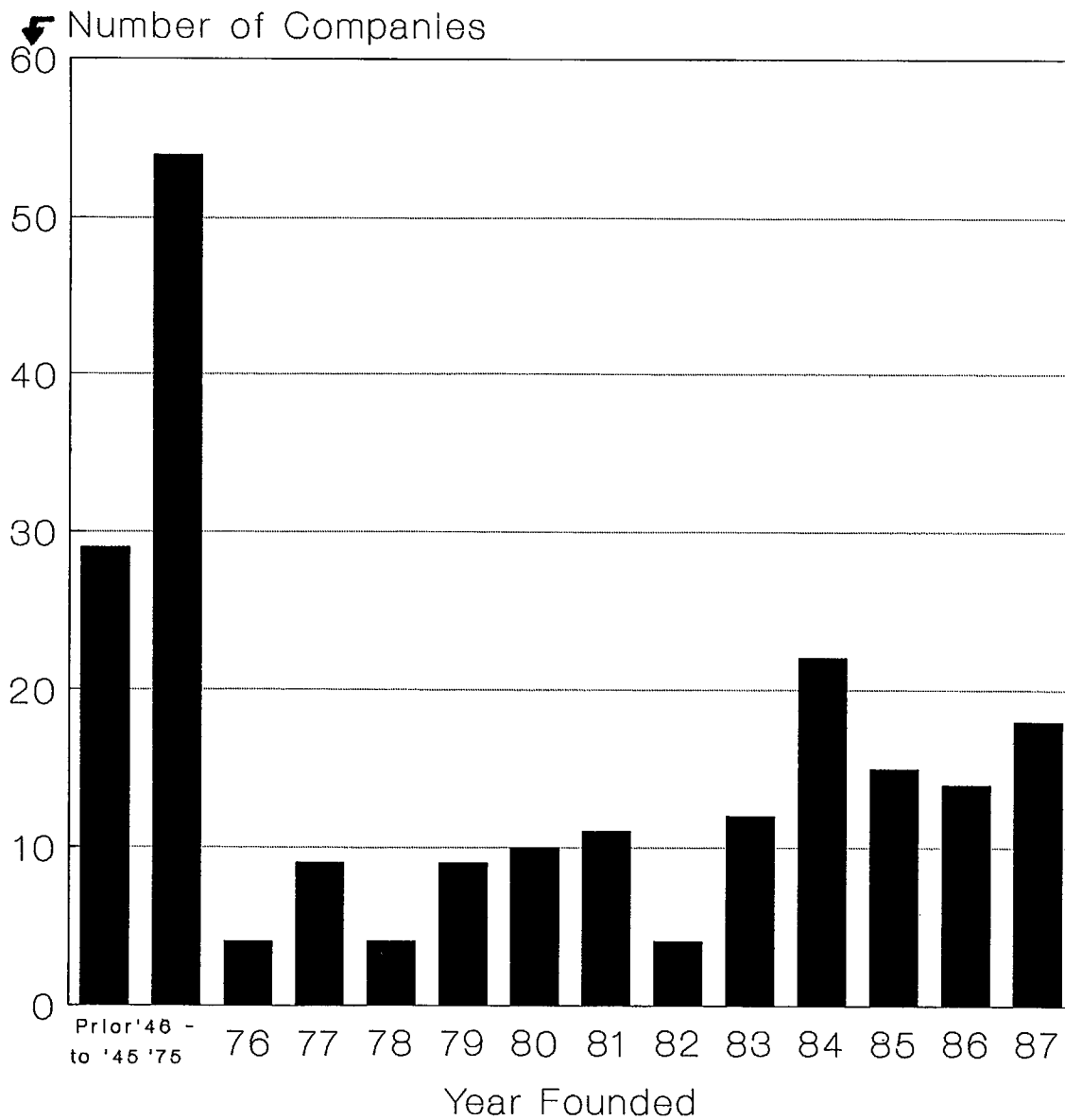
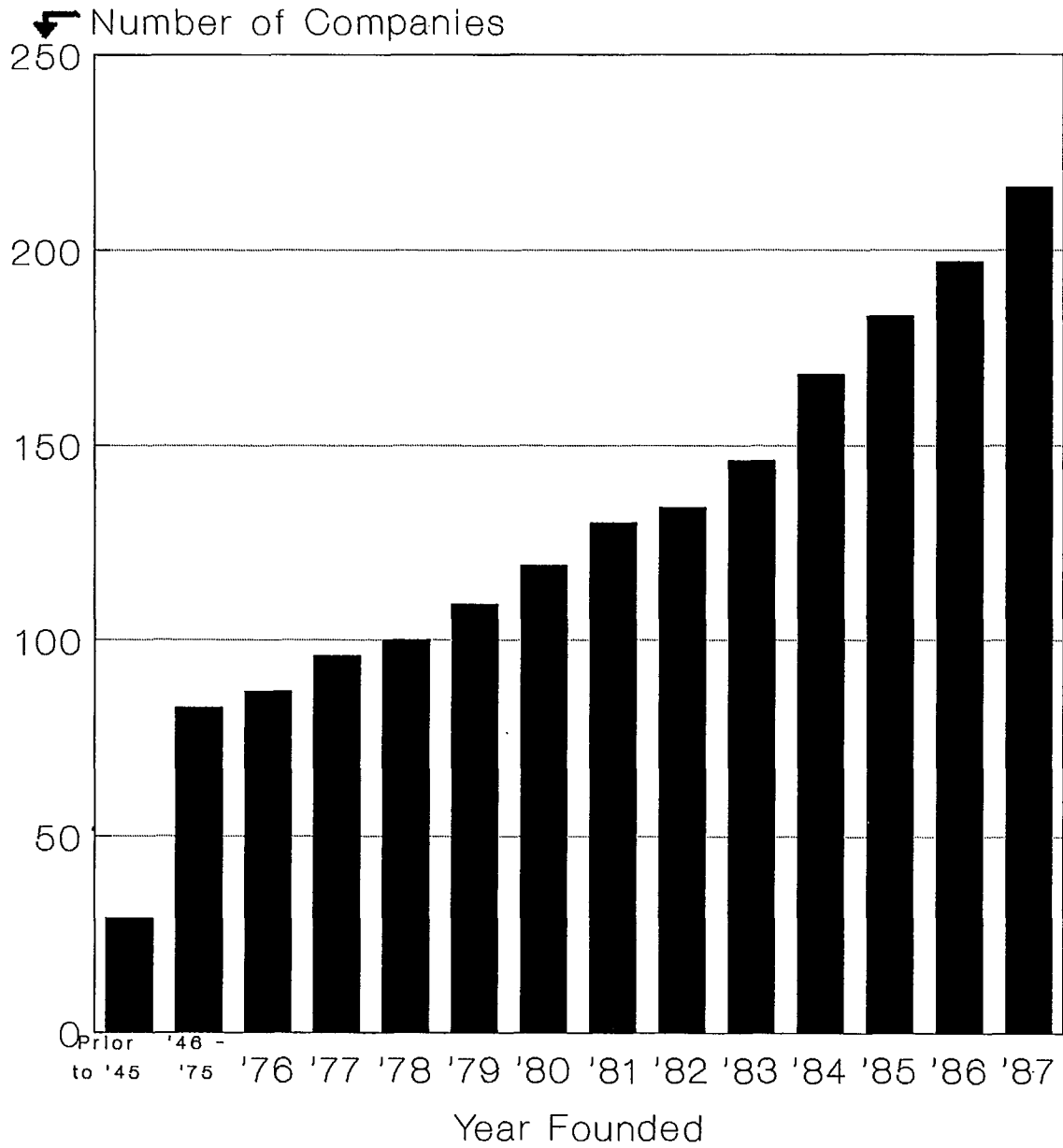


Figure VI

Companies Currently  
Performing Biotechnology R&D  
(cumulative)



**Table I**  
**Organizations Reporting Biotechnology**  
**Activities by Principal Sector**

SECTOR	NUMBER OF ORGANIZATIONS REPORTING	BIOTECH R&D EXPEND. \$M	R&D EMP.	BIOTECH R&D EMP. (%)
AGRICULTURE	29	44.3	462.5	361.5 (78)
AQUACULTURE	13	4.3	63	49 (78)
CHEM/ALT. ENERGY	9	10.4	416	76 (18)
FOOD/BEV.	20	6.9	461	97 (21)
FORESTRY/ & PRODUCTS	9	5.0	907	65 (7)
HEALTH CARE	52	74.1	1075	698 (65)
MINING	9	2.3	230	31.5 (14)
WASTE	21	13.1	187	80.5 (43)
OTHER	12	3.1	82	65 (79)

**Table II**  
**R&D Expenditures and Researchers Reported by**  
**Organizations Listed In The 1988 & 1986**  
**Biotechnology Sourcebooks by Principal Sector**  
**of Application**

SECTOR	NUMBER OF ORGANIZATIONS	%	R&D EXPEND. REPORTED (MILLIONS) \$	%	NUMBER OF RESEARCHERS	%
AGRICULTURE (1986)	38 (13)	17 (12)	33.8 (18.3)	9 (28)	462.5 (211)	12 (24)
AQUACULTURE (1986)	14 (NO STATS)	6	6	2	63.1	1.6
CHEM/ALT. ENERGY (1986)	10 (NO COMPARABLE STATS)	5	41.7	12	416	10.7
FOOD/BEV. (1986)	26 (22)	12 (20)	37.5 (8)	10 (12)	461 (119)	12 (13)
FORESTRY/ & PRODUCTS (1986)	9 (11)	4 (10)	64.1 (4.5)	18 (7)	907 (49)	23 (6)
HEALTH CARE (1986)	65 (31)	30 (29)	123.7 (27.3)	34 (42)	1075 (368)	27.6 (41)
MINING (1986)	10 (5)	5 (4)	24.3 (2)	7 (3)	230 (21)	6 (2)
WASTE (1986)	30 (8)	14 (7)	22.7 (595)	6 (1)	187 (23)	4.7 (2)
OTHER (1986)	16 (10)	7 (9)	5.2 (2.8)	1 (4)	82 (76)	2 (9)
TOTAL (1986)	218 (110)		359.1 (65.6)		3883.6 (893)	

Table III  
Index of Organizations by All  
Sectors of Application

Agriculture (N=70)

Advanced Biotech Ltd.	Agriforest Technologies Ltd.
Allelix-Agriculture*	Applied Bionomics*
B2	Better Yield Insects*
Bio-Field Technologies	BioRex Groupe Conseil Inc.
Bioscan Continental Inc.	Biosystech Consulting Inc.
Biotechnica Canada Inc.	Blueberry Acres
Canadian Seed Coaters Limited*	Canber Industries Limited
Canpro Laboratories	CB Research International Corp.
CIAQ*	Chateau Des Charmes Wines
C-I-L	Ciba-Geigy Ltd. Agricultural Div.
Les Clay & Son Limited	CSP
Du Pont Canada Inc.	Elite Seed Potato Farm *
Endogro Systems Inc.	Encor Inc.
Fermtech R&D Inc.	Gemini Biochemical Research Ltd.
Hara Products	Inrad Industrial R&D Ltd.
Inst. de Recherche Sylviechimie	Kilborn (Saskatchewan) Ltd.
King Agro*	Koppernaes Engineering Ltd.
Frank Maine Consulting Ltd.	Mann Testing Laboratories Ltd.
Marbicon Inc.	Meiogenics Research Corporation
MicroElite Plant Laboratories*	Microbe Inc.
Microtech Research & Development	Mycotek
Novo Laboratories	Paladin Hybrids Inc.*
Paracel Laboratories Ltd.	Phero Tech Inc.
Philom Bios Inc.*	POS Pilot Plant Corporation
Premier Peat Moss Ltd.*	ProPlant Garden Products*
Raylo Chemicals	Rhizogen Corp.
Institut Rosell	Safer Ltd.*
Semico Inc.*	Shaver Poultry Farms Ltd.*
Stake Technology Ltd.	St. Lawrence Reactors Ltd.
Sylvan Industries Ltd.	Syndel Laboratories Ltd.
Thermotech Waste Systems Inc.	W.G. Thompson & Sons Ltd.*
United Grain Growers*	Vetrepharm Inc.*
VIDO	Westech Agriculture Ltd.*
Western Biologicals Ltd.	W.H.E. Bio-Systems

\* Applications of R&D in these companies apply to this sector only



### Aquaculture (N=39)

Acadian Seaplants Limited*	Advanced Biotechnology Ltd.
Aqua Health Ltd.*	Aquaresearch Ltd.
B2 Enterprises Ltd.	Bay D'Espoir Salmon Hatchery
B.C. Research Corporation	Bio Field Technologies Research
Bionov CNP Inc.	Biorex Groupe Conseil Inc.
Canber Industries Limited	Canpolar Inc.
Carratech Inc.	Clearwater Fine Foods*
Coolwater Farms Limited	Envirocon Pacific Ltd.*
Fermtech R&D Inc.	FMG Integrated Biotechnical Labs.*
Gemini Biochemical Research Ltd.	Helix Biotech Ltd.
J.D. Koppernaes Engineering Ltd.	P. Lane and Associates Limited
D. McLeay & Associates Ltd.	Microtek Research & Development
Mycotech	Nova Chem Limited
Pisciculture Des Alleghanys Ltd.	Pollutech Limited
Purdel Coop. Agroalimentaire	Quality Sea Farms Ltd.*
Royal Pacific Sea Farms	Seasprings Farms Ltd.
B.V. Sorbex	Specialty Marine Products Ltd.
Syndel Laboratories Ltd.	Terra Nova Fishery Co. Ltd.
Vancouver Island Antibodies	

\* Applications of R&D in these companies apply to this sector only

### Chemicals & Alternate Energy (N=39)

B2 Enterprises Ltd.	Bioprotein Canada Inc.
Biosyn	Brookside Farms Ltd.
Canber Industries Limited	Carratech Inc.
CB Research International Corp.	Centre de Recherche en Sylvichemie
CSP Foods Ltd.	Cyanamid Canada Inc.*
Dearborn Chemical Company Limited	Diagnostic Chemicals Limited
Diversified Research Laboratories	Domtar Inc.
Du Pont Canada Inc.	Export Packers Company Limited
Elanco	Forintek Canada Corp.
Gelda Scientific	Gemini Biochemical Research Ltd.
Griffith Laboratories Limited	Iogen Corporation
Frank Maine Consulting Ltd.	Nelson's Dairy
Noranda Research Centre	Nova Husky Research Corp. Ltd.
Pegasus Industrial Specialties	Phero Tech Inc.
POS Pilot Plant Corporation	Raylo Chemicals
Serdary Research	SNC Inc. (Le Groupe)
Stake Technology Ltd	TCI-Superior Div. Mueller Canada
Thermo Tech & Waste Systems Inc.	Waitaki International Biosciences
Wardrop Engineering Inc.	W.H.E. Biosystems Inc.
Zeton Inc.	

\* Applications of R&D in these companies apply to this sector only

Food/Beverages (N=62)

Acadian Seaplants	ADI Limited
ADS	Advanced Biotechnology Ltd.
Agropur Cooperative*	Aliments Carriere (Les)*
Allelix-Agriculture	Allelix-Biochemicals
Aquaterre Inc.	Aquaresearch Ltd.
B2	BC Research Corporation
Bionov CNP	Biorex Groupe Conseil Inc.
Biosystech Consulting Inc.	Brookside Farms
Canber Industries Limited	Canpolar Inc.
Canviro Consultants	Casco Inc.
Champlain Industries Limited*	Chateau des Charmes Wines*
Coolwater Farms Limited	CSP Foods
Dairyland Foods (FVMPCA)*	Diversified Research Laboratories
Domtar Inc.	Export Packers Company Limited
Fermtech R&D Inc.	Gelda Scientific & Res. Dev.
Gendron Lefebvre	Gore & Storrie Ltd.
Griffith Laboratories Limited	Iogen Corporation
J.D. Koppernaes Engineering	Labatt Brewing Co. Ltd.*
Lallemande Inc.*	A. Lassonde & Fils Inc.*
Meiogenics Research Corporation	Molson Breweries of Canada Ltd.*
Mycotech	Nelson's Dairy
Novo Laboratories Ltd.	Paques-Lavalin
Pegasus Industrial Specialties	Pollutech Limited
POS Pilot Plant Corporation	Purdel Coop. Agroalimentaire
QA Laboratories Limited*	Institut Rossell Inc.
Joseph E. Seagram & Sons Ltee	Le Groupe SNC Inc.
Stake Technology Ltd.	St. Lawrence Reactors Ltd.
Sylvan Industries Ltd.	TCI-Superior Div. Mueller Canada
Terra Nova Fishery Co. Ltd.	Thermo Tech Waste Systems Inc.
Wardrop Engineering	W.H.E. Bio-Systems

\* Applications of R&D in these companies apply to this sector only

Forestry (N=41)

Agriforest Technologies Ltd.	Aquaresearch Ltd.
B2 Enterprises Ltd.	BC Research Corporation
Balco Canfor Reforestation*	Biotechnica Canada Inc.
Blueberry Acres	Canber Industries Limited
Centre de Recherche/Sylvichimie	C-I-L Inc.
Les Clay & Son Limited	Diversified Research Laboratories
Domtar Inc.	Ensco Inc.
Forintek Canada Corp.	Gemini Biochemical Research Ltd.
Hara Products	Inrad Industrial R&D Ltd.
Iogen Corporation	Kilborn (Saskatchewan) Ltd.
MacMillan Bloedel Ltd.	Frank Maine Consulting Ltd.
Mann Testing Laboratories Ltd.	Marbicon Biological Consultants
D. McLeay & Associates Ltd.	Microtech Research & Development
Mycotek	Noranda Research Centre
Paques-Lavalin	Pegasus Industrial Specialties
Phero Tech Inc.	Pulp & Paper Research Centre
Rhizogen Corp.	Rhizotech Inc.
Stake Technology Ltd.	St. Lawrence Reactors Ltd.
TCI-Superior Division Mueller	Thermo Tech Waste Systems Inc.
Wardrop Engineering Inc.	Western Biologicals td.
W.H.E. Bio-Systems	

\* Applications of R&D in these companies apply to this sector only

Health Care (Animal, Fish, Human) (N=94)

AB Biological Supplies*	H	ABI Biotechnology	A,H
Allelix-Biochemicals	H	Allelix-Diagnostics	A,H
Alta Genetics Inc.*	H	APO Diagnostics Inc.	H
B2 Enterprises Ltd.	A,H	Bio-Mega Inc.	A,H
Biomira Inc.*	H	Bio-Research Labs	A,H
Biorex Groupe	F	Bioscan Continental	A,H
Biostar Inc.*	A	Biosystech Consulting	A,H
Brookside Farms Ltd.	H	Bocknech Ltd.*	H
Canadian Bioclinical*	A,H	Canadian Liposome*	A,H
Canber Industries Ltd.	A	Cangene Corporation*	H
Canpolar Inc.	H	Canpro Laboratories	H
Cedarlane Laboratories*	H	Chembiomed Limited*	H
Chemfet Canada*	H	Ciba-Geigy Ltd.	A
Connaught Labs*	H	Continental Cryosan	H
Corp. BDG*	H	Cosem Neurostem Ltee*	H
Cyberfluor Inc.*	H	Canadian Red Cross*	H
Dextran Products Ltd.*	A	Diagnostic Chemicals	H

Dominion Biologicals	H	Domtar Inc.	H
Elanco (Lilly)	A,H	Encor Inc.	H
Equipment Moniteur	H	Fermtech R&D Inc.	H
Frappier Diagnostics*	A,H	Helix Biotech Ltd.*	A
Hybrisens Ltd.*	H	Hypercube Inc.*	H
IAF Biochem*	A,H	Joldon Diagnostics*	A,H
Kemic Bioresearch*	H	Langford Inc.*	A
Mann Testing Labs	A	MDS Health Group*	H
Merck Frosst*	H	Medicorp Inc.*	H
Meiogenics Research	A,H	Microbe Inc.	H
Microbix Biosystems*	H	Microtek R&D	A
New Age Devices*	H	Nova Chem Ltd.	H
Novo Laboratories*	H	Ortho Pharmaceutical*	H
Pacific Pharm. Ltd.*	H	Paliser Animal Health*	A
Paracel Labs. Ltd.	A,H	Pegasus Industrial	A,H
Pharmacia	H	POS Pilot Plant Corp.	H
Precision Biologicals*	H	Probtech Corp.*	H
Quadra Logic Tech.*	H	Raylo Chemicals	H
Research Dev'ment (HSC)	H	Institut Rosell Inc.	A,H
Rutland Biotech Ltd.	H	SCI Can Diagnostics*	H
Serdary Research Labs.*	H	B.V. Sorbex	A
Specialty Marine	F	Spectrex Ltd.	H
SPI Synthetic Peptides*	H	Syndel Laboratories*	A,F
Synphar Labs/Taiho, Alta	H	Syntex*	H
TCI-Superior Div. Mueller	H	Tech Marketing	H,A
Thermo Tech Waste Systems	A	Tyler Research Inst.	H
Vancouver Is. Antibodies*	H	Vetrepharm*	A
VIDO	A	Wataki International	H
W.H.E. Bio-Systems	A,H	Winnipeg RH Institute*	H
Xymotech Biosystems*	H		

\* Applications of R&D in these companies are to this sector only

Mineral Resources (N=29)

Aquaresearch Ltd.	B2 Enterprises Ltd.
BC Research Corporation	Beak Consultants Ltd.
Boojum Research Ltd.	Canber Industries Limited
Canpro Laboratories	Canviro Consultants
Cape Breton Dev'ment Corp.*	CB Research International
Coastech Research Inc.*	Denison Mines*
Domtar Inc.	Falconbridge Ltd.
Gemini Biochemical Research Ltd.	Giant Bay Resources
P. Lane & Associates Limited	Mycotech
Noranda Research Centre	Pegasus Industrial Specialties
Pollutech Limited	Recbiome Inc.*
Rhizogen Corp.	Rio Algom Limited*
SNC (Le Groupe)	B.V. Sorbex Inc.
TMG Inc.	W.H.E. Bio-Systems
Zeton Inc.	

\* Applications of R&D in these companies apply to this sector only

OTHER (N=16)

Bioquest  
Canpolar  
Hypercube Inc.  
Pegasus  
Spectrex  
Tech Marketing  
Wardrop Engineering  
Xymotech

Biosystech  
Essa - Environmental Analysts  
Mycotech  
Pollutech  
Stake Technology  
Tyler Research Instruments  
WHE Biosystems Inc.  
Zeton Inc.

Waste Treatment (N=58)

ADI Limited  
Aquaresearch Ltd.  
BC Research Corporation  
Biogenie S.R.D.C. Inc.\*  
Bionov CNP Inc.  
Bioquest International\*  
Biorex Groupe Conseil Inc.  
Biosyn  
Canber Industries Limited  
Canviro Consultants  
Centre de Recherche en Sylvichemi  
Dearborn Chemical Company Ltd.  
Diversified Research Laboratories  
Export Packers Company Limited  
Falconbridge Ltd.  
Gemini Biochemical Research Ltd.  
Gore & Storrie Ltd.  
Kilborn (Saskatchewan) Ltd.  
Gendron Lefebvre\*  
John Meunier Inc.\*  
Mycotech  
Nova Huskie Research Corporation  
Pegasus Industrial Specialties  
Rutland Biotech Limited  
Seasprings Farms Ltd.  
B.V. Sorbec Inc.  
Temfibre Inc.\*  
Thermo Tech Waste Systems  
W.H.E. Bio-Systems

ADS Environnement Inc.\*  
Aquateerre Inc.  
Beak Consultants  
Bio-Hol Developments\*  
Bioprotein Canada Inc.  
Bio-Response Systems Ltd.\*  
Bioshell Inc.\*  
Boojum Research Ltd.  
Canpolar Inc.  
CB Research International Corp.  
Coolwater Farms Ltd.  
Degremont-Infilco Ltee\*  
Domtar Inc.  
Enviromine Inc.  
Fermtech R&D Inc.  
Giant Bay Resources Ltd.  
Inst. for Chemical Science/Tech  
P. Lane & Associates  
MacMillan Bloedel Ltd.  
Microbe Inc.  
Noranda Research Centre  
Paques-Lavalin  
Pollutech Limited  
Sanenex International\*  
SNC Inc. (Le Groupe)  
TCI-Superior Division of Mueller  
TMG Inc. (Niobec Mine)  
Wardrop Engineering Inc.  
Zymotech Biosystems

\* Applications of R&D in these companies apply to this sector only

# APPENDIX

## CANADA'S NATIONAL BIOTECHNOLOGY STRATEGY

Canada's industrial and research sectors are facing the challenge and promise of a powerful new form of technology: biotechnology.

Today, the biological activities of microbial, plant and animal cells are being applied in increasingly sophisticated ways to develop new products and to improve production processes. Food, drugs, medical diagnostics, chemicals, agriculture, mining and waste processing are being transformed by the new biological technologies. Canada's ability to remain competitive in the resource sectors and to build new industries, will depend on a strong capacity in biotechnology.

Recognizing the above, the federal government commits \$11 million annually to support the National Biotechnology Strategy and the Ministry of State for Science and Technology has been given responsibility for overseeing the Strategy.

The goals of the Strategy are to enhance scientific research applications, increase the supply of highly qualified personnel, increase scientific cooperation and technology transfer, and foster an economic and regulatory climate conducive to commercial biotechnology investment and activity. To achieve these goals, several activities have been initiated.

First, the National Biotechnology Advisory Committee was established in 1983 to advise the Minister of State (Science and Technology) on the development of biotechnology in Canada and to report on the National Strategy. Representatives from industry, university and federal government departments and agencies involved in, or funding, R&D related to biotechnology ensure that there is broad input into policy development.

As part of its activities, the Committee has organized a series of policy workshops on topics such as Engineering and Fermentation (Vancouver), Agriculture (Saskatoon and Ottawa) and regional biotechnology seminars (Halifax and Edmonton). The Committee has also given special attention to the impact of biotechnology on specific sectors such as agriculture and food, health care and forestry, and to policies designed to accelerate technology transfer and commercialization. Publications and reports stemming from the activities of the Committee are available from the Secretariat.

Second, under the Strategy the national Biotechnology R&D Networks have been established to facilitate communication and cooperation between the performers and users of research. Each Network is administered by a federal department and membership is open to

industry, university and government researchers who are actively working in relevant fields. A list containing further information and the names of the coordinators for each Network is included with this Appendix.

Third, the Strategy includes a federal cost-shared program administered by the National Research Council through the Industrial Research Assistance Program (IRAP). Under the Program, industries are eligible to apply for federal grants provided that they are collaborating with, or sub-contracting biotechnology research to, universities or provincial research organizations. The Program encourages technology transfer from university, federal and provincial government laboratories, where the research base for future development currently exists, to industry. This Program includes support for both national and international collaborations.

Fourth, through the federal departments actively involved in research, the Strategy supports scientific collaboration by means of equipment sharing and personnel exchanges between research and development groups in various sectors, and through international collaboration. Joint research projects between industry and government or university labs are particularly encouraged. The federal biotechnology research capacity has been strengthened with funds from the Strategy in order to facilitate these interactions. In addition, the federal commitment to biotechnology is demonstrated by the establishment of the Biotechnology Research Institute and other activities at the National Research Council; Agriculture Canada has expanded its activities in plant, animal and food biotechnology. Other federal departments such as Health and Welfare and Energy, Mines and Resources and Fisheries and Oceans also have biotechnology programs and the federal granting councils provide support for research carried out at Canadian universities.

Finally, a federal Interdepartmental Committee has been formed to coordinate activities under the Strategy. Representatives of key federal departments involved in biotechnology meet regularly to consider scientific, budgetary, international and regulatory issues. In cooperation with these departments, the Ministry of State for Science and Technology is currently involved in the review of patenting and safety and regulations issues.



NATIONAL BIOTECHNOLOGY STRATEGY/CONTACTS:

BIOTECHNOLOGY SECRETARIAT

Ministry of State for Science and Technology,  
240 Sparks St., 8th Floor West, Ottawa, Canada, K1A 1A1

National Biotechnology Advisory Committee  
Interdepartmental Committee on Biotechnology  
Contact: M. Louise McArthur - 613/993-6045

IRAP - BIOTECHNOLOGY FUNDING PROGRAM

Dr. J.D. Robar - 613/993-1790  
General Manager, IRAP & Laboratory Network  
National Research Council of Canada

THE NATIONAL BIOTECHNOLOGY NETWORKS

NAME	AREA	DEPARTMENT(S)	COORDINATOR(S)	TELEPHONE
<u>BIONIF</u>	Nitrogen Fixation	Agriculture Canada	Dr. L.R. Barran	613/995-3700
<u>BIOCROP</u>	Plant Strain Development		Dr. W. Kellar	613/995-3700
<u>BIONET</u>	Human and Animal Health Care Products	National Health and Welfare	Dr. Keith Bailey	613/957-1058
		Agriculture Canada	Dr. Jim Pantekoek	613/995-5433
<u>BIOMINET</u>	Mineral Leaching and Metal Recovery	Energy, Mines and Resources	Dr. R.G.L. McCready	613/990-6945
<u>BIOFOR</u>	Forestry and Forest Products	National Research Council	Mr. Wayne Campbell	613/993-7659
<u>BIOQUAL</u>	Waste Treatment	National Research Council	Dr. P. Matteau	613/993-7630
<u>AQUATECH</u>	Fisheries/Marine Aquaculture	Fisheries and Oceans	Dr. G. Ian Pritchard	613/990-0275

DIRECTORY

## ALPHABETICAL INDEX OF ORGANIZATIONS

AB Biological Supplies Inc.  
ABI Biotechnology Inc.  
Acadian Seaplants Ltd.  
ADI Limited  
ADS Environnement Inc.  
Advanced Biotechnology Ltd.  
Agriforest Technologies Ltd.  
Agropur Coopérative Agro-alimentaire  
Aliments Carriere Inc. (Les)  
Allelix Agriculture  
Allelix Biochemicals  
Allelix Diagnostics Inc.  
Alta Genetics Inc.  
APO Diagnostics Inc.  
Applied Bio-Nomics Ltd.  
Aqua Health Ltd.  
Aquaresearch Ltd./Aquarecherche Ltée  
Aquaterre Inc.  
B2 Enterprises Ltd.  
Balco Canfor Reforestation Centre Ltd.  
Bay D'Espoir Salmon Hatchery Ltd.  
B.C. Research Corporation  
Beak Consultants Ltd.  
Better Yield Insects  
Biochem International Inc.(IAF)  
Bio Field Technologies Research Inc. (Northern Soils Technologies)  
Biogénie S.R.D.C. Inc.  
Bio-Hol Developments  
Bio-Méga Inc.  
Biomira Inc.  
Bionov CNP Inc.  
Bioprotein Canada Inc.  
Bioquest International, Inc.  
Bio-Research Laboratories  
Bio-Response Systems Ltd.  
Biorex Groupe Conseil Inc.  
Bioscan Continental Inc.  
Bioshell Inc.  
Biostar Inc.  
Biosyn  
Biosystech Consulting Inc.  
Biotechnica Canada Inc.  
Blueberry Acres Limited  
Bocknek Ltd.  
Boojum Research Ltd.  
Brookside Farms Ltd.

Canadian Bioclinical  
Canadian Liposome Co. Ltd. (The)  
Canadian Red Cross Society (Blood Transfusion Service)  
Canadian Seed Coaters Limited  
Canber Industries Limited  
Cangene Corporation  
Canpolar Inc.  
Canpro Laboratories (Research Foods)  
Canviro Consultants  
Cape Breton Development Corporation  
Carratech Inc.  
Casco Inc.  
CB Research International Corporation  
Cedarlane Laboratories Limited  
Centre de Recherche en Sylvichimie de l'Outaouais Inc.  
Centre d'Insémination Artificielle du Québec (CIAQ) Inc.  
Champlain Industries Limited  
Chateau Des Charmes Wines  
Chemiomed Limited  
Chemfet Canada Ltd.  
Ciba-Geigy Ltd. (Agricultural Division)  
C-I-L Inc.  
Les Clay & Son Limited  
Clearwater Fine Foods Inc.  
Coastech Research Inc.  
Connaught Laboratories Limited  
Continental Pharma Cryosan Inc.  
Coolwater Farms Limited  
Corporation BDG  
Cosem Neurostim Ltée  
CSP Foods Ltd.  
Cyanamid Canada Inc.  
Cyberfluor Inc.  
Dairyland Foods, F.V.M.P.C.A.  
Dearborn Chemical Company Limited  
Degremont - Infilco Ltée  
Denison Mines Limited  
Dextran Products Limited  
Diagnostic Chemicals Limited  
Diversified Research Laboratories Limited  
(Division of George Weston Ltd.)  
Dominion Biologicals Limited  
Domtar Inc.  
Du Pont Canada Inc.  
Elanco (Division of Eli Lilly Canada Inc.)  
Elite Seed Potato Farm  
Endogro Systems Inc.  
Enscor Inc.  
Envirocon Pacific Ltd.  
Enviromine Inc.

Equipment Moniteur Inc.  
Essa - Environmental & Social Systems Analysts Ltd.  
Export Packers Company Limited  
Falconbridge Limited  
Fermtech R&D Inc.  
FMG Integrated Biotechnical Laboratories Ltd.  
Forintek Canada Corp.  
Frappier Diagnostic Inc.  
Gelda Scientific and Industrial Development Corp.  
Gemini Biochemical Research Ltd.  
Gendron Lefebvre  
Giant Bay Resources Ltd.  
Gore & Storrie Ltd.  
Griffith Laboratories Limited  
Hara Products Ltd.  
Helix Biotech Ltd.  
Hybrisens Ltd.  
Hypercube Inc.  
Inrad Industrial Research & Development, Ltd.  
Institute for Chemical Science and Technology (ICST)  
Iogen Corporation  
Joldon Diagnostics  
Kemic Bioresearch Laboratories Ltd.  
Kilborn (Saskatchewan) Ltd.  
King Agro  
J.D. Koppernaes Engineering Ltd.  
Labatt Brewing Company Ltd.  
Lallemand Inc.  
P. Lane and Associates Limited  
Langford Inc.  
A. Lasseonde & Fils Inc.  
MacMillan Bloedel Limited  
Frank Maine Consulting Ltd.  
Mann Testing Laboratories Ltd.  
Marbicon Inc.  
D. McLeay and Associates Ltd.  
MDS Health Group Limited  
Medicorp Inc.  
Meigenics Research Corporation  
Merck Frosst  
John Meunier Inc.  
Microbe Inc.  
Microbix Biosystems Inc.  
MicroElite Plant Laboratories Inc.  
Microtek Research and Development  
Molson Breweries of Canada Limited  
Mycotech - For Research and Development  
Nelson's Dairy  
New Age Devices  
Noranda Research Centre

Nova Chem Limited  
Nova Husky Research Corporation Limited  
Novo Laboratories Ltd.  
Ortho Pharmaceutical (Canada) Ltd.  
Pacific Pharmaceuticals Ltd.  
Paladin Hybrids Inc.  
Palliser Animal Health Laboratories Ltd.  
Paques Lavalin  
Paracel Laboratories Ltd.  
Pegasus Industrial Specialties Ltd.  
Pharmacia (Canada) Inc.  
Phero Tech Inc.  
Philom Bios Inc.  
Pisciculture Des Alleghanys Inc.  
Pollutech Limited  
POS Pilot Plant Corporation  
Precision Biologicals Inc.  
Premier Peat Moss Limited (Tourbières Premier Ltée {Les})  
Probtex Corporation  
Proplant Garden Products Ltd.  
Pulp and Paper Research Institute of Canada (PAPRICAN)  
Purdel Cooperative Agro-alimentaire  
Q A Laboratories Limited  
Quadra Logic Technologies Inc.  
Quality Seafarms Ltd.  
Raylo Chemicals (Division of Terochem Laboratories Ltd.)  
Recbiome Inc.  
Research Development Corporation (Hospital for Sick Children)  
Rhizogen Corp.  
Rhizotec Inc. (Les Laboratoires)  
Rio Algom Limited  
Institut Rosell Inc.  
Royal Pacific Sea Farms Ltd.  
Rutland Biotech Limited  
Safer Ltd.  
Sanenex International Inc.  
Sci Can Diagnostics  
Joseph E. Seagram & Sons Limitée  
Seasprings Farms Ltd.  
Semico Inc.  
Serdary Research Laboratories Inc.  
Shaver Poultry Breeding Farms Limited  
SNC Inc. (Le Groupe)  
B.V. Sorbex Inc.  
Specialty Marine Products Ltd.  
Spectrex Ltée/Ltd.  
S.P.I. Synthetic Peptides Inc.  
Stake Technology Ltd.  
St. Lawrence Reactors Ltd.  
Sylvan Industries Ltd.

Syndel Laboratories Ltd.  
Synphar Labs Inc. and Taiho Alberta Ltd.  
Syntex Inc.  
TCI-Superior Division Mueller Canada Inc.  
Technical Marketing Associates Limited  
Temfibre Inc.  
Terra Nova Fishery Co. Ltd.  
Thermo Tech Waste Systems Inc.  
W.G. Thompson & Sons Ltd.  
T.M.G. Inc. (Les Services - Niobec Mine)  
Tyler Research Instruments Corporation  
United Grain Growers  
Vancouver Island Antibodies Ltd.  
Veterinary Infectious Disease Organization (VIDO)  
Vetrepharm Inc.  
Waitaki International Biosciences  
Wardrop Engineering Inc.  
Westech Agriculture Ltd.  
Western Biologicals Ltd.  
W.H.E. Bio-Systems (Division of W.H.E. Process Systems Limited)  
Winnipeg RH Institute Inc.  
Xymotech Biosystems/Biosystèmes Inc.  
Zeton Inc.

# AB BIOLOGICAL SUPPLIES INC.

## HEAD OFFICE

**P.O. Box 65  
Grimsby, Ontario L3M 4G1**

Telephone:  
Telex:  
Fax:

President: **G. Machan**  
Telephone: **(416) 945-9661**  
R & D Director: **Dr. J. Gauldie**  
Telephone:

Employees: **6**  
R & D Employees: **4**

## RESEARCH FACILITY

**20 Mural Street, Unit 4  
Richmond Hill, Ontario L4B 1K3**

Telephone: **(416) 731-0300**

Founded: **1978**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: Development of monoclonals from beginning to diagnostic kit form, including dipstick methodology.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Newer types of diagnostic kits using monoclonal antibodies for infectious diseases, plastic and membrane-bound reactions.**

## MANUFACTURING:

## SALES/OTHER(S):

AFFILIATIONS: **Affiliate lab of NRC Ottawa.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Joint venture.**

## COMMENTS:

CONTACT PERSON: **G. Machan, President.**

## OTHER ACTIVITIES:



# ABI BIOTECHNOLOGY INC.

## HEAD OFFICE

**A-1150 Waverley Street  
Winnipeg, Manitoba R3T 0P4**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(204) 477-6413**

Telex:

Fax: **(204) 284-1021**

President: **A.D. Friesen**

R & D Director: **John Langstaff**  
Telephone: **(204) 477-6413**

Employees: **23**  
R & D Employees: **20**  
(In biotechnology: **18-22**)

Founded: **1984**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$1-3M**  
(In biotechnology: **\$1.4M**)

PRINCIPAL ACTIVITIES: **Growth factors, diagnostics.**

## **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Anti-cancer drug development, rDNA interleukin-2, MAb-based diagnostics.**

MANUFACTURING: **VirocidIn-X disinfectant; intoxi-stick alcohol test stick; UV chroma + UV monitor.**

SALES/OTHER(S):

## **OTHER ACTIVITIES:**

AFFILIATIONS: **Bio-Technology General Corp.; Cangene - Genelabs; Clonal Research Limited Partnership.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Joint-Ventures; Technology licensing.**

COMMENTS:

CONTACT PERSON: **A.D. Friesen, Ph.D, President.**

# ACADIAN SEAPLANTS LTD.

## HEAD OFFICE

**202 Brownlow Avenue  
Tower D, Suite 304  
Dartmouth, Nova Scotia B3B 1T5**

Telephone: **(902) 468-2840**  
Telex: **via New York 7601211 ACAD UC**  
Fax: **(902) 468-3474**

President: **Louis E. Deveau, P. Eng.**

R & D Director: **Robert P. Welland**  
Telephone: **(902) 723-2152**

Employees: **16**  
R & D Employees: **6**

Founded: **1980**  
Annual Sales: **\$3M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Cultivation, processing and development of seaweed and seaweed products, marketing of same.**

## RESEARCH FACILITY

**Charlesville Cultivation Site  
P.O. Box 25  
Lower East Pubnico, Yarmouth Co.  
Nova Scotia B0W 2A0**

Manufacturing Director:  
**Clarence J. Doucette**

Telephone: **(902) 742-9159**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Marine plant cultivation.**

MANUFACTURING: **Seaweed products based on Irish moss (Chondrus crispus) and Norwegian kelp (Ascophyllum nodosum).**

SALES/OTHER(S): **Seaweed and seaweed products.**

AFFILIATIONS: **Aquaculture Association of Nova Scotia; Canadian Aquaculture Association; Marine Technology Society.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Louis E. Deveau, President.**

## OTHER ACTIVITIES:

# ADI LIMITED

## HEAD OFFICE

**1133 Regent Street  
Fredericton, New Brunswick E3B 3Z2**

Telephone: **(506) 452-9000**  
Telex: **014-46244**  
Fax: **(506) 459-3954**

President: **John R. Dean**

R & D Director: **Robert C. Landine**  
Telephone: **(506)452-9000**

Employees: **105**  
R & D Employees: **1-5**  
(In biotechnology: **1-5**)

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(506) 452-9000**

Founded: **1945**  
Annual Sales: **\$5-7M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$0-0.5M**)

**PRINCIPAL ACTIVITIES: Professional design consultants specializing in building design, environmental protection, power and process engineering and public works engineering**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Anaerobic wastewater treatment for warm, strong, organic wastewater from a wide variety of sources.**

MANUFACTURING: **Design of treatment systems.**

SALES/OTHER(S): **Worldwide.**

### **OTHER ACTIVITIES:**

**Wood-fired heating; energy conservation.**

AFFILIATIONS: **Water Pollution Control Federation; Pollution Control Association of Ontario; American Water Works Association.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Licensing of technology outside of North America, technology transfer with designers in Third World.**

COMMENTS: **ADI is one of North America's leading firms in the research, design and application of anaerobic wastewater treatment systems.**

CONTACT PERSON: **Robert C. Landine**

# ADS ENVIRONNEMENT INC.

## HEAD OFFICE

**2155, rue Guy, Suite 1200  
Montréal (Québec) H3H 2L9**

## RESEARCH FACILITY

**Research is carried out by Laval  
University and in cooperation with  
private industry.**

Telephone: **(514) 932-4454**  
Telex: **055-60514**  
Fax: **(514) 932-1518**

Directors: **A. D'Aragon, R. Desbiens, C. Lavoie.**

R & D Directors: **René Fontaine, M.Sc., Gaston Picard, Ph.D.**  
Telephone: **(514) 932-4454**

Employees:	<b>35</b>	Founded:	<b>1984</b>
R & D Employees:	<b>5</b>	Annual Sales:	<b>N/A</b>
		R & D Expenses:	<b>\$0.5-1M</b>

PRINCIPAL ACTIVITIES: **Waste treatment. Food for animals and beverages.**

### **BIOTECHNOLOGY ACTIVITIES:**

### **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Treatment of hydrocarbon- contaminated oils. Treatment of wastewaters.**

MANUFACTURING: **Ultrafiltration. Food products for animals. Production of food proteins.**

SALES/OTHER(S):

AFFILIATIONS: **ADS-Biotechnologie.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSONS: **A. D'Aragon, Tel.: (514) 932-4454; R. Fontaine, Tel.: (514) 932-4454.**

# ADVANCED BIOTECHNOLOGY LTD.

## HEAD OFFICE

**28355 Fraser Highway  
Aldergrove, British Columbia V0X 1A0**

Telephone: **(604) 533-4444**  
Telex:  
Fax: **(604) 856-8929**

President: **Dwight Jefferson**

R & D Director: **Neil MacDonald**  
Telephone:

Employees: **4**  
R & D Employees: **3**  
(In biotechnology: **3**)

Founded: **1984**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology:) **\$0-0.5M**

## RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Neil MacDonald**

Telephone: **(604) 533-4444**

PRINCIPAL ACTIVITIES: **Financing biotechnology industry.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Aquaculture, mushroom culture.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS: **Sylvan Industries Ltd.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Interested in investment inquiries and R & D projects.**

COMMENTS:

CONTACT PERSON: **Dwight Jefferson**

### **OTHER ACTIVITIES:**

# AGRIFOREST TECHNOLOGIES LTD.

## HEAD OFFICE

**2330 Enterprise Way  
Kelowna, British Columbia V1X 4H7**

Telephone: **(604) 860-5815**  
Telex:  
Fax:

President: **Reg Tomiye**

R & D Director: **Dr. Kamlesh R. Patel**  
Telephone: **(604) 860-5815**

Employees: **12**  
R & D Employees **3**  
(In biotechnology: **3**)

## RESEARCH FACILITY

**2330 Enterprise Way  
P.O. Box 178  
Kelowna, British Columbia V1Y 7N5**

Manufacturing Director:  
**Charlotte Lawrence**

Telephone: **(604) 860-5815**

Founded: **1984**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$100K**)

**PRINCIPAL ACTIVITIES: R & D in plant tissue culture and commercial micropropagation of agricultural and horticultural plants.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Development of protocols for micropropagation of forest trees as well as plants of agricultural and horticultural importance.**

MANUFACTURING: **Commercial micropropagation of fruit tree rootstocks, self-rooted fruit trees, tissue cultured roses, woody ornamentals and several greenhouse plants.**

SALES/OTHER(S): **Sale of the above-mentioned plants.**

### AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **AgriForest welcomes contracts from government or private enterprise to micropropagate specific plants. AgriForest is also interested in joint ventures with foreign companies in the field of plant tissue culture.**

### COMMENTS:

CONTACT PERSON: **Reg Tomiye**

### **OTHER ACTIVITIES:**

# AGROPUR COOPÉRATIVE AGRO-ALIMENTAIRE

HEAD OFFICE

**510, rue Principale  
Granby (Québec) J2G 7G2**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(514) 375-1991**  
Telex: **05832510**  
Fax: **(514) 375-2099**

Manufacturing Director:  
**Robert Poirier, Eng.**

Telephone: **(514) 375-1991**

President: **Michel Lemire**

R & D Director: **Roger N. Giroux, Ph.D.**  
Telephone: **(514) 375-1991 ext. 358**

Employees: **2,500**  
R & D Employees: **12**  
(In biotechnology: **5**)

Founded: **1938**  
Annual Sales: **\$700M**  
R & D Expenses: **\$0.5-1M**  
(In biotechnology: **\$400K**)

PRINCIPAL ACTIVITIES: **Processing of milk products, especially cheese.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Lactic ferments. Proteases for cheese-making.**

MANUFACTURING:

SALES/OTHER(S): **Marketing of lactic ferments.**

**OTHER ACTIVITIES:**

**Purification of wastewater. Manufacture of all other milk products and some food products.**

**Marketing of milk and food products.**

AFFILIATIONS: **La Coopérative fédérée du Québec.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Exchanges of data and lactic bacteria cultures.**

COMMENTS: **Possible exchanges of data by mail or during meetings of the International Federation of Milk Industries.**

CONTACT PERSON: **Roger N. Giroux, Ph.D.**

# LES ALIMENTS CARRIÈRE INC.

HEAD OFFICE

**540, chemin des Patriotes  
Saint-Denis sur Richelieu (Québec) J0H 1K0**

Telephone: **(514) 584-2235**  
Telex: **055-60185**  
Fax: **(514) 787-3537**

President: **Marcel Ostiguy**

R & D Director: **Michel Casgrain**  
Telephone: **(514) 584-2235**

Employees: **100**  
R & D Employees: **2**  
(In Biotechnology: **Contracted out**)

RESEARCH FACILITY

**Same as Head Office and  
143, rue Saint-Francois-Xavier  
Saint-Césaire (Québec) J0H 1K0**

Manufacturing Director:  
**Pierre Carrière**

Telephone: **(514) 584-2235**

Founded: **1987**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Vegetable canning and freezing. Confectionery.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Extraction of coloring additives from sugar-beet wastes. Lactic fermentation of vegetables.**

MANUFACTURING:

SALES/OTHER(S):

**OTHER ACTIVITIES:**

**Acidification. Controlled atmospheres.**

AFFILIATIONS: **Snyder & Fils Inc., Bedford; Girard Inc., Saint-Césaire; Légubec Inc., Rougemont.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Reciprocal visits concerning new processes.**

COMMENTS:

CONTACT PERSON: **Michel Casgrain**



# ALLELIX AGRICULTURE

## (A Division of Allelix Inc.)

HEAD OFFICE

**6850 Goreway Drive  
Mississauga, Ontario L4V 1P1**

Telephone: **(416) 677-0831**  
Telex: **06-968036**  
Fax: **(416) 677-9595**

Chairman: **Dr. John R. Evans, Ph.D.**  
Telephone: **(416) 677-0831**

Employees: **66 plus**  
R & D Employees: **60\***  
(In biotechnology: **60**)

MANUFACTURING FARM

**Alloa Farm  
R.R. #4  
Georgetown, Ontario L7G 4S7**

Telephone: **(416) 546-4448**

Founded: **1981 (Commenced operations in 1983)**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$3-5M**  
(In biotechnology: **\$3-5M**)

**PRINCIPAL ACTIVITIES: Improvement of plants and microorganisms for agricultural purposes using plant breeding, plant cell and molecular biology and agricultural microbiology.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Emphasis is on crop seeds (notably hybrid spring canola) and microbial inoculants. Research facilities include a 100-acre farm and over half an acre of greenhouse space.**

MANUFACTURING: **Seed production on leased land in Ontario and at a winter nursery in Chile.**

SALES/OTHER(S): **U.S.A./Canada canola launch in 1990. Microbial seed treatments as early as 1990.**

AFFILIATIONS: **United Grain Growers Limited - joint venture to develop and commercialize hybrid spring canola for Western Canada; Weibull AB (Volvo) - joint development and cross licensing agreement for hybrid canola sold in Europe and the Eastern Bloc; American Cyanamid - funded collaboration to develop herbicide resistant canola varieties.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Enters into joint venture agreements with companies with complementary strengths.**

COMMENTS: **Owned by two public companies - Canada Development Corporation (50%) and John Labatt Limited (30%) - and Ontario Development Corporation (20%).**

CONTACT PERSON: **Jim Castagno, Commercial Manager.**

\* Including 17 Ph.D.

# ALLELIX BIOCHEMICALS

## (A Division of Allelix Inc.)

HEAD OFFICE

**6850 Goreway Drive  
Mississauga, Ontario L4V 1P1**

Telephone: **(416) 677-0831**  
 Telex: **06-968036**  
 Fax: **(416) 677-9595**  
 President: **Graham Strachan**  
 Chairman: **Dr. John R. Evans**  
 R & D Director: **Dr. Wayne Davies**  
 Telephone: **(416) 677-0831**

Employees: **75 plus support**

R & D Employees: **70**  
 (In biotechnology: **70**)

RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Dr. Nigel Smart**

Founded: **1981 (Commenced operations in 1983)**  
 Annual Sales: **\$0-1M**  
 R & D Expenses: **\$5-7M**  
 (In biotechnology: **\$6-M**)

**PRINCIPAL ACTIVITIES: Develops pharmaceutical products focusing on therapeutic protein production via recombinant DNA technology and receptor-based drug design.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Biopharmaceuticals/human therapeutics tissue repair, anti-inflammatory, central nervous system, immunodisorder, cancer treatments.**

MANUFACTURING: **Proprietary fungal, yeast and plant cell fermentation systems for the production of high value chemicals, available for licensing. Proprietary systems for identifying genes that code for enzymes, vitamins, amino acids, etc., available for licensing. Pilot plant/fermentation capability.**

SALES/OTHER(S):

**OTHER ACTIVITIES:**

AFFILIATIONS: **DDI Pharmaceuticals, human superoxide dismutase; McMaster University, therapeutics for central nervous system disorders; Mitsui Petrochemicals Inc., vincristine/Vinblastine; Continental Pharma Cryosan Inc., heparinase; Hypercube Inc., software for computer-aided drug design.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Undertakes contract research in pharmaceutical and industrial enzyme production. Forms joint ventures with companies with complementary strengths.**

COMMENTS: **Owned by two public companies - Polysar Energy and Chemical Corporation (50%) and John Labatt Limited (30%) - and the Ontario Development Corporation (20%).**

CONTACT PERSON: **Graham Strachan**

# ALLELIX DIAGNOSTICS INC.

## HEAD OFFICE

**6850 Goreway Drive  
Mississauga, Ontario L4V 1P1**

Telephone: **(416) 677-0831**  
Telex: **06-968036**  
Fax: **(416) 677-9595**

President: **Stephen Hayter**  
Chairman: **Dr. John R. Evans**  
R & D Director: **Dr. Scott Winston**  
Telephone: **(416) 677-0831**

Employees: **44 plus support**

R & D Employees: **36\***

## RESEARCH FACILITY

**Same as Head Office**

Commercial Director:  
**Jeff Greenberg**

Founded: **1981 (operations  
began in 1984)**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$1-3M**

PRINCIPAL ACTIVITIES: **MAB-based diagnostic tests and kits for physician's office, home and clinical use.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Pregnancy and ovulation strep throat, sexually-transmitted diseases and cardiac markers. Combines expertise in test chemistries, test reagents (UREIASE™) and device design to develop, patent and manufacture kits. Undertakes contract research leading to joint product development.**

MANUFACTURING: **Diagnostic kit assembly facility planned for mid-1988 start-up.**

SALES/OTHER(S): **Professional pregnancy and strep throat kits launched worldwide in 1988. Canine heartworm sales worldwide**

### **OTHER ACTIVITIES:**

AFFILIATIONS: **Boehringer Mannheim, distribution of UREIASE™ reagents in U.S.A. Norden - supply agreement for veterinary diagnostic reagents; Agritech - supply agreement for veterinary diagnostic reagents; University of Texas, Serex International, development and distribution of patented syphilis detection technology.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Interested in forming joint ventures with companies with complementary strengths in marketing and distribution.**

COMMENTS: **Owned by two public companies - Canada Development Corporation (50%) and John Labatt Limited (30%) - and the Ontario Development Corporation (20%).**

CONTACT PERSON: **Stephen Hayter**

\* Including 8 Ph.D.

# ALTA GENETICS INC.

## HEAD OFFICE

**Site 12, Box 12, R.R. 4  
Calgary, Alberta T2M 4L4**

Telephone: **(403) 239-8882**  
Telex: **03-821172 CGY**  
Fax: **(403) 239-8886**

President: **Douglas G. Blair**

R & D Director: **Dr. S. Willadsen**  
Telephone: **(403) 239-8882**

Employees: **65**  
R & D Employees: **4**  
(In biotechnology: **4**)

Founded: **1984**  
Annual Sales: **\$7-10M**  
R & D Expenses: **\$1-3M**  
(In biotechnology: **\$2M**)

## RESEARCH FACILITY

**Same as Head Office**

**PRINCIPAL ACTIVITIES: Production and marketing of livestock genetics (semen and embryos). Supplying advanced livestock reproductive technologies (including artificial insemination, embryo transfer, embryo freezing, micro-manipulation of embryos, etc.).**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Long-term storage/long distance transport of embryos; cloning of embryos by blastomere separation and nuclear transplantation; embryo sexing and genetic engineering; In vitro maturation and fertilization of oocytes.**

**MANUFACTURING: Production of elite dairy and beef breeding stock, embryos and semen (with inventory often available from frozen gene-bank).**

**SALES/OTHER(S): Consultant and supplier for livestock development projects (ranging from breeder herds to "national" livestock improvement projects).**

**AFFILIATIONS: Western Breeders Service Ltd., Balzac, Alberta.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: "Contract" research projects as well as select joint venture situations.**

### COMMENTS:

**CONTACT PERSON: T.J. Mitenko**

### **OTHER ACTIVITIES:**

# APO DIAGNOSTICS INC.

HEAD OFFICE

**91 Esna Park Drive, Unit 2  
Markham, Ontario L3R 2S2**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 475-1582**  
Telex: **06-986783**  
Fax: **(416) 749-9578**

Manufacturing Director:  
**Robert Snirch**

Telephone: **(416) 475-1582**

President: **Max Marmel**

R & D Director: **James Walker**  
Telephone: **(416) 475-1582**

Employees: **30**  
R & D Employees: **4**

Founded: **1974**  
Annual Sales: **\$3-5M**  
R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: Manufacture of microbiological test kits for detecting, identifying and quantitating of bacteria in medical, dental and commercial areas.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Research and develop our own products.**

MANUFACTURING: **Manufacture.**

SALES/OTHER(S): **Market world wide through distributors.**

AFFILIATIONS: **Apotex Inc., 150 Signet Drive, Weston, Ontario M9L 1T9 (Parent Company).**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Expansion of export markets.**

COMMENTS: **Are always interested in new products and in joint ventures.**

CONTACT PERSON: **Max Marmel, President.**

# APPLIED BIO-NOMICS LTD.

## HEAD OFFICE

**P.O. Box 2637  
Sidney, British Columbia V8L 4C1**

Telephone: **(604) 656-2123**  
Telex:  
Fax:

President: **Donald Elliott**

R & D Director: **Dr. Linda Gilkeson**  
Telephone: **(604) 656-2123**

Employees: **13**  
R & D Employees: **10**  
(In biotechnology: **10**)

Founded: **1981**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0.5M**  
(In biotechnology: **\$0.5M**)

PRINCIPAL ACTIVITIES: **R & D of biological control agents for crop protection.**

## RESEARCH FACILITY

**c/o Agriculture Canada  
8801 East Saanich Road  
Sidney, British Columbia**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Spidermite predators - whitefly parasites. Aphid predators, thrips predators, pesticide resistant races and cold storage.**

### MANUFACTURING:

SALES/OTHER(S): **Sales of experimental production of above.**

### AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Exchange of pesticide resistant races. Exchange of exotic host parasites and predators.**

### COMMENTS:

CONTACT PERSON: **Dr. Linda Gilkeson**

### **OTHER ACTIVITIES:**

# AQUA HEALTH LTD.

HEAD OFFICE

**West Royalty Industrial Park  
Charlottetown, Prince Edward Island C1E 1B0**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(902) 566-4966**  
 Telex: **014-44109**  
 Fax: **(902) 566-4030**

Manufacturing Director:  
**D. Airdrie**

Telephone: **(902) 566-4966**

President: **W.D. Paterson**

R & D Director: **W.D. Paterson**  
 Telephone: **(416) 936-2559**

Employees: **8**  
 R & D Employees: **4**  
 (In biotechnology: **4**)

Founded: **1984**  
 Annual Sales: **\$0-1M**  
 R & D Expenses: **\$0-0.5M**  
 (In biotechnology: **\$0-0.5M**)

**PRINCIPAL ACTIVITIES: Development, production and sale of fish vaccines.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Development and licensing of new fish vaccines. Immersion lobster vaccine, KD vaccine, Hitra vaccine.**

MANUFACTURING: **Production of fish vaccines and other veterinary bacterins. Furogen, Ermogen, Furogen b, Vibrogen and Gaffogen.**

SALES/OTHER(S): **Aquaculture health consulting. Technology transfer.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Aqua Health seeks cooperators to develop new veterinary vaccines and our modern fermentation facility is available for bacterin production.**

COMMENTS:

CONTACT PERSON: **W.D. Paterson, R.R. 1, Loretto, Ontario L0G 1L0.**

# AQUARESEARCH LTD. / AQUARECHERCHE LTÉE

HEAD OFFICE

**C.P. 208  
North Hatley (Québec) J0B 2C0**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(819) 842-2890**

Telex:

Fax: **(819) 842-2902**

President: **M.-C. Cantin**

R & D Director: **K.F. Ehrlich, Ph.D.**

Telephone: **(819) 842-2890**

Employees: **7**

R & D Employees: **3**

Founded: **1984**

Annual Sales: **\$0-1M**

R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: Water management: aquaculture, industrial and municipal wastewater, lake restoration.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Wastewater purification, nitrification, algae control.**

MANUFACTURING:

SALES/OTHER(S): **Biotechnological products and services.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Research project(s) with Fisheries and Oceans Canada.**

COMMENTS:

CONTACT PERSON: **K.F. Ehrlich, Ph.D.**

**OTHER ACTIVITIES:**

**Culture cool and warm water fishes. Spawning control.**

**Aquacultural products.**



# AQUATERRE INC.

## HEAD OFFICE

**2065, boulevard Charest ouest, #119  
Sainte-Foy (Québec) G1C 2G1**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(418) 681-6931**  
Telex:  
Fax: **(418) 681-7806**

Manufacturing Director:  
**Yves Lavoie**

Telephone: **(418) 722-0202**

President: **Marc Gagnon**

R & D Director: **Alain Andersen**  
Telephone: **(418) 681-6931**

Employees: **7**  
R & D Employees: **2**

Founded: **1983**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Beneficiation of the marine biomass.**

### **BIOTECHNOLOGY ACTIVITIES:**

### **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Composting of sea wrack. Ensil-  
ing of sea wrack. Extracts from seaweeds.**

MANUFACTURING: **Composting of sea wrack. Extracts from  
seaweeds.**

SALES/OTHER(S): **Composting of sea wrack. Extracts from  
seaweeds.**

AFFILIATIONS: **Biorex Groupe Conseil Inc.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Distribution of technologies.**

COMMENTS:

CONTACT PERSON: **Alain Andersen**

# B2 ENTERPRISES LTD.

## HEAD OFFICE

**P.O. Box 185  
Choceland, Saskatchewan S0J 0M0**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(306) 428-2192**  
Telex:  
Fax:

Manufacturing Director:  
**Lloyd Bartlett**

Telephone: **(306) 428-2192**

President: **Lloyd Bartlett**

R & D Director:  
Telephone:

Employees: **10**  
R & D Employees: **1**  
(In biotechnology: **2 on contract**)

Founded: **1986**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$200K**)

PRINCIPAL ACTIVITIES: **Growth regulator extractions from bark saw dust, peat moss, soil-less mixtures, and peat flour.**

### **BIOTECHNOLOGY ACTIVITIES:**

### **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Growth regulators.**

MANUFACTURING: **Extracts and peat flour.**

SALES/OTHER(S): **Soilless mixtures.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **G.L. Bartlett**

# BALCO CANFOR REFORESTATION CENTRE LTD.

## HEAD OFFICE

**R.R. #3  
Kamloops, British Columbia V2C 5K1**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(604) 578-7212**

Telex:

Fax: **(604) 578-8655**

President: **J.A. Thorlakson**

Manager: **Gary Castonguay**

R & D Director: **Gary Hunt**

Telephone: **(604) 578-7212**

Employees: **5**

R & D Employees: **2**

(In biotechnology: **1**)

Founded: **1982**

Annual Sales: **\$1-3M**

R & D Expenses: **\$0-0.5M**

(In biotechnology: **\$200K**)

**PRINCIPAL ACTIVITIES: Growing forest seedlings.**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Improving quality of seedlings in container nurseries and improving growth and survival after planting by use of biofertilizers and growth regulators.**

### MANUFACTURING:

### SALES/OTHER(S):

AFFILIATIONS: **B.C. Ministry of Forests and Lands.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

### COMMENTS:

CONTACT PERSON: **Gary Hunt, Research Scientist.**

### **OTHER ACTIVITIES:**

# BAY D'ESPOIR SALMON HATCHERY LTD.

## HEAD OFFICE

**St. Alban's Development Association  
St. Alban's, Newfoundland A0H 2E0**

## RESEARCH FACILITY

**via Head Office**

Telephone: **(709) 538-3236**

Telex:

Fax:

Development Officer: **Juanita Organ**

R & D Director: **Dr. Arnold Sutterlin**

Telephone: **(709) 882-2736**

Founded: **1986**

Annual Sales: **\$0-1M**

Employees: **10**

R & D Expenses: **\$0-0.5M**

R & D Employees: **2**

(In biotechnology: **\$50K**)

(In biotechnology: **2**)

PRINCIPAL ACTIVITIES: **Commercial salmon hatchery.**

### **BIOTECHNOLOGY ACTIVITIES:**

### **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Salmonid aquaculture; chromosome set manipulation; hybridization; sex control and sterilization; steroid enhancement of growth.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS: **Contract work with National Research Council and Fisheries and Oceans, Canada.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON:

# B.C. RESEARCH CORPORATION

## HEAD OFFICE

**3650 Wesbrook Mall  
Vancouver, British Columbia V6S 2L2**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(604) 224-4331**  
Telex: **04-507748**  
Fax: **(604) 224-0540**

President: **Dr. Terry Howard**

R & D Director: **Dr. Doug Duncan**  
Telephone: **(604) 224-4331**

Employees: **135**  
R & D Employees: **100**

Founded: **April 1988**  
Annual Sales: **\$7-10M**  
R & D Expenses: **\$7-10M**

PRINCIPAL ACTIVITIES: **R & D contracts, technical services.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Fish disease screening and diagnostic techniques. Waste management: anaerobic/aerobic digestion, composting technologies. Mineral leaching. Forest biotechnology: cloning technology.**

## MANUFACTURING:

## SALES/OTHER(S):

## AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **We sell contracts (R & D) to anyone who is willing to hire us.**

## COMMENTS:

CONTACT PERSONS: **Aquaculture: E. Lee; Waste management: A. Birkbeck; Mineral leaching: Dr. R. McElroy; Forestry: Dr. Paul Webb (Cloning technology).**

## OTHER ACTIVITIES:

# BEAK CONSULTANTS LTD.

## HEAD OFFICE

**14 Abacus Road  
Brampton, Ontario L6T 5B7**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 458-4044**

Telex:

Fax: **(416) 458-7303**

President:

R & D Director: **Dr. D. Lush**  
Telephone: **(416) 458-4044**

Employees: **200**

R & D Employees: **25**

Founded: **1955**

Annual Sales: **\$10-15M**

R & D Expenses: **\$0.5-1M**

PRINCIPAL ACTIVITIES: **Regulatory policies. Environmental protection.**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Pollution control: Industrial waste treatment, sludge and mill-tailing management-aerobic/anaerobic. Risk-impact assessment development protocol: microcosm test systems.**

MANUFACTURING:

SALES/OTHER(S): **Consulting: bio-process design; bioassay services.**

### **OTHER ACTIVITIES:**

**Environmental research; contaminant pathways, fisheries research; bio-assay and mutagenicity R & D; environmental modelling; natural systems management; regulatory control.**

**Consulting: impact assessment; commercial laboratory; engineering.**

AFFILIATIONS: **Beak Consultants Inc.; Beak consultants Associates Ltd.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Joint ventures; contract agreements.**

COMMENTS: **Offices in Canada and the U.S.**

CONTACT PERSON: **Dr. D. Lush**

# BETTER YIELD INSECTS

## HEAD OFFICE

**P.O. Box 3451, Tecumseh Station  
Windsor, Ontario N8N 3C4**

## RESEARCH FACILITY

**1302 Highway #2  
Emeryville, Ontario N0R 1C0**

Telephone: **(519) 727-6108**

Telex:

Fax: **(519) 727-5989**

President: **P. Coristine**

R & D Director: **P. Coristine**

Telephone: **(519) 727-6108**

Employees: **6**

R & D Employees: **3**

(In biotechnology: **3**)

Founded: **1977**

Annual Sales: **\$0-1M**

R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: Rearing, marketing beneficial insects and mass producing insects.**

### **BIOTECHNOLOGY ACTIVITIES:**

### **OTHER ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Rearing, mass producing and Integration of insects to pesticides. Spider mite predators, white fly parasites, aphid predators, thrip predators.**

**MANUFACTURING: Beneficial insects.**

**SALES/OTHER(S): Rear 4 beneficial insects. Sell insect traps - attract insects by colour (sticky insect strips).**

**AFFILIATIONS:**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:**

**COMMENTS: Insects replace pesticides at a much lower cost, with much higher plant yields - no toxicity. Greenhouse workers prefer to use insects rather than toxic chemicals to control pests due to the reduced safety risks.**

**CONTACT PERSON:**

# IAF BIOCHEM INTERNATIONAL INC.

## HEAD OFFICE

**531, boulevard des Prairies  
Laval (Québec) H7B 1V7**

Telephone: **(514) 687-4910**  
Telex: **055-60466IAF BCM VDL**  
Fax: **(514) 687-3521**

President: **Francesco Bellini**

R & D Director: **Gervais Dionne**  
Telephone: **(514) 687-4910**

Employees: **45**  
R & D Employees: **26**  
(In Biotechnology: **26**)

Founded: **1986**  
Annual Sales: **\$1.4M**  
R & D Expenses: **\$2.6M**  
(In Biotechnology: **\$2.6M**)

## RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Tom Louridas**

Telephone: **(514) 687-4910**

PRINCIPAL ACTIVITIES: **Manufacture of chemical specialties, diagnostics and R & D on diagnostic tests, vaccines and drugs.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Diagnostic tests; vaccines; drugs; health care products for people and animals.**

MANUFACTURING: **Chemical specialties and diagnostics tests. Health care products for people and animals.**

SALES/OTHER(S):

AFFILIATIONS: **Institut Armand Frappier.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Licensing agreements for marketing our products in foreign countries and for marketing foreign products in Canada. R & D agreements.**

COMMENTS:

CONTACT PERSON: **Francois Legault, Treasurer.**

### **OTHER ACTIVITIES:**



# BIO FIELD TECHNOLOGIES RESEARCH INC. \*

## HEAD OFFICE

**1311-500 O'Connor Street  
Ottawa, Ontario K1P 6L2**

Telephone: **(613) 563-8105**  
Telex:  
Fax:

President: **David Grayson**

R & D Director: **David Grayson**  
Telephone:

Employees: **3**  
R & D Employees: **3**

## RESEARCH FACILITY

Manufacturing Director:  
**David Grayson**

Founded: **1984**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: R & D on microscopic algae for soil and crop improvement; seaweed extract used as a foliar spray and seed treatment for crop improvement.**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Algae strain selection and modification; effect of algae on soil properties and crop yields. Effect of seaweed extract on crop yield.**

**MANUFACTURING: Algae for green manure crops for agricultural land.**

**SALES/OTHER(S): Sale of product, MICROP (micro-algae) and BOOST (seaweed extract).**

### AFFILIATIONS:

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Marketing and Research assistance. Licencing of similar technologies for Canada and North America.**

### COMMENTS:

CONTACT PERSON: **David Grayson**

### **OTHER ACTIVITIES:**

\* Formerly: Northern Soil Technologies Ltd.

# BIOGÉNIE S.R.D.C. INC.

## HEAD OFFICE

**4700, boulevard Wilfrid Hamel  
Bureau 302  
Québec (Québec) G1P 2J9**

Telephone: **(418) 877-1348**  
Telex:  
Fax:

President: **Benoît Cyr**

R & D Director: **Jean-Luc Sansregret**  
Telephone: **(418) 877-1349**

Employees: **6**  
R & D Employees: **3**  
(In biotechnology: **2**)

Founded: **1986**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

## RESEARCH FACILITY

**Same as Head Office**

PRINCIPAL ACTIVITIES: **Industrial waste treatment; depollution of contaminated soils.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Waste treatment. Systems development. Thick foam bioreactors for the treatment of heavily-loaded effluents.**

### MANUFACTURING:

SALES/OTHER(S): **Biodegradation of soil contaminants. Management plan for industrial wastewaters (pulp and paper plants).**

### AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Exchanges of information with research institutes or private companies concerning technology transfers.**

### COMMENTS:

CONTACT PERSON: **Jean-Luc Sansregret**

### **OTHER ACTIVITIES:**

**Physical/chemical process for the treatment of contaminated soils.**

**Design of systems for the recovery of wastewater sludges.**

# BIO-HOL DEVELOPMENTS\*

<u>HEAD OFFICE</u>	<u>PILOT PLANT</u>
<p><b>Weston Research Centre</b>  <b>1047 Yonge Street</b>  <b>Toronto, Ontario</b>  <b>M4W 2L2</b></p> <p>Telephone: <b>(416) 922-5100</b>   <b>(416) 271-1100</b>            Telex:            Fax:           <b>(416) 922-4318</b>   <b>(416) 271-6929</b></p> <p>President:</p> <p>R &amp; D Directors:   <b>Ross Lawford, Ph.D.; Per Assarsson, Ph.D.</b>            Telephone:</p> <p>Employees:           <b>6</b>            R &amp; D Employees:   <b>5</b></p>	<p><b>St.Lawrence Reactors Limited</b>  <b>50 Elmwood Avenue S.</b>  <b>Mississauga, Ontario</b>  <b>L5G 3J7</b></p> <p><b>11 Vanley Crescent</b>  <b>Toronto, Ontario</b>  <b>M3J 2B7</b></p> <p>Manager :  <b>Mr. Dave Whiting</b></p> <p>Telephone: <b>(416) 638-7088</b></p> <p>Founded:           <b>1981</b>            Annual Sales:     <b>N/A</b>            R &amp; D Expenses:   <b>\$0-0.5M</b></p>
<p>PRINCIPAL ACTIVITIES: <b>R &amp; D in biomass utilization.</b></p>	
<b>BIOTECHNOLOGY ACTIVITIES:</b>	<b>OTHER ACTIVITIES:</b>
<p><u>RESEARCH &amp; DEVELOPMENT:</u> <b>Production of value-added products from ligno-cellulosics. Lignocellulose hydrolysis. Fermentation of pentoses and hexoses. Development of <u>Zymomonas mobilis</u> fermentation technology.</b></p> <p><u>MANUFACTURING:</u></p> <p><u>SALES/OTHER(S):</u> <b>Contract small fermentations and re-search.</b></p>	
<p><b>AFFILIATIONS:</b> <b>Weston Research Centre is a division of George Weston Limited. St.Lawrence Reactors is a subsidiary of St.Lawrence Starch Limited.</b></p> <p><b>FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:</b> <b>Interest in co-operative research and development projects; marketing and licensing of Bio-Hol technology.</b></p> <p><u>COMMENTS:</u></p>	
<p><b>CONTACT PERSONS:</b> <b>Dr. Ross Lawford, Weston Research Centre; Dr. Per Assarsson, St. Lawrence Reactors Limited</b></p>	

\* Joint Venture: Weston Research Centre; St.Lawrence Reactors Limited.

# BIO-MÉGA INC.

## HEAD OFFICE

**2100, rue Cunard  
Laval (Québec) H7S 2G5**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(514) 682-4640**  
Telex: **055-60073**  
Fax: **(514) 682-8434**

President and General Manager: **Jacques Gauthier**

R & D Director: **Yvan Guindon, Ph.D.**  
Telephone: **(514) 682-4640**

Employees: **85**  
R & D Employees: **75**

Founded: **1984**  
Annual Sales: **\$500K**  
R & D Expenses: **\$7-10M**

PRINCIPAL ACTIVITIES: **Laboratories of pharmaceutical, diagnostic and biotechnological research.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Fermentations. Enzymatic processes. Cardiovascular drugs: ANF analogs\*; inhibitors of the renin angiotensin-aldosterone cascade. Topical agents: antiviral drugs\*\* against HSV-I, II.**

### MANUFACTURING:

SALES/OTHER(S): **In microbiology: Strep A, Chlamidia trachomatis.**

AFFILIATIONS: **Le Groupe SGF (Société générale de financement du Québec).**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Corporate partnerships (licencing-in).**

### COMMENTS:

CONTACT PERSON: **Jacques Gauthier**

### **OTHER ACTIVITIES:**

**Peptidic hormones: ANF, GRF, calcitonin, LNRH; leukotrienes.**

**Peptidic hormones, resins, protected amino-acids and customized production of peptides.**

\* In cooperation with Institut de recherches cliniques de Montréal.

\*\* In cooperation with Hôpital Notre-Dame de Montréal and Institut du cancer de Montréal.

# BIOMIRA INC.

## HEAD OFFICE

**9411A-20th Avenue  
Edmonton, Alberta T6N 1E5**

Telephone: **(403) 450-3761**  
Telex: **961000**  
Fax: **(403) 463-0871**

President: **Gordon J. Politeski**

R & D Director, Immunology: **Mike Longenecker Ph.D.**

R & D Director, Chemistry: **Tony Noujaim, Ph.D.**

Telephone:

Employees: **50**  
R & D Employees: **40**  
(In biotechnology: **40**)

Founded: **1985**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$3-5M**  
(In biotechnology: **\$4.5M**)

## RESEARCH FACILITY

**Same as Head Office**

**PRINCIPAL ACTIVITIES: Cancer diagnosis and therapy using synthetic tumor associated glycoconjugates and monoclonal antibodies.**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Cancer diagnostic and therapeutic products - in vitro kits, radio-immuno imaging and radio-immuno therapy products.**

**MANUFACTURING: Cancer diagnostic and therapeutic products - in Vitro kits, radio-immuno imaging and radio-immuno therapy products.**

**SALES/OTHER(S): Direct sales in North America, distributors in other countries.**

**AFFILIATIONS: U. of Alberta, Miles Pharmaceuticals.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Collaborative arrangements with major international cancer researchers and major pharmaceutical and biotech companies with complementary proprietary technologies. Marketing and distribution partners - licencing in or licencing out cancer-related products.**

**COMMENTS:**

**CONTACT PERSON: G.J. Politeski, President.**

### **OTHER ACTIVITIES:**

# BIONOV CNP INC.

## HEAD OFFICE

**81, rue St-Pierre, 4<sup>e</sup> étage  
Québec (Québec) G1K 4A3**

## RESEARCH FACILITY

Telephone: **(418) 692-1357**

Telex:

Fax:

President: **Yvan Pouliot**

R & D Director: **Brigitte LeBreton, Ph. D.**

Telephone:

Employees: **2**

R & D Employees: **1**

(In biotechnology: **1**)

Founded: **1985**

Annual Sales: **\$0-1M**

R & D Expenses: **\$0-0.5M**

(In biotechnology: **\$0-0.5M**)

**PRINCIPAL ACTIVITIES: Carrying out studies and R & D on bioprocessing of pollutants and biomass production.**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Cultivation of micro-algae for the processing and beneficiation of wastewater and pig manure.**

**MANUFACTURING: Production of biomass for processing into food (being developed).**

**SALES/OTHER(S): Consultations.**

### **OTHER ACTIVITIES:**

**Exploitation of specific sea resources (being developed).**

**Consultations in biology.**

**AFFILIATIONS: The company's scientific authority is Joël de la Noüe, General Manager of GREREBÀ (Laval University).**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: We are looking for a partner for financing the development of processes.**

**COMMENTS:**

**CONTACT PERSON: Yvan Pouliot**

**BIOPROTEIN CANADA INC.**  
**(Division of Protein Foods Group Inc.)**

HEAD OFFICE

**154 Main Street East  
P.O. Box 463, Station B  
Hamilton, Ontario L8L 7W9**

Telephone: **(416) 522-9214**  
Telex: **061-8343**  
Fax: **(416) 522-6647**

President: **Robert Yarem**  
R & D Director: **Dr. C.J. Findlay**  
Telephone: **(416) 522-9214**

Employees: **6**  
R & D Employees: **6**  
(In biotechnology: **4**)

RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Dr. C.J. Findlay**

Telephone: **(416) 522-9214**

Founded: **1984**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$250K**)

**PRINCIPAL ACTIVITIES: Research into immobilized systems using BIOBONE™ clear granular bone.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: Immobilization of proteolytic enzymes for cheddar cheese production. Immobilized bacteria for wastewater treatment.

MANUFACTURING: Production of BIOBONE™ from residue of chicken deboning.

SALES/OTHER(S):

AFFILIATIONS: Protein Foods Group Inc. (Parent Company).

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Joint Venture, license arrangement, cooperative research.

COMMENTS:

CONTACT PERSON: Dr. C.J. Findlay

**OTHER ACTIVITIES:**

# BIOQUEST INTERNATIONAL, INC.

## HEAD OFFICE

**#3-1329 Niakwa Road East  
Winnipeg, Manitoba R2J 3T4**

Telephone: **(204) 254-0712**  
Telex:  
Fax:

President: **Martin Samoiloff, Ph.D.**

R & D Director: **Martin Samoiloff, Ph.D.**  
Telephone: **(204) 254-0712**

Employees: **12**  
R & D Employees: **6**  
(In biotechnology: **6**)

Founded: **1983**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$0-0.5M**)

## RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Ms. Hortencia Acosta**

Telephone: **(204) 254-0712**

**PRINCIPAL ACTIVITIES: Development of biomonitoring systems, toxicity assessment, evaluation of workplace and residential air quality. Research in detoxification systems.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **New bioassay systems.**

MANUFACTURING: **Organisms for air quality evaluation.**

SALES/OTHER(S):

### **OTHER ACTIVITIES:**

**Evaluation of conventional bioassay.**

**Air sampling systems.**

AFFILIATIONS: **None at present, contemplating acquisition by International Falcon Resources.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Need for capital, marketing expertise.**

COMMENTS:

CONTACT PERSON: **Martin Samoiloff, Ph.D.**



# BIO-RESEARCH LABORATORIES

## HEAD OFFICE

**87, rue Senneville  
Senneville, Montréal (Québec) H9X 3R3**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(514) 457-2280**  
Telex: **05-821582**  
Fax: **(514) 457-3883**

President: **M.F. Ankcorn**

R & D Director: **Dr. Reid Jilek**  
Telephone: **(514) 457-2280**

Employees: **500**  
R & D Employees: **N/A**

Founded: **1965**  
Annual Sales: **\$15-30M**  
R & D Expenses: **\$10+M**

**PRINCIPAL ACTIVITIES: Clinical and preclinical research on a contract basis for pharmaceutical, chemical, pesticide and biotechnology companies.**

## **BIOTECHNOLOGY ACTIVITIES:**

## **OTHER ACTIVITIES:**

**RESEARCH & DEVELOPMENT: On a contract basis on hormones immunomodulators, thrombolytic agents, monoclonal antibodies.**

**MANUFACTURING:**

**SALES/OTHER(S):**

**AFFILIATIONS: Connaught Biosciences, Inc. (Parent Company).**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: To introduce the services Bio-Research has to offer to biotech companies to aid in their product development.**

**COMMENTS:**

**CONTACT PERSONS: Dr. Reid Jilek, Vice-President Marketing; Winn Brink, Director, Marketing Services.**

# BIO-RESPONSE SYSTEMS LTD.

## HEAD OFFICE

**P.O. Box 2564, Station M  
Halifax, Nova Scotia B3J 3N5**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(902) 477-0155**  
Telex: **N/A**  
Fax: **N/A**

Manufacturing Director:  
**Michael Scott**

Telephone: **(902) 477-0155**

President: **Richard Thomas, Ph.D.**

R & D Director: **Torgny Vigerstad, Ph.D.**  
Telephone: **(301) 320-5790**

Employees: **3**  
R & D Employees: **part time**

Founded: **1987**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: Importation and distribution of toxicity testing systems using genetically engineered bacteria.**

## BIOTECHNOLOGY ACTIVITIES:

## OTHER ACTIVITIES:

RESEARCH & DEVELOPMENT: **Testing of appropriate methods and applications.**

MANUFACTURING: **None yet.**

SALES/OTHER(S): **Distribution in U.S.A. and Canada of toxicity testing systems.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Market Development Assistance; Development of manufacturing methods appropriate to this technology.**

COMMENTS:

CONTACT PERSON: **Michael Scott, Tel.: (902) 477-0155.**

# BIOREX GROUPE CONSEIL INC.

HEAD OFFICE

**2065, boulevard Charest ouest, Suite 119  
Sainte-Foy (Québec) G1N 2G1**

Telephone: **(418) 681-6931**

Telex:

Fax: **(418) 681-7806**

President: **Christian J. Jacques**

R & D Vice-President: **Marc Gagnon**

Telephone: **(418) 681-6931**

Employees: **75**

R & D Employees: **7**

(In biotechnology: **7**)

RESEARCH FACILITY

**Same as Head Office**

Vice-President, Manufacturing:

**Alain Andersen**

Telephone: **(418) 681-6931**

Founded: **1978**

Annual Sales: **\$3-5M**

R & D Expenses: **\$0.5-1M**

(In biotechnology: **\$450K**)

**PRINCIPAL ACTIVITIES: R & D, production and consulting on aquaculture, marine biotechnology and fisheries. Turnkey aquaculture projects.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: All-female, sterile or hybrid stocks of Salmonidae. Composting and ensiling of marine wrack. Mussel breeding.

MANUFACTURING: Wrack compost and fertilizers. Extracts from seaweeds. Aquaculture (Salmonidae, shellfish).

SALES/OTHER(S): Fertilizers and composts. Consulting on aquaculture. R & D on aquaculture.

**OTHER ACTIVITIES:**

Computer systems for aquaculture. New sea products.

Pisciculture (shrimps, mussels, Salmonidae).

Shrimps, smoked trouts and roe. Consulting on fisheries and aquaculture.

AFFILIATIONS: Le Groupe ACSI Ltd.; Pisciculture des Alléghanys Inc.; Aquaterre Inc.; Criadero de Camarones de Chomes S.A.

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Alone or in a consortium.

COMMENTS:

CONTACT PERSON: Marc Gagnon, Vice-President, Consulting and Research.

# BIOSCAN CONTINENTAL INC.

## HEAD OFFICE

**350, boulevard Industriel, Suite 201 (2nd Floor)  
St-Eustache (Québec) J7R 5V3**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(514) 491-5807**  
Telex: **05-25134-MTL BIO**  
Fax: **(514) 491-3069**  
Cable: **BIOMNI-Montréal-Canada**  
President: **G. Banik**

Manufacturing Director:  
**Christian Chabot**

Telephone: **(514) 491-5807**

R & D Director: **Dr. U.K. Banik**  
Telephone: **(514) 491-5807**

Employees: **6**  
R & D Employees: **2**

Founded: **1981**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: R & D health care products. Please see our brochure and information sheets.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DÉVELOPMENT: **Carcinoembryonic antigen (CEA) and hormones.**

MANUFACTURING: **CEA and hormones.**

SALES/OTHER(S): **CEA, hormones, and consumer products.**

AFFILIATIONS: **135952 Canada Inc. (holding company).**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **We are searching for companies to effectively commercialize our products.**

COMMENTS: **If properly marketed our products would be appreciated worldwide.**

CONTACT PERSON: **Dr. U.K. Banik, Vice President and Director of R & D.**

### **OTHER ACTIVITIES:**

**Consumer products:**

**Oradent<sup>(R)</sup>  
Panacil<sup>(R)</sup>  
Restorin<sup>(R)</sup>**

# BIOSHELL INC.

HEAD OFFICE

**6070, rue Sherbrooke est  
Montréal (Québec) H1N 1C1**

Telephone: **(514) 252-8300**  
Telex: **05-828684**  
Fax: **(514) 252-0523**

President: **Roger Paquet**

R & D Director: **Jean-Guy Bergeron**  
Telephone: **(514) 252-8300**

Employees:	<b>45</b>	Founded:	<b>1979</b>
R & D Employees:	<b>1</b>	Annual Sales:	<b>\$7-10M</b>
(In biotechnology: <b>1</b> )		R & D Expenses:	<b>\$0.5M</b>
		(In biotechnology: <b>\$0.5M</b> )	

RESEARCH FACILITY

**C.P. 100  
Lac-Mégantic (Québec) G6B 2S5**

Manufacturing Director:  
**Bruno Paradis**  
**3891, rue du Président-Kennedy**  
**C.P. 100, Lac-Mégantic**  
**(Québec) G6B 2S5**  
Telephone: **(819) 583-5131**  
**and**  
**Jacques Lecours**  
**75, chemin de la Petite-Gaspésie**  
**C.P. 547, Hearst (Ontario)**  
**P0L 1N0**  
Telephone: **(705) 362-4264**

PRINCIPAL ACTIVITIES: **Biomass densification into wood pellets.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT:

MANUFACTURING: **Processing of wood wastes.**

SALES/OTHER(S): **Sale of wood pellets.**

AFFILIATIONS: **Wholly-owned by the Dutch consortium Shell International.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Our company is looking for Canadian and international partnerships.**

COMMENTS:

CONTACT PERSON: **Roger Paquet, President.**

# BIOSTAR INC.

## HEAD OFFICE

**Box 1000, Sub P.O. #6  
Saskatoon, Saskatchewan S7N 0W0**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(306) 966-7473**  
Telex: **074-2659**  
Fax: **(306) 966-7478**

President: **Stephen D. Acres**

R & D Director: **Lorne A. Babiuk**  
Telephone: **(306) 966-7473**

Employees: **7**  
R & D Employees: **6**  
(In biotechnology: **3**)

Founded: **1983**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$0.5M**)

PRINCIPAL ACTIVITIES: **Development and testing of animal health-care products.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Development and testing of vaccines, monoclonal antibodies, diagnostic procedures, immunoregulators and other human and animal health-care products.**

MANUFACTURING:

SALES/OTHER(S): **Technology.**

### **OTHER ACTIVITIES:**

AFFILIATIONS: **Veterinary Infectious Disease Organization, University of Saskatchewan.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Joint development of animal health-care products. BiOSTAR will license-out discoveries which have application to human health care.**

COMMENTS:

CONTACT PERSON: **Stephen D. Acres, President.**

# BIOSYN

## HEAD OFFICE

**1080, Côte Beaver Hall, Suite 1806  
Montréal (Québec) H2Z 1S8**

Telephone: **(514) 875-6434**  
Telex: **055-611-39**  
Fax: **(514) 861-6303**

President: **Guy Gravel**

R & D Director: **Guy Gravel**  
Telephone: **(514) 875-6434**

Employees: **21**  
R & D Employees: **15**

(In biotechnology: **6**)

## RESEARCH FACILITY

**51, rue du Moulin  
Saint-Juste-de-Bretenières  
Comté de Montmagny (Québec)  
G0R 3H0**

Founded: **1980**  
Annual Sales: **N/A**  
R & D Expenses: **\$10+M varies, depending  
on contracts.**  
(In biotechnology: **\$8M**)

PRINCIPAL ACTIVITIES: **Development of a biomass gasification process for the production of a synthetic gas.**

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Biomass gasification.**

MANUFACTURING: **Production of a synthesis gas by gasification of biomass residues, in view of ultimate conversion into liquid methanol or other petrochemicals, or for production of electricity by gas turbines or diesel engines in case of air gasification.**

SALES/OTHER(S):

AFFILIATIONS: **A Division of Groupe Nouveler Inc., Montréal.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS: **Cooperation with Federal Department of Energy, Mines and Resources; National Research Council and Institut de recherches énergétiques d'Hydro-Québec, and with 3 Canadian universities.**

CONTACT PERSON: **Guy Gravel**

### OTHER ACTIVITIES:

# BIOSYSTech CONSULTING INC.

## HEAD OFFICE

**2383 Edenhurst Drive  
Mississauga, Ontario L5A 2L1**

Telephone: **(416) 279-5337**  
Telex:  
Fax:

President: **Dr. Hugh G. Lawford**  
R & D Director: **Dr. Hugh G. Lawford**  
Telephone: **(416) 978-7096**

Employees: **4**

R & D Employees: **1**  
(In biotechnology: **1**)

## RESEARCH FACILITY

**University of Toronto  
Department of Biochemistry**

Founded: **Registered in 1980 -  
Incorporated in 1983**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$8-10K, 1986-87**)

**PRINCIPAL ACTIVITIES: Consulting in the area of bio-systems technologies/bio-engineering/fermentation technologies/enzyme and microbial processes (health care products/foods/lactic cultures/fuel alcohol).**

### BIOTECHNOLOGY ACTIVITIES:

**RESEARCH & DEVELOPMENT: Consulting in the area of bio-systems technologies/bio-engineering/fermentation technologies/enzyme and microbial processes (health care products/foods/lactic cultures/fuel alcohol).**

### MANUFACTURING:

**SALES/OTHER(S): Lease equipment.**

**AFFILIATIONS: Fermtech R & D Inc. (Mississauga); Agferm Products Inc. (Mississauga).**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:**

**COMMENTS:**

**CONTACT PERSON: Dr. Hugh Lawford**

### OTHER ACTIVITIES:



# BIOTECHNICA CANADA INC.

## HEAD OFFICE

#170-6815-8 Street North East  
Calgary, Alberta T2E 7H7

## RESEARCH FACILITY

Same as Head Office

Telephone: (403) 295-0383

Telex:

Fax: (403) 295-0386

President: Gordon A. Wells

R & D Director: W. R. Scowcroft

Telephone:

Employees: 34

R & D Employees: 22

Founded: 1985

Annual Sales: \$0-1M

R & D Expenses: \$3-5M

PRINCIPAL ACTIVITIES: R & D in oilseeds, cereals, forages, horticulture and forestry.

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: Plant breeding: tissue culture, biochemistry, molecular biology, microbiology. Crop protection in forestry and agriculture: herbicides.

### MANUFACTURING:

SALES/OTHER(S): Products: super sile, super hay.

### OTHER ACTIVITIES:

AFFILIATIONS: Biotechnica International, Inc., 85 Bolton Street, Cambridge, MA. 02140; Biotechnica Limited, 5 Chiltern Close, Llanishen, Cardiff, Wales CF4 5DL; Biotechnica Limited/North America, 17 Dunster Street, #208, Cambridge, MA. 02138.

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON:

# BLUEBERRY ACRES LIMITED

## HEAD OFFICE

R.R. #2  
Centreville, Nova Scotia B0P 1J0

Telephone: (902) 582-3832  
Telex:  
Fax: (902) 582-7755

President: Robert P. Aucoin

R & D Director:  
Telephone:

Employees: 40 \*  
R & D Employees: 2

## RESEARCH FACILITY

Plant Tissue Culture Laboratory

Laboratory Manager:  
Jennifer Smith

Founded: 1974  
Annual Sales: \$850K  
R & D Expenses: \$300K

PRINCIPAL ACTIVITIES: Nursery and Highbush Blueberry Farming.

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: Plant tissue culture laboratory.  
Wide range of ornamentals, apples, pears, small berry plants, foliage and flowers.

MANUFACTURING: Plants from tissue culture lab.

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS: Some research is subcontracted to university researchers.

CONTACT PERSON:

### OTHER ACTIVITIES:

Fresh and frozen blueberries and raspberries, shipped and marketed.

Fresh Highbush blueberries and cultivated raspberries, 90% of which are shipped to Boston.

\* Staff increases to 650 during picking season.

# BOCKNEK LTD.

## HEAD OFFICE

**165 Bethridge Road  
Rexdale, Ontario M9W 1N4**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 745-0796**  
Telex: **06-989319**  
Fax: **(416) 745-8843**

Manufacturing Director:  
**Paul Haffenden**

Telephone: **(416) 745-0796**

President: **Zelik L. Bocknek**

R & D Director: **Dr. Adolf V. Seefried**  
Telephone: **(416) 745-0796**

Employees: **27**  
R & D Employees: **2**

Founded: **1973**  
Annual Sales: **\$7-10M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Manufacturer of tissue culture products (sera and media).**

## **BIOTECHNOLOGY ACTIVITIES:**

## **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Development of serum substitutes.**

MANUFACTURING:

SALES/OTHER(S): **World Distribution through agents to Europe, Japan, U.S.A., U.K., Canada.**

**By-product sales - pancreas, rennets.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Joint venture for development of serum free media and cell growth factors. Extraction technology using animal glands, organs, etc.**

COMMENTS:

CONTACT PERSON: **Paul Haffenden**

# BOOJUM RESEARCH LTD.

## HEAD OFFICE

**21 Dundas Square  
Suite 405  
Toronto, Ontario M5B 1B7**

## RESEARCH FACILITY

Telephone: **(416) 861-1086**  
Telex:  
Fax:

President: **M. Kalin**

R & D Director: **M. Kalin**  
Telephone:

Employees: **5**  
R & D Employees: **5**  
(In biotechnology: **5**)

Founded: **1984**  
Annual Sales: **N/A**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$0-0.5M**)

PRINCIPAL ACTIVITIES: **R & D of wastewater treatment in mining industry, AMD and close-out. Carried out on site.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Developing biological methods to address acid mine drainage problems for close-out of waste management areas for hard rock and coal mines. Biological polishing methods using Chara species, are being developed for extreme alkaline wastewaters to provide improvement in treated effluents during operations and to economize on treatment costs in general.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS: **Cangene Ltd., Dearborn.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON:

### **OTHER ACTIVITIES:**

# BROOKSIDE FARMS LTD.

## HEAD OFFICE

**31212 Peardonville Road  
Abbotsford, British Columbia V2S 5W6**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(604) 534-8596**  
Telex: **04-363512**  
Fax: **(604) 852-8751**

Manufacturing Director:  
**Don Westendorp**

Telephone: **(604) 534-8596**

President: **J. Hugh Wiebe**

R & D Director: **Stephen R. Smith**  
Telephone:

Employees: **50**  
R & D Employees: **4**  
(In biotechnology: **4**)

Founded: **1956**  
Annual Sales: **\$7-10M**  
R & D Expenses: **\$0.5M**  
(In biotechnology: **\$0.5M**)

PRINCIPAL ACTIVITIES: **Food confectionary; biochemicals.**

## **BIOTECHNOLOGY ACTIVITIES:**

## **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Research on extractability of potentially profitable biochemicals.**

MANUFACTURING: **Extraction, isolation and purification of biochemicals.**

SALES/OTHER(S): **Environmental and agricultural testing.**

AFFILIATIONS: **Canadian Lysozyme, Inc.; Brookside Laboratories, Inc.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Will contract out our research capabilities. Can do bioprocessing or downstream protein purification.**

COMMENTS:

CONTACT PERSON: **Stephen R. Smith**

# CANADIAN BIOCLINICAL

## HEAD OFFICE

**81 Finchdene Square  
Scarborough, Ontario M1X 1B4**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 293-4955**  
Telex: **065-25422**  
Fax: **(416) 293-2492**

Manufacturing Director:  
**Dr. D. Segal**

President: **Dr. J. Clapp**

R & D Director: **Dr. Clapp**  
Telephone: **(416) 293-4955**

Employees: **15**  
R & D Employees: **3**  
(In biotechnology: **3**)

Founded: **1975**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$0-0.5M**)

PRINCIPAL ACTIVITIES: **Diagnostic kit manufacture. Purification of proteins.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Diagnostic kits; protein purification (human and animal) antibody assay and analysis for private drug company.**

MANUFACTURING: **EIA's, ELISA. RIA's, IRMA.**

SALES/OTHER(S):

AFFILIATIONS: **Joldon; Helix; De Rose Biologicals.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Willing to consider distribution of other products in Canada and joint venture for new products.**

COMMENTS:

CONTACT PERSON: **Dr. J. Clapp**

### **OTHER ACTIVITIES:**

# THE CANADIAN LIPOSOME CO. LTD.

HEAD OFFICE

**#308-267 West Esplanade  
North Vancouver, British Columbia V7M 1A5**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(604) 988-5400**

Telex:

Fax: **(604) 988-0362**

President: **Edward T. Mertz**

R & D Director: **Dr. Pieter R. Cullis**

Telephone: **(604) 988-5400**

Employees: **9**

R & D Employees: **9**

(In biotechnology: **9**)

Founded: **1987**

Annual Sales: **\$0-1M**

R & D Expenses: **\$1-3M**

(In biotechnology: **\$1-3M**)

**PRINCIPAL ACTIVITIES: R & D: pharmaceuticals, liposomes.**

**BIOTECHNOLOGY ACTIVITIES: Health Care**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: Use of liposomes with certain pharmaceuticals to increase efficacy, and reduce toxicity. Scope from initial formulations to animal studies.

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS: The Liposome Company, Inc., Princeton, New Jersey.

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Exploration of concurrent effort to reduce drug toxicity, prolong therapeutic dosage, and targeting to diseased tissue.

COMMENTS: Discussion desired of models and procedures used in animal studies to evaluate impact/presence of drug in animal systems.

CONTACT PERSONS: Dr. Pieter R. Cullis; Dr. Michael J. Hope; Ian Robertson.

# CANADIAN RED CROSS SOCIETY

## (Blood Transfusion Service)

HEAD OFFICE

**1800 Alta Vista Drive  
Ottawa, Ontario K1G 4J5**

Telephone: **(613) 739-3000**  
Telex:  
Fax:

Medical Director: **Gail Rock, Ph.D., M.D.**

Senior Scientist: **Peter Ganz, Ph.D.**  
Telephone: **(613) 560-7440**  
Fax: **(613) 560-7226**

Employees: **130**  
R & D Employees: **30**

Founded: **1945**  
Annual Sales: **N/A**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Human health care.**

RESEARCH FACILITY

**85 Plymouth Street  
Ottawa, Ontario K1S 3E2**

**BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Pharmaceuticals, vaccines, diagnostics (monoclonal antibodies), medical devices/instrumentation.**

**MANUFACTURING: Pharmaceuticals, vaccines, diagnostics (monoclonal antibodies), medical devices/instrumentation.**

SALES/OTHER(S):

AFFILIATIONS: **Baxter; immuno (Austria); Haemonetics (U.S.A.).**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON:

**OTHER ACTIVITIES:**



# CANADIAN SEED COATERS LIMITED

HEAD OFFICE

**P.O. Box 219  
210 Wanless Drive  
Brampton, Ontario L6V 2L2**

Telephone: **(416) 846-5080**  
Telex: **069-7535**  
Fax: **(416) 846-6909**

President: **G. Eros**

R & D Director: **A. Klassen, Ph.D.**  
Telephone: **(306) 445-1077**

Employees: **11+15 seasonal**  
R & D Employees: **4**  
(In biotechnology: **3**)

RESEARCH FACILITY

**Same as Head Office and  
P.O. Box 1748  
North Battleford,  
Saskatchewan S9A 3W2**

Manufacturing Director:  
**T. Bailie**

Telephone: **(416) 846-5080**

Founded: **1976**  
Annual Sales: **N/A**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **N/A**)

**PRINCIPAL ACTIVITIES: Laboratory and field trial research on seed coating - includes enzymes, growth promoting regulators, agricultural chemicals and rhizobium.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: Rhizobial research. Field work on canola hybrids.

MANUFACTURING:

SALES/OTHER(S):

**OTHER ACTIVITIES:**

Seed coating materials.

Seed coating equipment.

AFFILIATIONS: Elders IXL Ltd., Melbourne, Australia; Oseco Inc., Brampton, Ontario.

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: 1. Seed coating franchises and/or joint ventures. 2. Field trial facilities for canola and forages in Western Canada.

COMMENTS:

CONTACT PERSON: T.S. Bailie

# CANBER INDUSTRIES LIMITED

## HEAD OFFICE

Site 34, P.O. Box 58  
6028 Mount View Road  
Lantzville, British Columbia V0R 2H0

Telephone: (604) 390-3113  
Telex:  
Fax:

President: Allan J. McInnes  
R & D Director: Allan J. McInnes  
Telephone: (604) 390-3113

Employees: 2  
R & D Employees:  
(In biotechnology: 5 Contractual)

Founded: 1979  
Annual Sales: N/A  
R & D Expenses: N/A

## RESEARCH FACILITY

**Contractual**

Manufacturing Director:  
**Allan J. McInnes**

Telephone: (604) 390-3113

**PRINCIPAL ACTIVITIES: R & D applied to aerobic and anaerobic fermentation technology, various enzyme formulas for cell separation of organic matter, to allow natural microorganism development over decomposition controls.**

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: Discovery of methods to start-up and complete anaerobic facultative digestion over organic wastes held in toxic inhibited state ie. sewage, garbage, agricultural, etc. By-product recovery from anaerobic facultative formula provides a pure form of biogas, methane gas fraction increase above 30% over natural (nature) processes.

MANUFACTURING: Bio catalytic seeding formulas. Waste management products, drain cleaners, grease trap cleaners, animal livestock, farm wastes, etc. fertilizer preparation method. Pollution control products to clean up ground water reserves, garbage waste management and control products.

SALES/OTHER(S): To Italy, Spain, Switzerland, France, Taiwan, Puerto Rico, Phillipines, China, Nepal, U.S.A.

AFFILIATIONS: Bercan Environmental Resources Inc.

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Introduction is required for bio catalytic seeding formulas designed to increase fermentation over organic wastes, biomass. Formula method will provide increased methane gas production by above 30% over natural fermentation process.

COMMENTS: The importance of bio catalytic seeding formulas and their application provides a method of reducing pollution through fermentation accelerators and by this, further destroying harmful microorganism development, further providing a method of renewable energy development in third world countries that cannot afford fossil fuels.

CONTACT PERSON: Director, BIOGAS RESEARCH AND TRAINING CENTRE FOR ASIA AND THE PACIFIC, Number 13 Fourth Block, People's South Street, Chengdu, Sichuan, The People's Republic of China.

### OTHER ACTIVITIES:

# CANGENE CORPORATION

## HEAD OFFICE

**3403 American Drive  
Mississauga, Ontario L4V 1T4**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 673-0200**

Telex:

Fax: **(416) 673-5123**

President: **James Rae**

Chairman: **Dr. Eric James**

R & D Director: **Robert T. Garvin**

Telephone:

Founded: **1984**

Employees:

Annual Sales: **\$0-1M**

R & D Employees: **37**

R & D Expenses: **\$1-3M**

(In biotechnology: **30**)

(In biotechnology: **\$2.5M**)

**PRINCIPAL ACTIVITIES: rDNA genetic engineering research and development.**

### **BIOTECHNOLOGY ACTIVITIES:**

### **OTHER ACTIVITIES:**

**RESEARCH & DEVELOPMENT: rDNA genetic engineering. Gene expression for the manufacture, use and sale of nucleic acid-based diagnostics and bio-pharmaceuticals.**

**MANUFACTURING:**

**SALES/OTHER(S): Marketing multi-tissue block kits manufactured by subsidiary.**

**AFFILIATIONS:**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:**

**COMMENTS:**

**CONTACT PERSON: Mr. James Rae**

# CANPOLAR INC.

## HEAD OFFICE

**421 Eglinton Avenue West, Suite 4  
Toronto, Ontario M5N 1A4**

Telephone: **(416) 487-1581**  
Telex: **06-218813**  
Fax:

President: **Dr. James R. Rossiter**

R & D Director: **Dr. Ernest M. Reimer**  
Telephone: **(709) 722-6067**

Employees: **8**  
R & D Employees **8**  
(In biotechnology: **4**)

Founded: **1983**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0.5-1M**  
(In biotechnology: **\$150K (87-88 estimate)**)

PRINCIPAL ACTIVITIES: **Development of sensing systems for industrial applications.**

## RESEARCH FACILITY

**31 Peet Street  
Ashley Building  
St. John's, Newfoundland  
A1B 3W8**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Development of biosensors for food processing applications, especially fish quality measurement.**

### MANUFACTURING:

SALES/OTHER(S): **Sales of KV-101 fish quality testing device.**

### **OTHER ACTIVITIES:**

**Fish processing technology.**

**R & D consulting.**

AFFILIATIONS: **Intera Technologies Ltd., Calgary. Working relationship with Chemical Sensors Group; University of Toronto; Memorial University of Newfoundland.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Investment in Canpolar's biosensor technology; joint ventures.**

### COMMENTS:

CONTACT PERSONS: **Dr. James Rossiter; Dr. Ernest Reimer.**

# CANPRO LABORATORIES (RESEARCH FOODS)

HEAD OFFICE

**77 Champagne Drive  
Downsview, Ontario**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 635-8692**  
Telex: **06-218797**  
Fax: **(416) 635-8444**

Manufacturing Director:  
**Dr. A. Gawhary**

Telephone: **(416) 635-8692**

President: **H. Tenenbaum**

R & D Director: **Dr. A. Gawhary**  
Telephone: **(416) 635-8692**

Employees: **12**  
R & D Employees: **4**  
(In biotechnology: **4**)

Founded: **1973**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$0.5-1M**  
(In biotechnology: **\$0.5-1M**)

**PRINCIPAL ACTIVITIES: Government contracts and private sector: Agriculture: pesticides/herbicides. Health care: human and animal pharmaceuticals, medical devices/instrumentation.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Agriculture: pesticides/herbicides. Health care: human and animal pharmaceuticals, medical devices/instrumentation.**

MANUFACTURING: **Custom-made pharmaceuticals for human and veterinary use; medical devices.**

SALES/OTHER(S):

AFFILIATIONS: **Agra Industries, CN Towers, Saskatoon, Saskatchewan.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON:

**CANVIRO CONSULTANTS**  
**(A Division of CH<sub>2</sub>M-Hill Engineering Ltd.)**

HEAD OFFICE

**Calgary, Alberta T2E 2R2**

Telephone: **(403) 230-0100**  
Telex:

President: **S.L. Lackey**

R & D Director: **Dr. E.E. Shannon**  
Telephone: **(519) 579-3500**  
Fax: **(519) 579-8986**

Employees: **100**  
R & D Employees: **< 5**

RESEARCH FACILITY

**180 King Street South, Suite 600**  
**Waterloo, Ontario N2J 1P8**

Founded: **1977**  
Annual Sales: **\$5-7M**  
R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: Environmental consulting and aerobic biological waste treatment.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Consulting for process development of anaerobic treatment and biogas utilization. Also aerobic biological wastewater treatment.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS: **CH<sub>2</sub>M-Hill Inc.; Canviro Laboratories Ltd.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Fee for services.**

COMMENTS: **Wide range of experience in food and beverage mineral resource, agriculture and related fields.**

CONTACT PERSONS: **Dr. E.E. Shannon; Ray Stickney.**

**OTHER ACTIVITIES:**

- Design of industrial and municipal wastewater treatment systems.
- Treatability testing.
- Laboratory analysis.

# CAPE BRETON DEVELOPMENT CORPORATION

## HEAD OFFICE

**Cabot House, Kings Road  
P.O. Box 2500  
Sydney, Nova Scotia B1P 6K9**

Telephone: **(902) 564-2848**  
Telex: **019-35132**  
Fax: **(902) 564-2589**

President: **Dr. Teresa MacNeil (Acting)**

R & D Director: **Adrian White**  
Telephone: **(902) 564-2563**

Employees: **4000**  
R & D Employees: **15**  
(In Biotechnology: **1**)

Founded: **1967**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$1-3M**  
(In Biotechnology: **\$50K**)

## RESEARCH FACILITY

**Same as Head Office**

Vice-President, Mining:  
**Bob Cooper**

Telephone: **(902) 564-2804**

PRINCIPAL ACTIVITIES: **Coal mining and processing.**

## **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Work with Gemini Biochemical Research, Calgary, on the use of bacteria to consume methane to reduce explosive hazards.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Collaboration and contact with others interested in this application.**

COMMENTS: **Federal Crown Corporation.**

CONTACT PERSON: **J.C. Campbell, Senior Research Engineer, Tel.: (902) 564-2894.**

## **OTHER ACTIVITIES:**

# CARRATECH INC.

## HEAD OFFICE

**West Royalty Industrial Park  
Charlottetown, Prince Edward Island C1E 1B0**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(902) 566-5325**  
Telex: **014-44109**  
Fax: **(902) 566-2498**

President: **J.T. Zolper**

R & D Director: **R. John Whitaker**  
Telephone: **(902) 675-4895**

Employees: **6**  
R & D Employees: **4**

Founded: **1984**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: Development of processes for extraction/refinement of chemicals from algae.**

### **BIOTECHNOLOGY ACTIVITIES:**

### **OTHER ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Lambda/Kappa carrageenan separation process. Carrageenan/Polysaccharide refining processes.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **George I.H. Mason, Business Manager.**



# CASCO INC.

## HEAD OFFICE

**401 The West Mall  
Etobicoke, Ontario M9C 5H9**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 620-2300**

Telex:

Fax: **(416) 620-2385**

President: **Bruce MacNaughton**

R & D Director: **G.N. Fulford**  
Telephone: **(416) 620-2363**

Employees: **458**

R & D Employees: **6-8**

Manufacturing Director:

**Arnold Burwell**

Telephone: **(416) 620-2393**

Founded: **1858**

Annual Sales: **\$30+M**

R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Feed - Grain processing (corn wet milling) to supply food processing plants.**

## **BIOTECHNOLOGY ACTIVITIES:**

## **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Enzyme application to starch and corn.**

MANUFACTURING: **Enzyme used in production of corn sweeteners. Corn syrups, glucose, maltose and high fructose.**

SALES/OTHER(S):

AFFILIATIONS: **CPC International, U.S.A.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **G.N. Fulford, Vice-President and Technical Director.**

# CB RESEARCH INTERNATIONAL CORPORATION

## HEAD OFFICE

**P.O. Box 2010,  
#101-9865 West Saanich Road,  
Sidney, British Columbia V8L 3S3**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(604) 655-1944**

Telex:

Fax: **(604) 655-7131**

President: **Dr. Bryan Imber**

R & D Director: **Dr. Shawn Severn**

Telephone: **(604) 655-1944**

Employees: **15**

R & D Employees: **13**

Founded: **1986**

Annual Sales: **\$0-1M**

R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **R & D, consulting, biohazard research.**

## **BIOTECHNOLOGY ACTIVITIES:**

### RESEARCH & DEVELOPMENT:

- 1. DNA probes**
- 2. Antibody probes**
- 3. Chemical probes**
- 4. Biodegradation**
- 5. Mineral binding**
- 6. Biological monitoring systems**

### MANUFACTURING:

SALES/OTHER(S): **Consulting.**

## **OTHER ACTIVITIES:**

**Environmental monitoring.**

**Environmental chemistry.**

AFFILIATIONS: **CBM Bioventures: Dr. W. Kay, Tel.: (604) 655-3321, address as above; CBR International, Long Beach, California.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **1. Clients. 2. Cooperative ventures in resource industry.**

### COMMENTS:

CONTACT PERSONS: **Dr. Bryan Imber; Dr. S. Severn.**

# CEDARLANE LABORATORIES LIMITED

## HEAD OFFICE

**5516, 8th Line, R.R. 2  
Hornby, Ontario L0P 1E0**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 878-8891**  
Telex: **982340**  
Fax:

Manufacturing Director:  
**J.C. Course**

Telephone: **(416) 878-8891**

President: **J.C. Course**

R & D Director: **Ms. C.N. Greer**  
Telephone: **(416) 878-8891**

Employees: **9**  
R & D Employees: **3**

Founded: **1975**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Manufacturer of reagents for tissue typing and immunology re-  
search.**

## **BIOTECHNOLOGY ACTIVITIES:**

## **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **On-going reagents for immunol-  
ogy research.**

MANUFACTURING: **Monoclonal antibodies, complement, tis-  
sue typing reagents, HLA-AB typing trays, cell separation  
medium.**

SALES/OTHER(S): **Canadian distributor for several interna-  
tional companies offering: affinity purified antibodies;  
monoclonal antibodies; oncogene probes and controls;  
immunological reagents; RIA kits; pepticles; hormones;  
cell separation medium; HLA-DR typing trays; monoclonal  
antibodies to HIV proteins; immunological reagents; growth  
factors; southern blot apparatus and reagents.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Distributors in countries where Cedar-  
lane is not currently represented. Marketing agreements with researchers interested in  
commercializing their product.**

COMMENTS:

CONTACT PERSON: **Ms. C.N. Greer**

# CENTRE DE RECHERCHE EN SYLVICHIMIE DE L'OUTAOUAIS INC.

HEAD OFFICE

**11, rue Main  
C.P. 38  
Gatineau (Québec) J8P 6J1**

Telephone: **(819) 643-9099**  
Telex:  
Fax:

President: **Yvon Gauthier**

R & D Director: **Werner Kaepner**  
Telephone: **(819) 643-9099**

Employees:	<b>8</b>	Founded:	<b>1984</b>
R & D Employees:	<b>5</b>	Annual Sales:	<b>\$0-1M</b>
(In biotechnology: <b>2</b> )		R & D Expenses:	<b>\$0-0.5M</b>
		(In biotechnology: <b>\$150K</b> )	

RESEARCH FACILITY

**PRINCIPAL ACTIVITIES: R & D on the use of biomass for manufacturing chemicals, cellulose and food products.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: Agriculture: biodecomposition and fermentation. Forestry: products; cellulolysis and fermentation; lignification; new products. Single-cell proteins. Waste treatment. New products. Systems development. Chemical products and alternative energies.

MANUFACTURING: Fuel ethanol.

SALES/OTHER(S): Consulting. Research contracts in above-mentioned areas.

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Yvon Gauthier**

**OTHER ACTIVITIES:**

Scale-up of chemicals or semi-chemical processes for utilization of cellulosic bio-mass.

# CENTRE D'INSÉMINATION ARTIFICIELLE DU QUÉBEC (CIAQ) INC.

HEAD OFFICE

**3450, rue Sicotte  
C.P. 518  
Saint-Hyacinthe (Québec) J2S 7B8**

Telephone: **(514) 774-1141**  
Telex: **05-830542**  
Fax: **(514) 774-9318**

President: **William Laçoursière,**  
Executive Director: **Robert Chicoine**  
R & D Director: **Sylvie Des Marchais**  
Telephone: **(514) 774-1141**

Employees: **128**  
R & D Employees: **4**  
(In biotechnology: **0**)

RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Fernand Laliberté**

Telephone: **(514) 774-1141**

Founded: **1948**  
Annual Sales: **\$10-15M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$350K**)

**PRINCIPAL ACTIVITIES: Production of bovine semen and embryos. Improvement of the live stock.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Micromanipulation, sexing and freezing of embryos.**

MANUFACTURING: **Production of embryos.**

SALES/OTHER(S): **Frozen embryos.**

**Freezing of bovine semen.**

**Bull semen.**

**AFFILIATIONS: Faculté de médecine vétérinaire, Université de Montréal (CRR); Agriculture Canada - Station de recherche de Lennoxville; Association canadienne des éleveurs de bétail.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Technology transfer; temporary exchanges of personnel; participation of our R & D employees to research projects carried out in specialized laboratories.**

COMMENTS:

CONTACT PERSONS: **Sylvie Des Marchais, Agronomist; Daniel Bousquet, U.M.**

# CHAMPLAIN INDUSTRIES LIMITED

## HEAD OFFICE

**7200 West Credit Avenue  
Mississauga, Ontario L5N 5N1**

Telephone: **(416) 826-0801**  
Telex: **06-218719**  
Fax: **(416) 826-0212**

President: **Colwyn G. Rich**

R & D Director: **Jane E. Rich**  
Telephone: **(416) 826-0801**

Employees: **150**  
R & D Employees: **3**

## RESEARCH FACILITY

**Same as Head Office and  
Stanbridge Station, Québec  
J0J 2J0**

Manufacturing Director:  
**Carl H. Finch**

Telephone: **(416) 826-0801**

Founded: **1925**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Manufacture of hydrolyzed vegetable proteins, yeast extracts, peptones, milk replacers, caseinates, gum arabic.**

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Work is being carried out on casein, soy and gelatin peptones, using enzymes. Some work with fermentation. Some work with yeast.**

MANUFACTURING: **Manufacture of casein peptones.**

SALES/OTHER(S):

AFFILIATIONS: **CIFST; AOAC; IFT.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Information on world-wide biotechnology activities in the form of a publication.**

COMMENTS:

CONTACT PERSON: **Jane Rich**

### OTHER ACTIVITIES:

- Hydrolyzed vegetable proteins;
- Developing new flavours;
- Improving manufacturing processes;
- Non dairy creamers;
- Hydrolyzed vegetable proteins;
- Developing new flavours;
- Improving manufacturing processes;
- Non-dairy creamers.

# CHATEAU DES CHARMES WINES

## HEAD OFFICE

**P.O. Box 280**  
**St. Davids, Ontario L0S 1P0**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 262-4219**  
Telex:  
Fax:

Manufacturing Director:  
**Paul M. Bosc**

President: **Rodger Gordon**

R & D Director: **Paul M. Bosc**  
Telephone: **(416) 262-4219**

Employees: **20**  
R & D Employees: **6**

Founded: **1977**  
Annual Sales: **\$1-3M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Viticulture, winery.**

## **BIOTECHNOLOGY ACTIVITIES:**

## **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Clonal evaluation for winter hardiness of vines.**

MANUFACTURING: **Wine making.**

SALES/OTHER(S): **Wholesale and retail.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACTS PERSONS: **Paul M. Bosc; Dr. John Paroschy.**

# CHEMBIOMED LIMITED

## HEAD OFFICE

**Edmonton Research and Development Park  
P.O. Box 8050  
Edmonton, Alberta T6H 4N9**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(403) 450-6800**  
Telex: **037-3886**  
Fax: **(403) 450-6899**

Manufacturing Director:  
**David Rafter**

Telephone: **(403) 450-6800**

President: **E.J. Cuyler, B.Sc., M.B.A.**

R & D Vice-President: **Dr. Frank M. Unger**  
Telephone: **(403) 450-6800**

Employees: **70+**  
R & D Employees: **40**

Founded: **1977**  
Annual Sales: **\$1-3M**  
R & D Expenses: **\$5-7M**

**PRINCIPAL ACTIVITIES: Development, manufacture and sale of blood-typing reagents and immunosorbents for hematological applications.**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Carbohydrate haptens; lectins; anti-carbohydrate antibodies, proprietary extracorporeal devices (BIOSYNORB™). Novel adjuvant principles. Tumor diagnostics.**

**MANUFACTURING: Blood typing monoclonal antibodies. Affinity purified monoclonal antibodies.**

**SALES/OTHER(S): Blood typing reagents.**

**AFFILIATIONS: Owned by Government of Alberta.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Joint ventures with Canadian firms/institutions who lack suitable production facilities but have proprietary technology to develop and market innovative, health-care oriented products.**

**COMMENTS:**

**CONTACT PERSON: Dr. Frank M. Unger, Vice-President, Research and Development.**

### **OTHER ACTIVITIES:**

**Synthesis of immune-complexing soluble oligosaccharides. Synthesis of oligosaccharide analogs.**

**Carbohydrate-based immunosorbents (SYNSORB™); latex coated with artificial antigens for agglutination tests.**



# CHEMFET CANADA LTD.

## HEAD OFFICE

**340-342 Saulteaux Crescent  
Winnipeg, Manitoba R3J 3T2**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(204) 831-8077**

Telex:

Fax: **(204) 831-8069**

President: **Dr. Garry J. Smith**

R & D Director: **Al Hayden**

Telephone:

Employees: **46**

R & D Employees: **12**

Founded: **1984**

Annual Sales: **\$15-30M**

R & D Expenses: **\$1-3M**

Manufacturing Director:

**Al Hayden**

**PRINCIPAL ACTIVITIES: Development and manufacture of Chemfet technology chemical sensor products.**

## **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Fetal scalp pH electrode; levin tube pH probe; dental pH probe; blood pH and potassium electrode.**

**MANUFACTURING:**

**SALES/OTHER(S):**

## **OTHER ACTIVITIES:**

**AFFILIATIONS: US parent - Chemfet Corporation of Bellevue, Washington; NASA; various corporate co-developers of Chemfet technology applications.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Seeking product co-development partners for Chemfet technology applications.**

**COMMENTS: Partners will contribute to development programs and will have opportunities for exclusive licensing of application.**

**CONTACT PERSON: Dr. Garry J. Smith, President.**

# CIBA-GEIGY CANADA LTD. (Agricultural Division)

## HEAD OFFICE

**6860 Century Avenue  
Mississauga, Ontario L5N 2W5**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 821-4420**  
Telex:  
Fax:

Manufacturing Director:  
**G.P. Rich (Agricultural)**

Telephone: **(519) 623-7600**

President: **J. Wells**

R & D Director: **Dr. D.R. Ridley (Agricultural)**  
Telephone: **(416) 821-4420**

Employees: **250**  
R & D Employees: **30**

Founded: **1970**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$3-5M**

PRINCIPAL ACTIVITIES: **Agricultural - pesticides, seeds, animal health care, plant protection.**

## **BIOTECHNOLOGY ACTIVITIES: Agricultural**

## **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Animal health care, plant protection, seeds.**

MANUFACTURING: **None at present.**

SALES/OTHER(S): **None at present.**

AFFILIATIONS: **Funk Seeds Canada, Ciba-Geigy Ltd., Basle, Switzerland.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Working with research personnel within Ciba-Geigy internationally, and collaborating with Canadian university and government biotechnology scientists.**

COMMENTS:

CONTACT PERSON: **Dr. Ken W. Campbell, Manager, Research and Development, Funk Seeds, Ciba-Geigy Canada Ltd., RR#1 Plattsville, Ontario N0J 1S0, Tel.: (519) 696-2246.**

# C-I-L INC.

## HEAD OFFICE

**90 Sheppard Avenue East  
P.O. Box 200, Station "A"  
North York, Ontario M2N 6H2**

Telephone: **(416) 229-7000**  
Telex: **069-86505**  
Fax:

## RESEARCH FACILITY

**C-I-L Research Centre  
Sheridan Park Research  
Community  
2101 Hadwen Road  
Mississauga, Ontario L5K 2L3**

President and Chairman of the Board: **C.H. Hantho**  
R & D Director, Biotechnology: **Dr. D.J. Gannon**  
Telephone: **(416) 823-7160**  
Fax: **(416) 823-0044**

Employees:	<b>6,000</b>	Founded:	<b>1862</b>
R & D Employees:	<b>350</b>	Annual Sales:	<b>\$1.4B</b>
(In biotechnology:	<b>10</b> )	R & D Expenses:	<b>\$20-30M</b>
		(In biotechnology:	<b>\$1M</b> )

PRINCIPAL ACTIVITIES: **Chemical production and distribution. Agricultural microbiology.  
Forest industry inputs.**

## BIOTECHNOLOGY ACTIVITIES:

## OTHER ACTIVITIES

RESEARCH & DEVELOPMENT: **Microbial pesticides. Forage inoculants.**

MANUFACTURING:

SALES/OTHER(S): **Forage inoculants.**

AFFILIATIONS: **Imperial Chemical Industries PLC is the majority shareholder (73%) of C-I-L Inc. Remainder of shares are publicly traded on TSE.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Interested in licensing technologies for agricultural and forest industry applications.**

COMMENTS:

CONTACT PERSONS: **N.C.C. Gray; D.J. Gannon.**

# LES CLAY & SON LIMITED

## HEAD OFFICE

#3666-224 Street, Box 3040  
Langley, British Columbia V3A 4R3

## RESEARCH FACILITY

Same as Head Office

Telephone: (604) 530-5188  
Telex: 04-352848VCR  
Fax: (604) 534-3463

President: Leslie K.C. Clay

R & D Director: Leslie K.C. Clay  
Telephone: (604) 530-5188

Employees: 17  
R & D Employees: 3  
(In biotechnology: 3)

Founded: 1956  
Annual Sales: \$0-1M  
R & D Expenses: \$0-0.5M  
(In biotechnology: \$150K)

PRINCIPAL ACTIVITIES: Tissue culture of ornamental and horticultural species.

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: Ongoing research on development of new species through tissue culture. Development of a practical means of tissue culture of forest species.

### MANUFACTURING:

SALES/OTHER(S): Worldwide distribution of small plants grown from tissue culture.

### OTHER ACTIVITIES:

AFFILIATIONS: Affiliated with Canadian Forest Products on Forestry Research of Chamaecyparis nootkatensis, Pseudotsugha menziesii and Picea glauca through an FRDA arrangement.

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON:

# CLEARWATER FINE FOODS INC.

## HEAD OFFICE

**757 Bedford Highway  
Bedford, Nova Scotia B4A 2X3**

Telephone: **(902) 443-0550**  
Telex: **019-22729/CLEARCO**  
Fax: **(902) 443-8365**

President: **John Risley**

R & D Director: **Thomas H. Morse, Ph.D.**  
Telephone: **(902) 443-0550**

Employees: **4,000**  
R & D Employees: **10**

Founded: **1977**  
Annual Sales: **\$300M**  
R & D Expenses: **\$0.5-1M**

PRINCIPAL ACTIVITIES: **Industry leader in shellfish harvesting, processing and marketing.**

## RESEARCH FACILITY

**Same as Head Office  
and  
Clarke's Harbour, Nova Scotia  
B0W 1P0**

Manufacturing Director:  
**Colin MacDonald**

Telephone: **(902) 443-0550**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Ongoing development in packaging systems for fresh and frozen shellfish.**

MANUFACTURING: **Biological system storage for crustaceans and other related aquaculture systems.**

SALES/OTHER(S): **Fresh and frozen distribution channel articulation.**

## AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **International and domestic standardization of food laws and distribution standards.**

## COMMENTS:

CONTACT PERSON: **Thomas H. Morse, Ph.D.**

## OTHER ACTIVITIES:

# COASTECH RESEARCH INC.

## HEAD OFFICE

**869 West Third Street  
North Vancouver, British Columbia**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(604) 980-5992**  
Telex: **04-352888**  
Fax: **(604) 980-2737**

President: **P.B. Marchant**

R & D Director: **R.W. Lawrence**  
Telephone:

Employees: **26**  
R & D Employees: **12**

Founded: **1982**  
Annual Sales: **\$1-3M**  
R & D Expenses: **\$1-1.2M**

PRINCIPAL ACTIVITIES: **Metallurgical testing and research and piloting for process flow-sheet development.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Bioleaching to enhance gold recovery from refractory ores.**

MANUFACTURING: **Design and installation of commercial process bioleach facilities.**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **P.B. Marchant**

## OTHER ACTIVITIES:

# CONNAUGHT LABORATORIES LIMITED

## HEAD OFFICE

**1755 Steeles Avenue West  
Willowdale, Ontario M2R 3T4**

Telephone: **(416) 667-2701**  
Telex: **22184**  
Fax: **(416) 667-0313**

President: **Alun Davies**

R & D Director: **Dr. Keith J. Dorrington**  
Telephone: **(416) 667-2826**

Employees: **1100**  
R & D Employees: **162**  
(In biotechnology **162**)

## RESEARCH FACILITY

**Connaught Research Institute  
1755 Steeles Avenue West  
Willowdale, Ontario M2R 3T4**

Manufacturing Director:  
**Peter Campbell**

Telephone: **(416) 667-2663**

Founded: **1914**  
Annual Sales: **\$191M**  
R & D Expenses: **\$20M**  
(In biotechnology: **\$20M**)

PRINCIPAL ACTIVITIES: **Vaccines, insulin (joint venture with NOVO).**

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Emphasis on recombinant DNA-based pertussis and hepatitis vaccines. Also monoclonal antibody research, development of diagnostic kits, pilot plant fermentation and downstream processing.**

MANUFACTURING: **Microcarriers for scale-up of polio vaccines and diagnostic kits. Use of human diploid cells for rabies vaccine production.**

SALES/OTHER(S):

### OTHER ACTIVITIES:

- application of liposomes to vaccine delivery.
- pancreatic islet encapsulation and transplantation.

AFFILIATIONS: **Connaught Laboratories Inc., Swiftwater, Pennsylvania; Connaught-Novo Limited, Willowdale, Ontario.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Joint ventures (R & D) production and/or marketing of products obtained under licence; International marketing of products through UNICEF, WHO, etc.**

COMMENTS:

CONTACT PERSON: **Dr. John R. Vose, Director, Technology Development, Tel.: (416) 667-2627.**

# CONTINENTAL PHARMA CRYOSAN INC.

## HEAD OFFICE

**1625, rue Sherbrooke ouest  
Montréal (Québec) H3H 1E2**

Telephone: **(514) 935-4004**

Telex:

Fax: **(514) 935-5370**

President: **Thomas Hecht**

R & D Director: **Dr. Robert Heft**  
Telephone: **(514) 935-4004**

Employees: **25**

R & D Employees: **10**

(In biotechnology: **10**)

Founded: **1972**

Annual Sales: **\$60+M**

R & D Expenses: **\$0-0.5M**

(In biotechnology: **\$0-0.5M**)

**PRINCIPAL ACTIVITIES: One of the world's largest, independent suppliers of source plasma and blood derivatives for expanding home health care operations in the U.S.A. Supplies vaccines through its subsidiary Conpharma Vaccines Ltd. to international agencies.**

## RESEARCH FACILITY

**Same as Head Office**

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Gene cloning. Enzyme immobilization. Biocompatible materials. Heparin monitoring and control. Heparin filters for cardiac surgery and hemodialysis.**

MANUFACTURING:

SALES/OTHER(S):

### OTHER ACTIVITIES:

AFFILIATIONS: **Massachusetts Institute of Technology, (Boston); Biotechnology Research Institute, (Montreal).**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON:



# COOLWATER FARMS LIMITED

## HEAD OFFICE

**591 Liverpool Road  
Pickering, Ontario L1W 1R1**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 831-0697**  
Telex:  
Fax:

General Manager:  
**G.A. Kamaitis**

Telephone: **(416) 831-0697**

President: **Wm. J. Hemmerick**

R & D Vice-President: **J.H. Neil**  
Telephone: **(416) 831-0697**

Employees: **18**  
R & D Employees: **4**  
(In Biotechnology: **4**)

Founded: **1985**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In Biotechnology: **\$100K**)

**PRINCIPAL ACTIVITIES: Aquaculture production of edible fish. R & D relating to utilization of aquatic resources.**

## **BIOTECHNOLOGY ACTIVITIES:**

## **OTHER ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Manipulation of reproduction to provide year-round stock. Harvest a culture of aquatic invertebrates for culture of new fish species. Fish waste utilization.**

**MANUFACTURING: Development of fertilizer from fish waste solids by aerobic composting. Harvesting of several trophic levels of aquatic production and use as fish feed.**

**SALES/OTHER(S): Products in development stage or utilized internally for fish production.**

**AFFILIATIONS: Member: International Association for Great Lakes Research; Water Pollution Control Federation; American Fisheries Society; International Association of Theoretical and Applied Limnology; American Society of Limnology and Oceanography, Inc.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Exchange of ideas and technology for processes and products resulting from aquatic production. Development of joint venture opportunities. Sharing of facility and resources with University and Government communities. Seed money for development of opportunities.**

**COMMENTS: Some R & D conducted at same facility by Limnos Ltd., John Neil, President.**

**CONTACT PERSON: John H. Neil, M.A., C.P.H.**

# CORPORATION BDG

## HEAD OFFICE

**1708, rue de Pont-Gravé  
Saint-Bruno (Québec) J3V 4Y4**

Telephone: **(514) 653-2205**  
Telex:  
Fax:

President: **Gilles Brisson**

R & D Director: **Yves Deschamps**  
Telephone: **(514) 496-6366**

Employees: **1**  
R & D Employees: **1**  
(In biotechnology: **1**)

Founded: **1986**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$0-0.5M**)

**PRINCIPAL ACTIVITIES: Evaluation, research and development of diagnostic equipment for medical laboratories. Professional consultants.**

## RESEARCH FACILITY

**Biotechnology Research Institute  
6100, avenue Royalmount  
Montréal (Québec) H4P 2R2**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: Clarification of principles and testing of diagnostic products.

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **We are looking for partnerships in diagnostic areas.**

COMMENTS:

CONTACT PERSON:

### **OTHER ACTIVITIES:**

# COSEM NEUROSTIM LTÉE

HEAD OFFICE

**2954, boulevard Laurier, Suite 330  
Sainte-Foy (Québec)**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(418) 657-7387**  
Telex:  
Fax:

President: **J.M. Gauthier, P.Eng.**

R & D Director: **J. Beaulieu, Ph.D.**  
Telephone: **(418) 657-7387**

Employees: **8**  
R & D Employees:  
(In biotechnology: **5 \***)

Founded: **1987**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$1-3M**  
(In biotechnology: **\$1.5M**)

**PRINCIPAL ACTIVITIES: Research, development, manufacture and sale of body-implanted central nervous system stimulators (Cochlear implants).**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: Health and medical care. Medical systems and instruments.

MANUFACTURING: Health care products. Medical systems and instruments.

SALES/OTHER(S): Health care products. Medical systems and instruments.

AFFILIATIONS: TIEM Canada Inc.

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Our company would be interested in partnerships for implementation of the above-mentioned technology.

COMMENTS: We have developed a manufacturing process for microelectrodes.

CONTACT PERSON: J.M. Gauthier, P.Eng., President.

\* Contractual R & D is carried out by Canadian university laboratories.

# CSP FOODS LTD.

## HEAD OFFICE

**#870 - 360 Main Street  
Winnipeg, Manitoba R3C 3Z3**

## RESEARCH FACILITY

**75 - 33rd Street East  
Saskatoon, Saskatchewan  
S7K 3K7**

Telephone: **(204) 947-6871**  
Telex: **075-87638**  
Fax: **(204) 946-1157**

President, C.E.O.: **A. Huffman**

R & D Director: **H. Schafer**  
Telephone: **(306) 862-4686**

Employees: **450**  
R & D Employees: **4**

Founded: **1975**  
Annual Sales: **\$200+M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Production of edible oils including canola, sunflower, and high erucic acid oil.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Development of new oilseed crops. Improvement of existing crops through biotechnology.**

MANUFACTURING: **Use of enzymatic processes.**

SALES/OTHER(S):

AFFILIATIONS: **Cooperative Crop Development Group; Enersearch; Canola Council of Canada.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Collaboration in the fields of applied biotechnology in oilseed production and processing.**

COMMENTS:

CONTACT PERSON: **Mark Pickard, Technical Project Manager, CSP Foods Ltd.**

### **OTHER ACTIVITIES:**

# CYANAMID CANADA INC.

## HEAD OFFICE

**88 McNabb Street  
Markham, Ontario L3R 6E6**

## RESEARCH FACILITY

**Head Office - Administration:  
Baie D'Urfé, Québec  
Niagara Falls, Ontario**

Telephone: **(416) 470-3600**  
Telex: **06-966602**  
Fax: **(416) 470-2167**

President: **W.J. Foran**

R & D Director: **Dr. G.B. Kinoshita (Crop Protection Division)**  
Telephone: **(416) 470-3675**

Employees:	<b>2000</b>	Founded:	<b>1907</b>
R & D Employees:	<b>50</b>	Annual Sales:	<b>\$30+M</b>
		R & D Expenses:	<b>\$10+M</b>

**PRINCIPAL ACTIVITIES: Agricultural chemicals, specialty chemicals, plant food, pharmaceuticals, medical devices.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Animal health, human health, pesticides, herbicides.**

MANUFACTURING: **Pharmaceuticals (human); animal vaccines (through Langford).**

SALES/OTHER(S): **Crop protection chemicals, pharmaceuticals, animal health products.**

AFFILIATIONS: **Langford Inc.; Quadra Logic Technologies Inc.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **D.P. Lawson, Tel.: (416) 470-3756.**

### **OTHER ACTIVITIES:**

**Electronic chemicals, mining reagents.**

**Chemicals.**

**Plant food, medical devices.**

# CYBERFLUOR INC.

HEAD OFFICE

**179 John Street  
Toronto, Ontario M5T 1X4**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 977-5450**  
Telex: **0622335**  
Fax: **(416) 977-5032**

Manufacturing Director:  
**James Clelland**

Telephone: **(416) 977-5450**

President: **James Clelland**

R & D Director: **E.P. Diamandis, M.D., Ph.D.**  
Telephone: **(416) 977-5450**

Employees: **23**  
R & D Employees: **12**

Founded: **1985**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0.5-1M**

**PRINCIPAL ACTIVITIES: Research, development, manufacture and marketing of time-resolved fluorescence (TR-FIA) instruments and tests for hospital and commercial laboratories.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT:

- **monoclonal antibodies**
- **patented fluorescent label (EuroFluor S™)**
- **Immunodiagnostic tests include thyroid and non-thyroid hormones, reproductive endocrinology, neonatal screening, anemia and therapeutic drug monitoring.**

**Instruments using laser technology.**

MANUFACTURING: **Immunodiagnostic tests manufactured in Canada.**

**Instruments manufactured in Canada.**

SALES /OTHER(S): **Sales of both instruments and immunodiagnostic tests through distributors.**

AFFILIATIONS: **The Hospital for Sick Children's Research Development Corporation.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Distributorships, corporate partnerships, licensing (instrument and/or immunodiagnostic test manufacture).**

COMMENTS:

CONTACT PERSON: **Ms. Thealzel Lee, Product Manager.**

# F.V.M.P.C.A. DAIRYLAND FOODS

## HEAD OFFICE

**6800 Lougheed Highway  
Burnaby, British Columbia V5A 1W2**

Telephone: **(604) 420-6611**  
Telex: **043-54591**  
Fax: **(604) 420-9700**

President: **P.J. Friesen**  
Chief Executive Officer: **D.E. Coe**  
R & D Director: **R.E.T. Irwin**  
Telephone: **(604) 420-6611**

Employees: **1200**  
R & D Employees: **3**  
(In biotechnology: **3**)

## RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**R.G. Webb**

Telephone: **(604) 420-6611**

Founded: **1917**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$0-0.5M**)

**PRINCIPAL ACTIVITIES: Dairy processing, dairy food manufacturing, beverage production.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Reverse osmosis concentrations of milk whey and skim milk and the utilization of those concentrates in dairy foods. Product development using UHT aseptic packaging process to other than milk dairy foods.**

MANUFACTURING: **Dairy foods, fruit juices and drinks.**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON:

## OTHER ACTIVITIES:

# DEARBORN CHEMICAL COMPANY LIMITED

## Dearborn Environmental Consulting Group

<p><u>HEAD OFFICE</u>  <b>P.O. Box 3060, Station A</b>  <b>Mississauga, Ontario L5A 3T5</b></p> <p>Telephone: <b>(416) 279-2222</b>          Telex: <b>06-961145</b>          Fax: <b>(416) 279-0020</b></p> <p>President: <b>H. Shymko</b></p> <p>R &amp; D Director: <b>J. Waller, Ph.D.</b>          Telephone: <b>(416) 279-2222</b></p> <p>Employees: <b>260</b>          R &amp; D Employees: <b>6</b>          (In biotechnology: <b>4</b>)</p> <p>PRINCIPAL ACTIVITIES: <b>Water treatment.</b></p>	<p><u>RESEARCH FACILITY</u>  <b>3451 Erindale Station Road</b>  <b>P.O. Box 3060, Station A</b>  <b>Mississauga, Ontario L5A 3T5</b></p> <p>Manufacturing Director:  <b>V. Uzbalis</b></p> <p>Telephone: <b>(416) 279-2222</b></p> <p>Founded: <b>1913</b>          Annual Sales: <b>\$30+M</b>          R &amp; D Expenses: <b>\$1-3M</b>          (In biotechnology: <b>\$0.5M</b>)</p>
<p><b>BIOTECHNOLOGY ACTIVITIES:</b></p> <p><u>RESEARCH &amp; DEVELOPMENT:</u> <b>Fuel and Energy: Biogas (anaerobic fermentation). Pollution control: anaerobic treatment of toxic wastewater. Enzymes: enzymes for biotreatment enhancement.</b></p> <p><u>MANUFACTURING:</u> <b>Automated process control software for anaerobic and aerobic wastewater treatment.</b></p> <p><u>SALES/OTHER(S):</u> <b>Sales for toxic industrial wastewater bio-treatment systems.</b></p> <p><u>AFFILIATIONS:</u> <b>W.R. Grace &amp; Co.</b></p> <p><u>FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:</u></p> <p><u>COMMENTS:</u></p> <p><u>CONTACT PERSON:</u> <b>Igor J. Marvan, P.Eng., Technical Director.</b></p>	<p><b>OTHER ACTIVITIES:</b></p> <p><b>Novel solid and liquid wastes treatment technology development.</b></p> <p><b>Wastewater treatment chemicals (biocides, polymers, etc.).</b></p> <p><b>Water/wastewater treatment chemical sales support. Computer-aided modelling of advanced wastewater treatment systems.</b></p>



# DEGREMONT - INFILCO LTÉE

## HEAD OFFICE

**160-D, boulevard St-Joseph  
Lachine (Québec) H8S 2L3**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: (514) 634-8011  
Telex: 05-821692  
Fax: (514) 634-3102

President: **O. Skorzewski, P.Eng.**

R & D Director: **Robert Cyr, P.Eng.**  
Telephone: (514) 634-8011

Employees: **80**  
R & D Employees: **2**

Founded: **1960**  
Annual Sales: **\$7-10M**  
R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: Treatment of drinking water, industrial effluents and wastewater by biological, physical, chemical or physico-chemical processes. Purification of wastewater.**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Biological filtering of wastewater using Biolite™ media to trap and retain bacteria for wastewater degradation.**

**MANUFACTURING: Biological filters. (Water purification plant for urban area of Québec). Biodrof™ filters for surface beds. Biofor™ for submerged beds.**

**SALES/OTHER(S): Studies on pilot plants; design, manufacture setting-up and starting water treatment plants.**

**AFFILIATIONS: Subsidiary of Degremont S.A.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:**

**COMMENTS:**

**CONTACT PERSON: Robert Cyr, P.Eng., Technical Manager.**

### **OTHER ACTIVITIES:**

**Ozonization process for pulp and paper making.**

**Treatment systems.**

**Studies on pilot plants; design, manufacture, setting up and starting water treatment plants.**

# DENISON MINES LIMITED

HEAD OFFICE

**Royal Bank Plaza  
Box 40, Suite 3000  
Toronto, Ontario M8J 2K2**

Telephone: (416) 865-1991  
Telex:  
Fax: (416) 865-0632

President: **J.D. Fowler**

R & D Director: **P. Townsend, P.Eng.**  
Telephone: (705) 461-6214

Employees: **1700**  
R & D Employees: **3**  
(In biotechnology: **3**)

RESEARCH FACILITY

**Elliot Lake Operations  
P.O. Box B2600  
Elliot Lake, Ontario P5A 2K2**

Vice-President:  
**C.K. Bevner**  
General Manager:  
**F.P. Kerr**

Telephone: (705) 461-6200

Founded: **1957**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$0.5-1M**  
(In biotechnology: **\$0.5-1M**)

**PRINCIPAL ACTIVITIES: Mining and processing of uranium ore. Commercialization of yellowcake (U<sub>3</sub>O<sub>8</sub>) and Yttria oxide (Y<sub>2</sub>O<sub>3</sub>).**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: Several cooperative research contracts in the fields of bio-extractive metallurgy of uranium ore.

MANUFACTURING:

SALES/OTHER(S): Ongoing in-house research to extend and enhance the leaching process.

AFFILIATIONS: Several Provincial and Federal government cooperative research contracts, primarily in the fields of bioleaching technology and mining rockmass stability.

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Any technology transfer or cooperative research which may enhance the competitive positions of lower grade uranium mining.

COMMENTS:

CONTACT PERSON: Manager of Engineering Services, Denison Mines, Elliot Lake, Ontario P5A 2K2.

**OTHER ACTIVITIES:**

Research in conjunction with Canmet into the effects of backfill on stabilization of post pillows.

# DEXTRAN PRODUCTS LIMITED

## HEAD OFFICE

**#415-421 Comstock Road  
Scarborough, Ontario M1L 2H5**

## RESEARCH FACILITY

Telephone: **(416) 755-2231**

Telex:

Fax: **(416) 755-0334**

President: **George Usher**

R & D Director:

Telephone:

Employees: **21**

R & D Employees: **3**

(In biotechnology: **2**)

Founded: **1966**

Annual Sales: **\$2.5M**

R & D Expenses: **\$400K**

(In biotechnology: **\$300K**)

**PRINCIPAL ACTIVITIES: Veterinary pharmaceuticals, tissue culture products, high performance liquid chromatography columns.**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Production of substitutes for fetal bovine serum, and improving said substitutes. New HPLC products.**

**MANUFACTURING: Production of tissue culture media supplements. Production of high pressure liquid chromatography columns.**

**SALES/OTHER(S):**

**AFFILIATIONS:**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:**

**COMMENTS:**

**CONTACT PERSON:**

### **OTHER ACTIVITIES:**

**Improved fermentation procedures for the production of dextran.**

**Production of veterinary products and dextran derivatives.**

# DIAGNOSTIC CHEMICALS LIMITED

## HEAD OFFICE

**West Royalty Industrial Park  
Charlottetown, Prince Edward Island C1E 1B0**

Telephone: **(902) 566-1396**  
Telex: **014-44173**  
Fax: **(902) 566-2498**

President: **J. Regis Duffy**

R & D Director: **Bill Herndon**  
Telephone: **(902) 566-1396**

Employees: **40**  
R & D Employees: **10**

## RESEARCH FACILITY

Manufacturing Director:  
**Julien Gaudin**

Telephone: **(902) 566-1396**

Founded: **1970**  
Annual Sales: **\$1-3M**  
R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: Manufacturer of specialty chemicals, enzymes and diagnostic kits for the determination of various components in blood.**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Development of immunodiagnostic procedures and kits using monoclonal and polyclonal antibodies.**

**MANUFACTURING: Isolation of a number of enzymes, i.e. peroxidase GLDH, urease, cholesterol esterase, etc. Production of immunodiagnostic reagents and kits.**

SALES/OTHER(S):

AFFILIATIONS: **DCL (USA), Monroe, Connecticut, U.S.A.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON::

### **OTHER ACTIVITIES:**

**Manufacture of diagnostic kits for various components in blood, i.e., glucose cholesterol, etc. and research biochemicals.**

# DIVERSIFIED RESEARCH LABORATORIES LIMITED

## (A Division of George Weston Limited)

<p><u>HEAD OFFICE</u>  <b>1047 Yonge Street</b>  <b>Toronto, Ontario M4W 2L2</b></p> <p>Telephone:       <b>(416) 922-5100</b>          Telex:           <b>065-28057</b>          Fax:              <b>(416) 922-4318</b></p> <p>President:</p> <p>R &amp; D Director:   <b>Dr. G.R. Lawford</b>          Telephone:       <b>(416) 922-5100</b></p> <p>Employees:        <b>95-100</b>          R &amp; D Employees:</p>	<p><u>RESEARCH FACILITY</u>  <b>Same as Head Office</b></p> <p>Founded:           <b>1947</b>          Annual Sales:     <b>N/A</b>          R &amp; D Expenses:  <b>\$3-5M</b></p>
<p><b>PRINCIPAL ACTIVITIES: Research, development, consulting, and technical services for George Weston Limited as well as other companies on a contract basis.</b></p>	
<p><b>BIOTECHNOLOGY ACTIVITIES:</b></p> <p><u>RESEARCH &amp; DEVELOPMENT:</u> <b>Fuel/Energy: Ethanol fermentations; Biomass conversions. Food: microbial lipids/biosurfactants; Single cell proteins. Chemicals: microbial Polysaccharides; Mycotoxins. Waste treatment / by-product utilization.</b></p> <p><u>MANUFACTURING:</u></p> <p><u>SALES/OTHER(S):</u> <b>Contract research, consulting, contract pilot scale fermentations/bioprocessing.</b></p>	<p><b>OTHER ACTIVITIES:</b></p> <p><b>Food processing technologies.</b></p>
<p><u>AFFILIATIONS:</u> <b>Division of George Weston Limited; Partner in Bio-Hol Developments.</b></p>	
<p><u>FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:</u></p>	
<p><u>COMMENTS:</u></p>	
<p><u>CONTACT PERSON:</u> <b>Dr. G. Ross Lawford</b></p>	

# DOMINION BIOLOGICALS LIMITED

## HEAD OFFICE

**179 Esplanade  
Truro, Nova Scotia B2N 5G9**

Telephone: **(902) 895-2846**  
Telex: **019-34581**  
Fax: **(902) 468-3599**

President: **Sam Brushett**

R & D Director: **D. Dobbie**  
Telephone: **(902) 895-1571 ext. 487**

Employees: **35**  
R & D Employees: **8**  
(In biotechnology: **6**)

Founded: **1972**  
Annual Sales: **\$5-7M**  
R & D Expenses: **\$1-3M**  
(In biotechnology: **\$1.2M**)

## RESEARCH FACILITY

**Cox Institute - NSAC  
P.O. Box 1035  
Truro, Nova Scotia B2N 5G9**

Manufacturing Director:  
**R. Townsend**

Telephone: **(902) 893-7113**

PRINCIPAL ACTIVITIES: **Health - Human Diagnostics (Production of immunodiagnostic reagents and test systems).**

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Hybridoma research to produce monoclonal antibodies for use in "state-of-the-art" diagnostic systems.**

MANUFACTURING: **Monoclonal and polyclonal antibody-based reagents and test systems, for immunohematology and infectious disease diagnostics.**

SALES/OTHER(S): **Direct sales force in Canada and network of international distributors in Europe and Middle East.**

### AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Co-development of immunodiagnostic reagents and/or test systems for hematology, immunohematology and microbiology. Exclusive marketing and/or licensing of instrument-based diagnostic test systems.**

### COMMENTS:

CONTACT PERSON: **Sam Brushett**

### OTHER ACTIVITIES:

# DOMTAR INC.

## HEAD OFFICE

**395, boulevard de Maisonneuve ouest  
Montréal (Québec) H3R 1L6**

## RESEARCH FACILITY

**C.P. 300  
Senneville (Québec) H9X 3L7**

Telephone: **(514) 848-5400**  
Telex:  
Fax:

President: **J.H. Smith**

Vice-Pres. Research & Environmental Technolgy: **Dr. S.S. Danyluk**  
Telephone: **(514) 457-6810**

Employees:	<b>16,000</b>	Founded:	<b>1903</b>
R & D Employees:	<b>135</b>	Annual Sales:	<b>\$30+M</b>
		R & D Expenses:	<b>\$10+M</b>

**PRINCIPAL ACTIVITIES: Pulp and paper. Packaging. Construction Materials. Specialty chemicals. Research Centre.**

### **BIOTECHNOLOGY ACTIVITIES: Research Centre**

**RESEARCH & DEVELOPMENT: Isolation, testing and cloning of specialized microorganisms for up-grading of natural resource base products, specialty chemicals, waste treatment.**

### MANUFACTURING:

### SALES/OTHER(S):

### AFFILIATIONS:

### FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

### COMMENTS:

### CONTACT PERSON:

### **OTHER ACTIVITIES:**

**Research activities in pulp and paper, construction materials, salt, gypsum, organics, inorganic products and new process development.**

**Packaging; pulp and paper, including fine papers, newsprint and specialties, bleached pulp and lumber, gypsum board, roofing and laminates; salt, specialty chemicals, preserved wood products.**

**Oil and gas explorations product.**

# DU PONT CANADA INC.

## HEAD OFFICE

**Box 2200 Streetsville  
Mississauga, Ontario L5M 2H3**

## RESEARCH FACILITY

**Kingston, Ontario**

Telephone: **(416) 821-3300**  
Telex: **06-22304**  
Fax: **(416) 821-5653**

President: **J.E. Newall**

R & D Director: **G.B. Dyer**  
Telephone: **(613) 548-5330**

Employees: **4,000**  
R & D Employees: **150 +**

Founded: **1862**  
Annual Sales: **\$1.3B**  
R & D Expenses: **\$15+M**

PRINCIPAL ACTIVITIES: **Major producer of plastics, films, fibres; also produce chemicals and paints. Biotechnology is in funded R & D at universities.**

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Enzymes, membranes, etc.  
University of Ottawa: insecticides. Queen's: tis-  
sue/wound healing.**

### MANUFACTURING:

SALES/OTHER(S): **Supplier of reagents and instruments for  
biotechnology.**

AFFILIATIONS: **E.I. Dupont, Wilmington, Delaware (Parent Company).**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Joint ventures, acquisitions, research  
partnerships.**

COMMENTS: **Resale supplier to health care, agriculture, forestry, food markets.**

CONTACT PERSON: **P.G. Hamilton, Director, Corporate Development.**

### OTHER ACTIVITIES:



# ELANCO (Division of Eli Lilly Canada Inc.)

## HEAD OFFICE

**3650 Danforth Avenue  
Scarborough, Ontario M1N 2E8**

Telephone: **(416) 694-3221**  
Telex:  
Fax:

President: **Arthur J. Benvenuto**

R & D Director: **Dr. Gerry F. McManus**  
Telephone: **(519) 681-5261**

Employees: **30+**  
R & D Employees: **7**

## RESEARCH FACILITY

**#305 - 313 Consortium Court  
London, Ontario N6E 2S8**

Manufacturing Director:  
**P. Winnett**

Telephone: **(519) 681-5261**

Founded: **1938**  
Annual Sales: **\$16+M**  
R & D Expenses: **\$~1M**

PRINCIPAL ACTIVITIES: **Manufacture of animal health care products.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Studies regarding three separate DNA compounds. Poultry: in-house trials. Experiments designed to support new product registration, and existing product supplemental registrations for animal health and agricultural chemical products.**

MANUFACTURING: **Finishing in Canada of animal health care products.**

SALES/OTHER(S):

## OTHER ACTIVITIES:

AFFILIATIONS: **Canadian subsidiary of Eli Lilly and Company, Indianapolis, Indiana, U.S.A.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Always interested in joint ventures and consortia.**

COMMENTS:

CONTACT PERSON: **Dr. Gerry F. McManus**

# ELITE SEED POTATO FARM

HEAD OFFICE

**R.R. #1, Alberton  
Prince Edward Island, C0B 1B0**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(902) 853-2619**  
Telex: **014-44198**  
Fax: **(902) 566-4914**

Manufacturing Director:  
**Allan Parker**

Telephone: **(902) 853-2619**

President: **Allan Parker**

R & D Director: **Norma Jean Lank**  
Telephone: **(902) 853-2619**

Founded: **1962**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

Employees: **9**  
R & D Employees: **2**

PRINCIPAL ACTIVITIES: **Production of "nuclear" (basic seeds) stock of seed potatoes.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT:

MANUFACTURING: **Rapid increase through tissue culture of numerous varieties of disease-free seed potato stocks.**

SALES/OTHER(S):

AFFILIATIONS: **Tissue Culture Association of Atlantic Canada.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Exchange of information with others in the same field.**

COMMENTS:

CONTACT PERSON: **Allan Parker**

# ENDOGRO SYSTEMS INC.

HEAD OFFICE

**67 Eaglewood Drive  
Bedford, Nova Scotia B4A 3B3**

RESEARCH FACILITY

**Biology Department  
Dalhousie University  
Halifax, Nova Scotia B3H 4H6**

Telephone: **(902) 835-9125**  
Telex:  
Fax:

President: **Sean Morrison**

R & D Director: **Sean Morrison**  
Telephone: **(902) 424-3545**

Employees: **3**  
R & D Employees: **3**  
(All in biotechnology)

Founded: **1987**  
Annual Sales: **N/A**  
R & D Expenses: **\$0-0.5M**  
(All in biotechnology)

**PRINCIPAL ACTIVITIES: Developing technologies for the agricultural use of vesicular-arbuscular mycorrhizal fungi.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Developing technologies for the agricultural use of vesicular-arbuscular mycorrhizal fungi.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS: **Atlantic Institute of Biotechnology.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Joint ventures with commercial interests in the agricultural industry.**

COMMENTS:

CONTACT PERSON: **Sean Morrison**

# ENSCOR INC.

## HEAD OFFICE

**156 Duncan Mill Road  
Don Mills, Ontario M3B 3N2**

Telephone: **(416) 449-3535**

Telex:

Fax: **(416) 449-9887**

President: **Martin Simon**

R & D Director: **Dr. Samuel Asculai**

Telephone: **(416) 366-4863,**

Fax: **(416) 366-4892**

Employees: **50**

R & D Employees: **2**

(In biotechnology: **15 contractors**)

Founded: **1978**

Annual Sales: **\$30M**

R & D Expenses: **\$0-0.5M**

(In biotechnology: **\$200K**)

## RESEARCH FACILITY

**8 King Street East, Suite 105  
Toronto, Ontario M5C 1B5**

PRINCIPAL ACTIVITIES: **Real estate development including residential, low and high rise apartment buildings. Biotechnology: pesticides for agriculture and forestry; pharmaceuticals for human health care - at universities.**

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Fine chemicals; exotic mushrooms; ectomychorrhizal fungi; biofungicides - carried out at McGill and Laval Universities.**

MANUFACTURING:

SALES/OTHER(S):

### OTHER ACTIVITIES:

AFFILIATIONS: **Research carried out at Laval and McGill Universities; The Rose Group; Tele-Radio Systems Limited; Syntex Inc., U.S.A.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Partners for joint ventures.**

COMMENTS:

CONTACT PERSON: **Dr. S. Asculai**

# ENVIROCON PACIFIC LTD.

<p><u>HEAD OFFICE</u>  <b>#205 - 2250 Boundary Road          Burnaby, British Columbia V5M 3Z3</b></p>	<p><u>RESEARCH FACILITY</u>  <b>Same as Head Office</b></p>
<p>Telephone: <b>(604) 291-0292</b>          Telex:          Fax: <b>(604) 291-2139</b></p>	<p>Manufacturing Director:  <b>Glen O. Stewart (Vice-Pres.)</b></p> <p>Telephone: <b>(604) 291-0292</b></p>
<p>President: <b>Bruce W. Jenkins</b></p>	
<p>R &amp; D Director: <b>P. Ross Murray (Vice-Pres.)</b>          Telephone: <b>(604) 291-0292</b></p>	
<p>Employees: <b>52</b>          R &amp; D Employees: <b>4</b></p>	<p>Founded: <b>1971</b>          Annual Sales: <b>\$1-3M</b>          R &amp; D Expenses: <b>\$0-0.5M</b></p>
<p>PRINCIPAL ACTIVITIES: <b>Commercial smolt production and environmental resource consulting.</b></p>	
<p><b>BIOTECHNOLOGY ACTIVITIES:</b></p>	<p><b>OTHER ACTIVITIES:</b></p>
<p><u>RESEARCH &amp; DEVELOPMENT:</u> <b>Genetics and broodstock development.</b></p>  <p><u>MANUFACTURING:</u> <b>Juvenile salmonids ("smolts").</b></p>  <p><u>SALES/OTHER(S):</u> <b>Smolts.</b></p>  <p><u>AFFILIATIONS:</u> <b>B.C. Salmon Farmers Association.</b></p>  <p><u>FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:</u> <b>Aquaculture Development, Genetic Selection - national and International.</b></p>  <p><u>COMMENTS:</u></p>  <p><u>CONTACT PERSON:</u> <b>P. Ross Murray</b></p>	

# ENVIROMINE INC.

## HEAD OFFICE

**24, rue Viger  
Beauport (Québec) G1B 1L4**

## RESEARCH FACILITY

**2575, rue Watt, Suite 6  
Sainte-Foy (Québec) G1P 3T2**

Telephone: **(418) 666-9430**  
Telex:  
Fax:

President: **André Paquet**

R & D Director: **Roger Guay, Ph.D.**  
Telephone: **(418) 656-5795**

Employees: **3**  
R & D Employees: **1**

Founded: **1987**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Systems Development. Biodegradation of cyanides. Reclamation of mining sites.**

### BIOTECHNOLOGY ACTIVITIES:

### OTHER ACTIVITIES:

RESEARCH & DEVELOPMENT: **Selection of bacterial strains. Development of bactericides. Biodegradation of toxic products.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Technological cooperation; technical feasibility; partnerships in some projects.**

COMMENTS:

CONTACT PERSONS: **Dr. Roger Guay, Département de microbiologie, Faculté de médecine de l'Université Laval, Sainte-Foy (Québec) G1K 7P4, Tel.: (418) 656-5795; Dr. Antoine Karam, Département des Sols, Université Laval, Tel.: (418) 696-2131, ext. 84.**

# ÉQUIPEMENT MONITEUR INC.

## HEAD OFFICE

**445, boulevard Industriel  
Saint-Eustache (Québec) J7R 5R3**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(514) 472-6620**

Telex:

Fax: **(514) 472-9294**

President: **Ervin Mak**

R & D Director: **Ervin Mak**  
Telephone: **(514) 472-6620**

Employees: **22**

R & D Employees: **5**

(In Biotechnology: **5**)

Manufacturing Director:

**Pierre R. Moffat**

Telephone: **(514) 472-6620**

Founded: **1977**

Annual Sales: **\$1-3M**

R & D Expenses: **\$1M**

(In Biotechnology: **\$1M**)

**PRINCIPAL ACTIVITIES: Distribution of diagnostics, and manufacture of blood serum analysers.**

## **BIOTECHNOLOGY ACTIVITIES:**

## **OTHER ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Blood serum analysers. Reagent kits for treatment of cancer, according to the FADU technique.**

**MANUFACTURING: Blood serum analysers. Reagent kits for the treatment of cancer, according to the FADU technique.**

**SALES/OTHER(S): Blood serum analysers. Reagent kits for the treatment of cancer, according to the FADU technique.**

## **AFFILIATIONS:**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Exclusive distribution agreements (with a performance threshold) for specified areas.**

## **COMMENTS:**

**CONTACT PERSON: Ervin Mak**

# ESSA - Environmental and Social Systems Analysts Ltd.

HEAD OFFICE

**P.O. Box 12155 - Nelson Square  
#705 - 808 Nelson Street  
Vancouver, British Columbia V6Z 2H2**

Telephone: (604) 689-2912  
Telex:  
Fax:

President: **Robert R. Everitt**

R & D Director: **David R. Marmorek**  
Telephone: (604) 689-2912

Employees: **18**  
R & D Employees: **15**  
(In biotechnology: **15**)

Founded: **1979**  
Annual Sales: **\$1-3M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$0-0.5M**)

RESEARCH FACILITY

**Same as Head Office**

**PRINCIPAL ACTIVITIES: R & D in artificial intelligence, forestry science, fisheries science, environmental science and acidic precipitation.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Methods of predicting, monitoring and screening environmental impacts of human activities. Application of principles of systems ecology, adaptive management, experimental design and expert systems to resource management.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Cooperation with academic, industrial or government agencies searching for innovative solutions to environmental and resource management problems.**

COMMENTS:

CONTACT PERSONS: **David R. Marmorek; Nicholas C. Sonntag.**



# EXPORT PACKERS COMPANY LIMITED

## HEAD OFFICE

**250 Summerlea Road  
Bramalea, Ontario L6T 3V6**

Telephone: **(416) 792-9700**  
Telex: **069-88533**  
Fax: **(416) 792-7421**

President: **John Hoberg Lee**

R & D Director: **Leslie Carvalho**  
Telephone: **(204) 477-1830**  
Fax: **(204) 475-7740**

Employees: **100**  
R & D Employees: **8**  
(In biotechnology: **8**)

## RESEARCH FACILITY

**70 Irene Street  
Winnipeg, Manitoba R3T 4E1**

Manufacturing Director:  
**Leslie Carvalho**

Telephone: **(204) 477-1830**  
Telex: **07-587641 (Winnipeg)**

Founded: **1973**  
Annual Sales:  
R & D Expenses: **\$1-3M**  
(In biotechnology: **\$1-3M**)

PRINCIPAL ACTIVITIES: **Egg processing and biochemical manufacturing.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Enzymes; egg products; filtration systems, waste processing.**

MANUFACTURING: **Egg products, enzymes, biochemicals.**

SALES/OTHER(S): **Analytical.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Leslie Carvalho**

### **OTHER ACTIVITIES:**

# FALCONBRIDGE LIMITED

## HEAD OFFICE

**Box 40, Commerce Court West  
Toronto, Ontario M5L 1B4**

## RESEARCH FACILITY

**Falconbridge, Ontario P0M 1S0  
c/o R.E. Michelutti**

Telephone: **(705) 693-2761 (Falconbridge, Ontario)**  
Telex: **067-7194**  
Fax: **(705) 566-2107**

President: **W. James  
(416) 863-7000**

R & D Director: **L. Seeley**  
Telephone: **(705) 693-2761**

Employees: **2,600**  
R & D Employees: **40**

Founded: **1928**  
Annual Sales: **\$1,000+M**  
R & D Expenses: **\$6M**

PRINCIPAL ACTIVITIES: **Base metals : nickel, copper, cobalt, zinc.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: Use of bacteriocides to reduce acid generation of wasterock. Use of bacteria to remove heavy metal contamination in waste streams. Use of aquatic systems to polish effluents and to prevent acid generation on tailings.

### MANUFACTURING:

### SALES/OTHER(S):

### AFFILIATIONS:

### FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS: This is a base metal operation - R & D is primarily directed to improving metallurgy - minimum R & D performed on biotech in pollution-related work.

CONTACT PERSON: R. Michelutti, Supervisor Envr. Cont., Falconbridge Ltd., Falconbridge, Ontario P0M 1S0.

### **OTHER ACTIVITIES:**

# FERMTECH R & D INC.

HEAD OFFICE

**2383 Edenhurst Drive  
Mississauga, Ontario L5A 2L1**

Telephone: **(416) 279-5337**  
Telex:  
Fax:

President: **Dr. Hugh G. Lawford**

R & D Director: **Dr. Hugh G. Lawford**  
Telephone: **(416) 978-7096**

Employees: **4**  
R & D Employees: **3**  
(In biotechnology: **3**)

RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Dr. Ignace Krizancic**

Telephone: **(416) 923-0912**

Founded: **1983**  
Annual Sales: **N/A**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$30-40K - 86-87**)

PRINCIPAL ACTIVITIES: **Bioprocesses for food/agriculture and alternative energy (fuel alcohol). Production of "microbial inoculants" (starter cultures, silage inoculants, feed additives "probiotics". Fermentation technologies (specializing in continuous fermentations).**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Fermentation processes (specializing in continuous systems).**

MANUFACTURING: **Microbial inoculants, silage inoculants, probiotic feed additives, cultures for fuel alcohol industry.**

SALES/OTHER(S):

AFFILIATIONS: **Biosystech Consulting Inc. (Mississauga).**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Joint venture in marketing.**

COMMENTS:

CONTACT PERSON: **Dr. H. G. Lawford**

# FMG INTEGRATED BIOTECHNICAL LABORATORIES LTD.

HEAD OFFICE

**#214 - 7080 River Road  
Richmond, British Columbia V6X 1X5**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(604) 273-7157**

Telex:

Fax:

President: **Dr. Kirk Maltman**

R & D Director: **Dr. S.H. Goh**  
Telephone: **(604) 273-7157**

Employees: **3**  
R & D Employees: **2.5**  
(In biotechnology: **2.5**)

Founded: **1984**  
Annual Sales: **N/A**  
R & D Expenses: **N/A**

PRINCIPAL ACTIVITIES: **Molecular biology and diagnostics.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Fish biology, aquaculture, diagnostics: rDNA gene probes and polyclonal antibodies. R & D for improved species carried out in-house and with Fisheries and Oceans Canada.**

MANUFACTURING: **DNA.**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Not at present.**

COMMENTS:

CONTACT PERSON: **Dr. Goh**

# FORINTEK CANADA CORP.

HEAD OFFICE

**6620 North West Marine Drive  
Vancouver, British Columbia V6T 1X2**

Telephone: **(604) 224-3221**  
Telex: **04-508552**  
Fax: **(604) 224-3229**

President: **K.A. French**

R & D Director: **Dr. J.A. Dangerfield**  
Telephone: **(604) 224-3221**

Employees: **198**  
R & D Employees: **139**  
(In biotechnology: **20**)

RESEARCH FACILITY

**800 Montreal Road  
Ottawa, Ontario K1G 3Z5**

Telephone: **(613) 744-0963**  
Telex: **053-3606**

Founded: **1979**  
Annual Sales: **N/A**  
R & D Expenses: **\$7-10M**  
(In biotechnology: **\$1.8M**)

**PRINCIPAL ACTIVITIES: R & D for Canada's wood products industries.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Fuels and chemicals from forest biomass. Novel products from biomass lignin. Enzyme production for cellulose related products. Control of stain and decay organisms.**

MANUFACTURING:

SALES/OTHER(S): **Maintenance of a wood-destroying fungal collection.**

**OTHER ACTIVITIES:**

**Broadly-based program of research in wood products in the areas of:**

- Resource characterization;
- Lumber manufacturing;
- Composite manufacturing;
- Engineering and fire performance properties of wood products;
- Building construction technology;
- Wood protection and wood preservation.

**AFFILIATIONS: Private, non-profit research corporation to support the wood products industries in Canada.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Partnerships to support the commercialization of technology developed in the R & D program.**

COMMENTS:

**CONTACT PERSON: Dr. J. Saddler, 800 Montreal Road, Ottawa, Ontario K1B 3Z5, Tel.: (613) 744-0963, Telex: 053-3606.**

# FRAPPIER DIAGNOSTIC INC.

## HEAD OFFICE

**527, boulevard des Prairies  
Laval (Québec) H7N 4Z9**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(514) 687-5010**  
Telex: **055-62171**  
Fax: **(514) 687-5010**

Manufacturing Director:  
**Robert Gareau**

Telephone: **(514) 687-5010**

Vice-President (scientific): **Dr. Claude Vezina**

R & D Director: **Hélène Gagné**  
Telephone: **(514) 687-5010 ext. 410**

Employees: **80**  
R & D Employees: **4**

Founded: **1978**  
Annual Sales: **\$5-7M**  
R & D Expenses: **N/A**

PRINCIPAL ACTIVITIES: **Production of diagnostic reagents for human and animal infectious diseases.**

## BIOTECHNOLOGY ACTIVITIES:

## OTHER ACTIVITIES:

RESEARCH & DEVELOPMENT: **Diagnostic reagents based on monoclonal antibodies.**

MANUFACTURING: **Diagnostic reagents.**

SALES/OTHER(S):

AFFILIATIONS: **Institut Armand Frappier.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON:

# GELDA SCIENTIFIC AND INDUSTRIAL DEVELOPMENT CORP.

HEAD OFFICE

**5266 General Road, Suite 8  
Mississauga, Ontario L4W 1Z7**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 624-2779**  
Telex: **065-2821MSG**  
Fax: **(416) 624-2469**

Manufacturing Director:  
**Latika Mogla**

Telephone: **(416) 624-2779**

President: **Dr. Charter Sen Gelda**

R & D Director: **Dave D. Sharma**  
Telephone: **(416) 624-2779**

Employees: **8**  
R & D Employees: **4**  
(In biotechnology: **4**)

Founded: **1979**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Technology development.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Fermented dairy products, animal feed supplements, aseptic systems, industrial enzymes.**

MANUFACTURING: **BIFIDO products.**

SALES/OTHER(S): **Biochemical products. Food products. Consulting to small and medium size companies in the area of R & D. Lab services - chemical and microbiological.**

AFFILIATIONS: **Universities (Toronto, Manitoba, McMaster, Guelph).**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS: **The company sponsors university research in the area of beneficial health effects of Bifido bacteria.**

CONTACT PERSONS: **Dr. Gelda; Kesh Gelda.**

# GEMINI BIOCHEMICAL RESEARCH LTD.

## HEAD OFFICE

#350-4520 16th Avenue North West  
Calgary, Alberta T3B 0M6

## RESEARCH FACILITY

Same as Head Office

Telephone: (403) 288-7771

Telex:

Fax:

President: Dr. I. Forrester

R & D Director: Dr. I. Forrester

Telephone: (403) 288-7771

Employees: 3

R & D Employees: 3

(In biotechnology: 3)

Founded: 1981

Annual Sales: \$0-1M

R & D Expenses: \$0-0.5M

(In biotechnology: \$0-0.5M)

PRINCIPAL ACTIVITIES: **Contract research in biotechnology, applied chemistry and environmental science.**

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: Methane oxidizing bacteria, biopesticides, polymers, bioreactors.

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Joint venture, licensing agreement or contract research.

COMMENTS:

CONTACT PERSON: Dr. Ian Forrester

### OTHER ACTIVITIES:



# GENDRON LEFEBVRE

## HEAD OFFICE

**2, Place Laval  
Laval (Québec) H7N 5N6**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(514) 384-1260**  
Telex: **05-25469**  
Fax: **(514) 629-8737**

Technical Director, Environment:  
**Claude Vallée**

Telephone: **(514) 384-1260**

President: **Claude F. Lefebvre**

R & D Director, Environment: **M. Prévost**  
Telephone: **(514) 384-1260**

Employees: **250**  
R & D Employees: **6**

Founded: **1957**  
Annual Sales: **\$10-15M**  
R & D Expenses: **\$0.5-1M**

**PRINCIPAL ACTIVITIES: Engineering consultation for environment, surveying, urban planning, geomantics, transportation and project management.**

## **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Biotreatment of wastewaters and drinking water. Industrial and agricultural waste treatment. Automation of methods of analysis.**

MANUFACTURING: **Biosensors and probes.**

SALES/OTHER(S): **Feasibility studies and demonstration of new processes. Development of biosensors and probes.**

AFFILIATIONS: **WPCF; AQTE; AWWA (Environment).**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Partnership with Canadian and foreign universities and the Canadian Center for Biotechnology.**

COMMENTS: **Our company carries out research in cooperation with École Polytechnique de Montréal; Institut Armand Frappier; INRS (Institut National de la Recherche Scientifique).**

CONTACT PERSON: **Mrs. Michèle Prévost**

## **OTHER ACTIVITIES:**

**Land surveying;  
Geomantics;  
Urban and regional planning;  
Environmental, sanitary and urban engineering;  
Transportation, public works project and construction management.**

# GIANT BAY RESOURCES LTD.

## HEAD OFFICE

**#107F, Discovery Park  
3700 Gilmore Way  
Burnaby, British Columbia V5G 4M1**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(604) 434-6344**

Telex:

Fax: **(604) 434-9320**

President: **Claus Jensen**

R & D Director: **Ralph P. Hackl**  
Telephone: **(604) 434-6344**

Employees: **11**

R & D Employees: **6**

(In biotechnology: **6**)

Founded: **1983**

Annual Sales: **\$0-1M**

R & D Expenses: **\$1-3M**

(In biotechnology since Inception: **\$3.5M**)

**PRINCIPAL ACTIVITIES: (Mineral Leaching). Use of microorganisms to aid in the recovery of metals from ores and waste products.**

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Development of processes in which sulphide-oxidizing bacteria are used to enhance recovery of gold and silver from refractory ores.**

### MANUFACTURING:

### SALES/OTHER(S):

### OTHER ACTIVITIES:

AFFILIATIONS: **Joint venture company: International Biotech Inc., (IBI) Burnaby.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Ralph P. Hackl**

# GORE & STORRIE LTD.

<p><u>HEAD OFFICE</u>  <b>1670 Bayview Avenue</b>  <b>Toronto, Ontario M4G 3C2</b></p> <p>Telephone: <b>(416) 485-7715</b>          Telex: <b>06-23283</b>          Fax: <b>(416) 485-0014</b></p> <p>President: <b>R.A. Goodings, P.Eng.</b></p> <p>R &amp; D Director: <b>S.A. Black, P.Eng.</b>          Telephone: <b>(416) 485-7715</b></p> <p>Employees: <b>250</b>          R &amp; D Employees: <b>10</b>          (In biotechnology: <b>4</b>)</p>	<p><u>RESEARCH FACILITY</u>  <b>Same as Head Office and</b>  <b>55 Research Road</b>  <b>Toronto, Ontario</b></p> <p>Founded: <b>1919</b>          Annual Sales: <b>\$15-20M (Income)</b>          R &amp; D Expenses: <b>\$0-0.5M</b>          (In biotechnology: <b>\$0.2M</b>)</p>
<p><b>PRINCIPAL ACTIVITIES: Consulting Engineers: wastewater treatment, characterization, process development. Water supply and distribution, waste management, EFW.</b></p>	
<p><b>BIOTECHNOLOGY ACTIVITIES:</b></p> <p><u>RESEARCH &amp; DEVELOPMENT:</u> <b>Aerobic and anaerobic treatability and pilot plant studies for municipal and industrial wastes and wastewaters.</b></p> <p><u>MANUFACTURING:</u></p> <p><u>SALES/OTHER(S):</u> <b>Systems design and construction, plant start-up, training, operations assistance and troubleshooting.</b></p> <p><u>AFFILIATIONS:</u> <b>GS Processes, Inc.</b></p> <p><u>FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:</u> <b>Anaerobic treatment of food processing wastes, landfill leachates and high strength chemical wastes. Canada, U.S.A. and Europe.</b></p> <p><u>COMMENTS:</u> <b>One of the largest environmental engineering design firms in Canada.</b></p> <p><u>CONTACT PERSON:</u> <b>John A. Stephenson, Tel.: (416) 485-7715.</b></p>	<p><b>OTHER ACTIVITIES:</b></p> <p><b>Physical/chemical treatability studies.</b></p> <p><b>Municipal and industrial water and wastewater systems design.</b></p>

# THE GRIFFITH LABORATORIES LIMITED

## HEAD OFFICE

**757 Pharmacy Avenue  
Scarborough, Ontario M1L 3J8**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 288-3050**  
Telex: **06-963562**  
Fax: **(416) 288-3481**

Vice-President, Operations:  
**E. Vegter**

Telephone: **(416) 288-3403**

President: **David H. Lees, Ph.D.**

R & D Director: **Dr. John Holme**  
Telephone: **(416) 288-3330**

Employees: **500**  
R & D Employees: **40**

Founded: **1919**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$1-3M**

PRINCIPAL ACTIVITIES: **Food product manufacturing and sale.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Fermentation processes in baking;  
enzymology in flavour development.**

MANUFACTURING: **Applied from research.**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON:

### **OTHER ACTIVITIES:**

# HARA PRODUCTS LTD.

## HEAD OFFICE

**P.O. Box 134  
Swift Current, Saskatchewan S9H 3V5**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(306) 773-2131**

Telex:

Fax: **(306) 773-0066**

President: **A.F. (Tony) Juffinger**

R & D Director:

Telephone:

Employees: **16**

R & D Employees: **1**

Founded: **1968**

Annual Sales: **\$0-1M**

R & D Expenses: **\$0-0.5M**

Manufacturing Director:

**Ron Juffinger**

Telephone: **(306) 773-2131**

PRINCIPAL ACTIVITIES: **Plastics manufacturing.**

## **BIOTECHNOLOGY ACTIVITIES:**

## **OTHER ACTIVITIES:**

### RESEARCH & DEVELOPMENT:

MANUFACTURING: **Hara insect traps for pheromone bait to monitor selective insect infestation.**

### SALES/OTHER(S):

### AFFILIATIONS:

### FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

### COMMENTS:

### CONTACT PERSON:

# HELIX BIOTECH LTD.

## HEAD OFFICE

**215-7080 River Road  
Richmond, British Columbia V6X 1X5**

## RESEARCH FACILITY

Telephone: **(604) 270-7468**

Telex:

Fax: **(604) 270-8208**

President: **Terrance G. Owen, Ph.D.**

R & D Director:

Telephone:

Employees: **10**

R & D Employees: **4**

Founded: **1980**

Annual Sales: **\$0-1M**

R & D Expenses: **\$0-0.5M.**

PRINCIPAL ACTIVITIES: **Biochemical manufacturing, contract research and development.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Veterinary and clinical diagnostic systems.**

MANUFACTURING: **Purification of rare proteins, enzyme-antibody conjugates and diagnostic systems.**

SALES/OTHER(S): **Genetic analysis of marine fish populations.**

AFFILIATIONS: **Joldon Diagnostics, Toronto, Ontario.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Seeks both Canadian and International collaborations.**

COMMENTS: **Helix is Canada's most experienced company in the purification of rare, clinically important proteins and in the development of novel immunoassay systems.**

CONTACT PERSON:

### **OTHER ACTIVITIES:**

**Marketing of chemical standards for pulp and paper research.**

# HYBRISENS LTD.

## HEAD OFFICE

**4700 Keele Street  
(York University Campus)  
Farquharson Building, Suite 104  
Toronto, Ontario M3J 1P3**

Telephone: **(416) 736-5504**

Telex:

Fax: **(416) 736-5594**

President: **Dr. E.Y. Shami**

R & D Director: **Dr. E.Y. Shami**

Telephone:

Founded: **1986**

Employees: **5**

Annual Sales: **N/A**

R & D Employees: **4**

R & D Expenses: **N/A**

(In biotechnology: **4**)

PRINCIPAL ACTIVITIES: **R & D in biotechnology.**

## RESEARCH FACILITY

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Stabilization of industrial enzymes, hormones, growth factors, custom monoclonal antibodies service.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: R & D contracts to stabilize biological active compounds and custom monoclonal antibodies production.**

COMMENTS:

CONTACT PERSON: **Dr. Ezekiel Shami**

### **OTHER ACTIVITIES:**

# HYPERCUBE INC.

## HEAD OFFICE

**16 Blenheim Road  
Cambridge, Ontario N1S 1E6**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(519) 622-0260**

Telex:

Fax:

President: **John Unsworth**

Chairman and C.E.O.: **Neil Ostlund**

R & D Director: **Neil Ostlund**

Telephone: **(519) 622-0260**

Employees: **7**

R & D Employees: **5**

Founded: **1985**

Annual Sales: **\$0-1M**

R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: Development of hardware and software for molecular modeling of drug and biologically interesting molecules, using parallel computers.**

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Simulation of proteins and nucleic acids for the pharmaceutical and biotechnical industries.**

### MANUFACTURING:

### SALES/OTHER(S):

### AFFILIATIONS:

### FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

### COMMENTS:

### CONTACT PERSON:

### OTHER ACTIVITIES:



# INRAD INDUSTRIAL RESEARCH & DEVELOPMENT, LTD.

HEAD OFFICE

**128 Adelaide Street  
Winnipeg, Manitoba R3A 0W5**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(204) 943-6870**  
Telex:  
Fax:

President: **Edward A. Speers, P.Eng.**

R & D Director: **Edward A. Speers, P.Eng.**  
Telephone: **(204) 943-6870**

Employees: <b>4</b>	Founded: <b>1975</b>
R & D Employees: <b>3</b>	Annual Sales: <b>\$0-1M</b>
(In biotechnology: <b>2</b> )	R & D Expenses: <b>\$0-0.5M</b>
	(In biotechnology: <b>\$15K</b> )

PRINCIPAL ACTIVITIES: **Plant/tree strain improvement and development.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Micropropagation and species development in gymnosperms and orchidaceae.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Edward A. Speers, P.Eng.**

# INSTITUTE FOR CHEMICAL SCIENCE AND TECHNOLOGY (ICST)

HEAD OFFICE

**P.O. Box 2712  
Sarnia, Ontario N7T 7V9**

Telephone:  
Telex:  
Fax:

Chairman: **J.M. Hay (Vice-Pres. - Dow Chemical Company)**

Director and C.E.O.: **W.R. Stadelman**  
Telephone: **(416) 425-4126**

Employees:	Founded:	<b>1985</b>
R & D Employees:	Annual Sales:	<b>N/A</b>
(In biotechnology: <b>12 - in universities</b> )	R & D Expenses:	<b>\$0-0.5M</b>
	(In biotechnology:	<b>\$250K</b> )

ADMINISTRATIVE OFFICE

**31 Rykert Crescent  
Toronto, Ontario M4G 2T1**

**PRINCIPAL ACTIVITIES: Support of precompetitive research of interest to the Canadian chemical, petrochemical and petroleum processing industries.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Removal of organic contaminants from wastewaters by immobilized enzymes. Industrial waste management by enhanced land treatment.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Will consider cooperative programs with other Canadian groups.**

COMMENTS: **ICST is an institute established to support precompetitive research of interest to its industrial members at Canadian Universities.**

CONTACT PERSON: **W.R. Stadelman, Director.**

**OTHER ACTIVITIES:**

**Research relating to chemical and petroleum processing industries.**

# IOGEN CORPORATION

## HEAD OFFICE

**3870, Côte Vertu  
St-Laurent (Québec)**

Telephone: **(514) 332-6430**  
Telex: **05-824652**  
Fax:

President: **Brian Foody**

R & D Director: **Brian Foody**  
Telephone: **(613) 733-9830**  
Fax: **(613) 733-5127**

Employees: **25**  
R & D Employees: **20**  
(In biotechnology: **20**)

## RESEARCH FACILITY

**400 Hunt Club Road  
Ottawa, Ontario K1G 3N3**

Manufacturing Director:  
**Alan Belcher**

Telephone: **(613) 733-9830**

Founded: **1986**  
Annual Sales: **\$1-3M**  
R & D Expenses: **\$1-3M**  
(In biotechnology: **\$1-3M**)

**PRINCIPAL ACTIVITIES: Conversion of renewable resources to food, energy, and specialty chemical products.**

## **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Chemical and alternate energy (enzymes, chemical specialties, bulk chemicals), forestry (new products, breakdown of cellulose and lignin), food and beverage (new products).**

MANUFACTURING: **\$5.3 million pilot facility.**

SALES/OTHER(S):

AFFILIATIONS: **Techtrol Ltd.; Monenco Ltd.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Brian Foody, 400 Hunt Club Road, Ottawa, Ontario K1G 3N3.**

## **OTHER ACTIVITIES:**

# JOLDON DIAGNOSTICS

## HEAD OFFICE

**81 Finchdene Square  
Scarborough, Ontario M1X 1B4**

## RESEARCH FACILITY

Telephone: **(416) 292-1699**  
Telex:  
Fax:

President: **Dr. D. Segal**

R & D Director:  
Telephone:

Employees: **11**  
R & D Employees: **2**

Founded: **1980**  
Annual Sales: **N/A**  
R & D Expenses: **N/A**

PRINCIPAL ACTIVITIES: **Manufacture and sale of diagnostic kits.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Immunoassay kits.**

MANUFACTURING: **Immunoassay kits.**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Joint venture(s), technology exchange.**

COMMENTS:

CONTACT PERSON: **Dr. D. Segal**

### **OTHER ACTIVITIES:**

# KEMIC BIORESEARCH LABORATORIES LTD.

## HEAD OFFICE

**70 Exhibition Street  
P.O. Box 878  
Kentville, Nova Scotia B4N 4H8**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(902) 678-8195**  
Telex:  
Fax:

President: **Dr. Peter W. Mullen**

R & D Director: **Dr. Peter W. Mullen**  
Telephone: **(902) 678-8195**

Employees:	<b>5</b>	Founded:	<b>1980</b>
R & D Employees:	<b>3</b>	Annual Sales:	<b>\$0-1M</b>
		R & D Expenses:	<b>\$0-0.5M</b>

PRINCIPAL ACTIVITIES: **Contract biomedical research, testing and consulting in: pharmacokinetics, toxicology. Conference organization and specialized training courses.**

## BIOTECHNOLOGY ACTIVITIES:

## OTHER ACTIVITIES:

RESEARCH & DEVELOPMENT: **Drug and pollutant assay kits.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS: **Will consider any relevant joint venture arrangement.**

CONTACT PERSON: **Dr. Peter W. Mullen**

# KILBORN (SASKATCHEWAN) LTD.

## HEAD OFFICE

**357 Third Avenue South  
Saskatoon, Saskatchewan S7K 1M6**

## RESEARCH FACILITY

Telephone: **(306) 664-2226**  
Telex: **074-2630**  
Fax: **(306) 652-3235**

General Manager: **E.H. Bassett**

R & D Director: **D.G. Malcolm, Ph.D., P.Eng.**  
Telephone:

Employees:	<b>150</b>	Founded:	<b>1947</b>
R & D Employees:	<b>10</b>	Annual Sales:	<b>\$7-10M</b>
		R & D Expenses:	<b>\$0-0.5M</b>

PRINCIPAL ACTIVITIES: **Engineering, management consulting, construction services, R & D, operation research.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Process development in biomass fermentation, e.g., banana fermentation to produce ethanol and animal feed.**

### MANUFACTURING:

SALES/OTHER(S): **Technology transfer activities re improved ethanol fermentation processes.**

AFFILIATIONS: **Kilborn Engineering.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Joint ventures and/or licensing arrangements.**

COMMENTS: **Kilborn concentrates on filling the facilitator role in technology transfer from universities and institutes to industry.**

CONTACT PERSON: **D.G. Malcolm, Manager of Market Development.**

### **OTHER ACTIVITIES:**

**MHD control of semi-conductor crystal growth. Artificial intelligence in process control and in mining and metallurgy. Graphics animation.**

# KING AGRO

HEAD OFFICE

**P.O. Box 1088  
Chatham, Ontario N7M 5L6**

RESEARCH FACILITY

**Same as Head Office  
and Listowel, Ontario**

Telephone: **(519) 354-3210**  
Telex: **78548**  
Fax: **(519) 354-8155**

Manufacturing Director:  
**Leo Marion**

Telephone: **(519) 354-3210**

President: **Paul A. King**

R & D Director: **Frank Scott-Pearse**  
Telephone: **(519) 354-3210**

Employees: **120**  
R & D Employees: **23**

Founded: **1934**  
Annual Sales: **\$15-30M**  
R & D Expenses: **\$1-3M**

PRINCIPAL ACTIVITIES: **Seed production and sale.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Routine use of microspore culture in rapeseed breeding program.**

MANUFACTURING:

SALES/OTHER(S):

**OTHER ACTIVITIES:**

**Breeding corn, soybeans, wheat, barley, oats.**

**Seed production - hybrid corn, soys, cereals.**

**Sales of seed, silage inoculant.**

**AFFILIATIONS: King Grain; Kingroup Inc.; King Grain Inc.; King Grain Limitada; France Canada Semences S.A; Sanofi Inc.; Rustica Semences; Daalgren & Co.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON:

# J.D. KOPPERNAES ENGINEERING LTD.

## HEAD OFFICE

**1248 Bedford Highway  
Bedford, Nova Scotia B4A 1W4**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(902) 835-8348**  
Telex: **019-21669**  
Fax: **(902) 835-0134**

President: **Peter Mitchell**

R & D Director: **Peter Mitchell**  
Telephone: **(902) 835-8348**

Employees: **9**  
R & D Employees: **4**  
(In biotechnology: **2**)

Founded:  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$10K**)

**PRINCIPAL ACTIVITIES: Food plant design, dairies, fish processing plants, waterfront designs, plant feasibility and economic impact studies.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: Treatment of effluent from fish, dairy and cheese plants using a mobile anaerobic digester.

### MANUFACTURING:

### SALES/OTHER(S):

### **OTHER ACTIVITIES:**

**Design for fisheries complexes:**

**Louisbourg, Boston, Cheticamp, Nova Scotia, New Brunswick, Prince Edward Island, Lunenburg, Nassau, St. Lucia, Barbados.**

**R & D in composite material products and machines.**

**Research on dried fish solubles, fish protein concentrates, ensilage of fish wastes.**

**AFFILIATIONS: American Composite Technology Inc., Boston; General Composite Technology; Advanced Materials Engineering Centre.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Peter Mitchell**



# LABATT BREWING COMPANY LTD.

HEAD OFFICE

**150 Simcoe Street  
London, Ontario N6A 4M3**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(519) 663-5050**  
Telex: **064-7244**  
Fax: **(519) 667-7304**

President: **S.M. Oland**

R & D Director: **Dr. G.G. Stewart**  
Telephone: **(519) 667-7339**

Employees: **4,600**  
R & D Employees: **38**  
(In biotechnology: **36**)

Founded: **1847**  
Annual Sales: **\$1.8 Billion**  
R & D Expenses: **\$1-3M**  
(In biotechnology: **\$2M**)

**PRINCIPAL ACTIVITIES: Manufacture of malt-based beverages.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Research on fermentation, yeast, flavours and flavour stability.**

MANUFACTURING:

SALES/OTHER(S):

**OTHER ACTIVITIES:**

**Manufacture of malt-based beverages.**

**Manufacture of malt-based beverages.**

AFFILIATIONS: **Hold associate laboratory status with National Research Council, Biotechnology Research Institute, Montreal.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS: **Labatt Brewing Co. is a wholly owned subsidiary of John Labatt Limited which is a broadly-based food and beverage processing corporation with annual sales of \$5 billion.**

CONTACT PERSON: **Dr. G.G. Stewart**

# LALLEMAND INC.

## HEAD OFFICE

**1620, rue Préfontaine  
Montréal (Québec) H1W 2N8**

Telephone: **(514) 522-2133**  
Telex: **05-24824**  
Fax: **(514) 522-2884**

President: **Jean Chagnon**

R & D Director: **Richard Degré**  
Telephone: **(514) 522-2133**

Employees: **100**  
R & D Employees: **7**

## RESEARCH FACILITY

**Same as Head Office and  
Biotechnology Research  
Institute (NRCC, Montréal)**

Vice-President, Production:  
**Guy Marleau**

Telephone: **(514) 522-2133**

Founded: **1917**  
Annual Sales: **\$15-30M**  
R & D Expenses: **\$0.5-1M**

PRINCIPAL ACTIVITIES: **Production of yeasts for bread-making. Wine-making. Distillation.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Fermentation and downstream processing. Fermentation control.**

MANUFACTURING: **Fermentation and downstream processing. Fermentation control.**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Richard Degré**

## OTHER ACTIVITIES:

# P. LANE AND ASSOCIATES LIMITED

## HEAD OFFICE

**1046 Barrington Street  
Halifax, Nova Scotia B3H 2R1**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(902) 423-8197**  
Telex: **019-21745**  
Fax: **(902) 429-9177**

President: **Dr. P. Lane**

R & D Director: **F. Meth**  
Telephone: **(902) 423-8197**

Employees: **12**  
R & D Employees: **2**

Founded: **1984**  
Annual Sales: **\$1-3M**  
R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: Environmental studies and impact assessment, risk analysis, biotechnology applications in environmental clean up problems of heavy metals and organic compounds. Aquaculture.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Wastewater treatment processes. PAH clean up in soil and water (microbiological and other methods). Bioaccumulation of heavy metals in aquatic macrophytes. Toxicological modelling with associated field and laboratory studies. Aquaculture: shellfish and finfish.**

MANUFACTURING:

SALES/OTHER(S):

### **OTHER ACTIVITIES:**

**AFFILIATIONS: Jacques Whitford and Associates Limited, Halifax, Nova Scotia; Environmental Structure and Design Limited, Charlottetown, Prince Edward Island.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Cooperation with new technologies and products (e.g. consortia of bacteria) both nationally and internationally.**

COMMENTS:

CONTACT PERSON: **Dr. P. Lane**

# LANGFORD INC.

## HEAD OFFICE

**400 Michener Road  
Guelph, Ontario N1K 1E4**

Telephone: **(519) 837-2040**  
Telex: **069-56673**  
Fax: **(519) 837-1876**

President: **Dr. R.C. Povey**

R & D Director: **Dr. M. Maxwell**  
Telephone: **(519) 823-5490**

Employees: **55**  
R & D Employees: **6**  
(In biotechnology: **6**)

## RESEARCH FACILITY

**131 Malcolm Road  
Guelph, Ontario N1K 1A8**

Manufacturing Director:  
**Dr. C.G. Boylan**

Telephone: **(519) 837-2040**

Founded: **1977**  
Annual Sales: **N/A**  
R & D Expenses: **N/A**

PRINCIPAL ACTIVITIES: **Animal health products: Production and marketing.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Animal vaccines.**

MANUFACTURING: **Animal vaccines.**

SALES/OTHER(S): **Animal vaccines, animal pharmaceuticals,  
animal diagnostics.**

AFFILIATIONS: **Cyanamid Canada Inc.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Joint development, technology licensing  
either way, sales representation either way.**

COMMENTS:

CONTACT PERSONS: **Dr. R.C. Povey, President; M. Warmelink, Director of Marketing.**

## OTHER ACTIVITIES:

# A. LASSONDE & FILS INC.

<p><u>HEAD OFFICE</u>  <b>170, 5<sup>e</sup> avenue  Rougemont (Québec) J0L 1M0</b></p>	<p><u>RESEARCH FACILITY</u>  <b>705, rue Principale  Rougemont (Québec) J0L 1M0</b></p>
<p>Telephone: <b>(514) 878-1057</b>  Telex: <b>05-832553</b>  Fax:</p>	<p>Manufacturing Director:  <b>Richard Morin</b></p> <p>Telephone: <b>(514) 878-1057</b></p>
<p>President: <b>Jean Paul Barré</b></p>	
<p>R &amp; D Director: <b>Yves Dumont</b>  Telephone: <b>(514) 878-1057</b></p>	
<p>Employees: <b>204</b>  R &amp; D Employees: <b>9</b></p>	<p>Founded: <b>1918</b>  Annual Sales: <b>\$30+M</b>  R &amp; D Expenses: <b>\$0.5-1M</b></p>
<p><b>PRINCIPAL ACTIVITIES: Production and canning of fruit juices and other food products.</b></p>	
<p><b>BIOTECHNOLOGY ACTIVITIES:</b></p>	<p><b>OTHER ACTIVITIES:</b></p>
<p><u>RESEARCH &amp; DEVELOPMENT:</u> <b>Enzymatic clarification of fruit juices.</b></p> <p><u>MANUFACTURING:</u> <b>Continuous process of fruit juice clarification.</b></p> <p><u>SALES/OTHER(S):</u> <b>Technology and consulting re: the processes of fruit juice production.</b></p>	<p><b>Development of food products. Formulation and adjustment of processes of food preservation.</b></p>
<p><u>AFFILIATIONS:</u> <b>Lassonde Technologie Inc. (Canada).</b></p> <p><u>FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:</u></p> <p><u>COMMENTS:</u></p> <p><u>CONTACT PERSON:</u> <b>Yves Dumont, Vice-President, R &amp; D.</b></p>	

# MACMILLAN BLOEDEL LIMITED

## HEAD OFFICE

**1075 West Georgia  
Vancouver, British Columbia V6E 3R9**

Telephone: **(604) 661-8000**  
Telex:  
Fax:

President: **R.V. Smith**

R & D Director: **Dr. O.L. Forgacs**  
Telephone: **(604) 661-8499**

Employees: **15 300**  
R & D Employees: **140**

## RESEARCH FACILITY

**MacMillan Bloedel Research  
3350 East Broadway  
Vancouver, British Columbia  
V5M 4E6**

Telephone: **(604) 254-5151**  
Fax: **(604) 251-6229**

Founded: **1911**  
Annual Sales: **30+M\$**  
R & D Expenses: **10+M\$**

**PRINCIPAL ACTIVITIES: Integrated forest products manufacturing including lumber, panelboards, bleached and unbleached kraft pulp, containerboard, groundwood specialty printing papers and newsprint.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Bacterial anaerobic digestion. Sylviculture: seedling propagation using vegetative methods.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSONS: **Dr. A.R. Procter, MacMillan Bloedel Research for product and process, Vancouver, B.C.; Dr. W.W. Bourgeois at Woodlands Services in Nanaimo, B.C., for sylviculture matters.**

## OTHER ACTIVITIES:

**Products and process development for the above-named products including woodscience, sylviculture, applied physics and chemistry, electronics and metallurgical disciplines.**

# FRANK MAINE CONSULTING LTD.

HEAD OFFICE

RESEARCH FACILITY

**71 Sherwood Drive  
Guelph, Ontario N1E 6E6**

Telephone: (519) 823-1465  
Telex:  
Fax:

President: **Dr. F.W. Maine**

R & D Director: **Dr. E. Mason**  
Telephone: (519) 823-1465

Employees: **4**  
R & D Employees: **2**

Founded: **1979**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Consulting.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Chemicals from peat. Mushroom technology.**

MANUFACTURING:

SALES/OTHER(S): **Consulting.**

**AFFILIATIONS: CRMA - Canadian Research Managers Association; SPI - Society of the Plastics Industry of Canada; SPE - Society of Plastics Engineers; APEO - Association of Professional Engineers of Ontario; CIC - Chemical Institute of Canada.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Dr. F.W. Maine**

# MANN TESTING LABORATORIES LTD.

## HEAD OFFICE

5550 McAdam Road  
Mississauga, Ontario L4Z 1P1

## RESEARCH FACILITY

Telephone: (416) 890-2555  
Telex: 06-960496  
Fax: (416) 890-0370

President: John Martin

R & D Director: Dr. Pierre Beaumier  
Telephone: (416) 890-2555

Employees: 100  
R & D Employees:

Founded: 1972  
Annual Sales: N/A  
R & D Expenses: N/A

**PRINCIPAL ACTIVITIES: Analytical testing in forensic science, occupational health and safety, environmental chemicals and inorganic chemistry.**

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: Development and evaluation of immunoassay methods for detection of drug and environmental organics.

MANUFACTURING: Production of antibodies directed toward drugs used in horse racing industry.

SALES/OTHER(S): Sales and marketing of immunoassay-based technology for drug and environmental contaminant detection.

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS: Currently involved in joint projects with Canadian universities concerning both biotechnology-based and classical analytical chemistry.

CONTACT PERSON:

### OTHER ACTIVITIES:

Robotic method development for custom analytical application. Trace level organic analysis development. Customized software applications. Development of new analytical techniques for drug detection in the equine.

Microprocessor-based air sampling devices for indoor and outdoor use. Pre-employment drug screening. Comprehensive drug screening of race, equestrian and other show horses. Pesticide and herbicide analysis. Complete environmental and occupational health monitoring.



# MARBICON INC.

## HEAD OFFICE

**P.O. Box 900  
Berwick, Nova Scotia B0P 1E0**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(902) 538-7101**

Telex:

Fax: **(902) 679-1170**

President: **Jim Jotcham**

R & D Director: **Jim Jotcham**  
Telephone: **(902) 538-7101**

Employees: **5**

R & D Employees: **5**

(In biotechnology: **5**)

Founded: **1984**

Annual Sales: **\$0-1M**

R & D Expenses: **\$0-0.5M**

(In biotechnology: **\$120K**)

**PRINCIPAL ACTIVITIES: Pesticide screening. Environmental impact studies. Plant tissue culture.**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Developing herbicide-resistant plant strains via plant tissue culture.**

MANUFACTURING:

SALES/OTHER(S):

### **OTHER ACTIVITIES:**

**Pesticide screening, bioassay for plant susceptibility and herbicide persistence.**

**Environmental impact studies.**

**AFFILIATIONS: Cooperative Research with Micro Elite Plant Laboratories Inc.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:**

**COMMENTS:**

**CONTACT PERSON: Jim Jotcham**

# D. McLEAY AND ASSOCIATES LTD.

## HEAD OFFICE

#300 - 1497 Marine Drive  
West Vancouver, British Columbia V7T 1B8

Telephone: (604) 922-0355  
Telex:  
Fax: (604) 925-1430

President: Dr. Don McLeay

R & D Director: Dr. Don McLeay  
Telephone: (604) 922-0355

Employees: 2  
R & D Employees: 1

## RESEARCH FACILITY

B.C. Research:  
3650 Wesbrook Mall  
Vancouver, British Columbia  
V6S 2L2

Founded: 1981  
Annual Sales: \$0-1M  
R & D Expenses: \$0-0.5M

PRINCIPAL ACTIVITIES: **Aquaculture and aquatic toxicological R & D.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Aquaculture: efficacy testing for vaccines and pharmaceuticals to be evaluated for use with farmed fish and shellfish. Biotesting techniques for assessing physiological condition of fish and shellfish.**

## MANUFACTURING:

## SALES/OTHER(S):

AFFILIATIONS: B.C. Research; Mae West Ltd.

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Consideration for Canadian and international research projects, here or abroad.**

## COMMENTS:

CONTACT PERSON: Dr. Don McLeay

## OTHER ACTIVITIES:

Aquatic Toxicology: **evaluation of the aquatic hazards of chemicals and effluents, using a battery of lethal and sublethal toxicity tests with fish and aquatic invertebra.**

# MDS HEALTH GROUP LIMITED

HEAD OFFICE

**100 International Boulevard  
Etobicoke, Ontario M9W 6J6**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 675-7661**

Telex:

Fax: **(416) 672-4220**

President: **W.G. Lewitt**

R & D Director: **John C. Nixon, M.D.**

Telephone: **(416) 672-4214**

Employees: **3200**

R & D Employees: **50**

(In biotechnology: **10**)

Founded: **1969**

Annual Sales: **\$200M**

R & D Expenses: **\$15M**

(In biotechnology: **\$250 k**)

**PRINCIPAL ACTIVITIES: Provision of medical and diagnostic services; manufacture and sale of advanced mass spectrometry instruments, development of hemoglobin-based human blood substitutes.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Development of hemoglobin-based human blood substitutes.**

MANUFACTURING: **Monoclonal antibodies for the detection of Neisseria gonorrhoea.**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Sale of monoclonal antibodies; development of diagnostic systems using monoclonal antibodies for the detection of Neisseria gonorrhoea; use of mass spectrometry in the detection of organic and inorganic compounds.**

COMMENTS: **Most of the research and development undertaken by MDS Health Group Limited is through the Sciex Division which is responsible for the mass spectrometry enterprises.**

CONTACT PERSON: **John C. Nixon, M.D.**

**OTHER ACTIVITIES:**

**R & D in the field of advanced techniques in mass spectrometry.**

# MEDICORP INC.

## HEAD OFFICE

**Biotechnology Research Institute (NRCC)  
6100, avenue Royalmount  
Montréal (Québec) H4P 2R2**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: (514) 496-1922  
Telex: 6503156922  
Fax: (514) 496-6232

President: Elliott Block, Ph.D.

R & D Director: Pierre Du Ruisseau, Ph.D.  
Telephone: (514) 496-1922

Employees: 7  
R & D Employees: 5  
(In biotechnology: 5)

Founded: 1985  
Annual Sales: \$0-1M  
R & D Expenses: \$0.5-1M  
(In biotechnology: \$~1M)

PRINCIPAL ACTIVITIES: Human health care.

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: Cancer diagnostics. AIDS therapeutics and diagnostics. Transplantation antigens. Quadromas.

MANUFACTURING: Quadromas.

SALES/OTHER(S): Strep A, Strep B, Glycosylated hemoglobin kits and control sera.

AFFILIATIONS: Medicorparg LTDA Buenos Aires, Argentina; Monteiro Aranha Biotecnologia LTDA, Rio de Janeiro, Brazil.

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: R & D joint ventures, distribution of human health care diagnostics, livestock and agricultural diagnostics in Canada and Latin America.

COMMENTS:

CONTACT PERSON:

### **OTHER ACTIVITIES:**

# MEIOGENICS RESEARCH CORPORATION

## HEAD OFFICE

**1716 Woodward Drive  
Ottawa, Ontario K2C 0P8**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(613) 727-8395**

Telex:

Fax: **(613) 727-9785**

President: **Dr. Peter Duck**

R & D Director: **Dr. Peter Duck**

Telephone:

Employees: **7**

R & D Employees: **5**

Founded: **1982**

Annual Sales: **\$0-1M**

R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: The development of nucleic acid hybridization-based diagnostic products for agriculture, food and medicine.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Hybridization-based user friendly diagnostic systems.**

MANUFACTURING:

SALES/OTHER(S): **Consulting/research contracts.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Yes, with universities.**

COMMENTS:

CONTACT PERSON: **Dr. Peter Duck**

## OTHER ACTIVITIES:

# MERCK FROSST

## HEAD OFFICE

**16711 Trans Canada Highway  
Kirkland, Québec H9H 3L1**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(514) 695-7920**  
Telex: **05-821533**  
Fax: **(514) 630-2670**

Manufacturing Director:  
**M. Pelini**

Telephone: **(514) 695-7920**

President: **Dr. J. Zabriskie**

Executive Director, Research: **Dr. Cecil Pickett**  
Telephone: **(514) 630-2600**

Employees: **850**  
R & D Employees: **120**

Founded: **1982**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$10+M**

PRINCIPAL ACTIVITIES: **R & D in drugs, stable isotopes, and radiopharmaceuticals. Health care: animal and human pharmaceuticals.**

## BIOTECHNOLOGY ACTIVITIES:

## OTHER ACTIVITIES:

RESEARCH & DEVELOPMENT: **Basic research in the area of drug design against the leukotriene receptors and lipxygenase enzymes. Study of leukotriene metabolism in various disease states.**

MANUFACTURING: **Stable isotopes, radiopharmaceuticals, animal pharmaceuticals.**

SALES/OTHER(S): **Stable isotopes, radiopharmaceuticals, animal and human pharmaceuticals.**

AFFILIATIONS: **Merck and Company Inc.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Dr. S. Goldstein, Director, Research Administration and Planning.**

# JOHN MEUNIER INC.

## HEAD OFFICE

**6290, rue Périnault  
Montréal (Québec) H4K 1K5**

Telephone: **(514) 334-7230**  
Telex: **05-825693**  
Fax: **(514) 334-5070**

President: **Gabriel Meunier, P.Eng.**

R & D Director: **Hoang Van Hoi, P.Eng.**  
Telephone: **(514) 334-7230**

Employees: **45**  
R & D Employees: **3**

## RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Pierre Bélisle**

Telephone: **(514) 334-7230**

Founded: **1948**  
Annual Sales: **\$3-5M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Manufacture of water treatment systems.**

## **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Filtration through peat moss.  
Compressed air jets. Bio-filters.**

MANUFACTURING: **Filtration through peat moss. Compressed  
air jets. Bio-filters.**

SALES/OTHER(S): **Water treatment systems.**

## AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Cooperation for the implementation of the  
above-mentioned processes.**

## COMMENTS:

CONTACT PERSONS: **Gabriel Meunier, P.Eng.; Hoang Van Hoi, P.Eng.**

## **OTHER ACTIVITIES:**

# MICROBE INC.

## HEAD OFFICE

**85 Midpark Road  
London, Ontario N6N 1B2**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(519) 668-1005**  
Telex:  
Fax: **(519) 668-3188**

Sales Director:  
**Michael Talbot**

Telephone: **(519) 668-1005**

President: **Dr. J.P. Insell**

R & D Director: **Dr. J.P. Insell**  
Telephone: **(519) 668-1005**

Employees: **12**  
R & D Employees: **8**

Founded: **1983**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Enhanced microbial degradation of toxic and non-toxic environmental pollutants, biopesticides, biomedical research.**

### **BIOTECHNOLOGY ACTIVITIES:**

### **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Microbial degradation of pollutants. Wastewater treatment. Biopesticides. Biomedical research.**

MANUFACTURING: **Non-genetically engineered bacterial cultures for specific problems.**

SALES/OTHER(S): **Customized non-genetically engineered bacterial cultures. Chemical analysis. Wastewater treatment systems.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Contacts.**

COMMENTS:

CONTACT PERSON: **Ms. D. Boersma, Lab Manager.**



# MICROBIX BIOSYSTEMS INC.

## HEAD OFFICE

## RESEARCH FACILITY:

**341 Bering Avenue  
Toronto, Ontario M8Z 3A8**

Telephone: **(416) 425-5959**

Telex:

Fax: **(416) 222-5326**

President: **James A. Long**

R & D Director: **William J. Gastle**

Telephone: **(416) 233-6587**

Employees: **10**

R & D Employees: **2**

Founded: **1980**

Annual Sales: **N/A**

R & D Expenses: **N/A**

**PRINCIPAL ACTIVITIES: Manufacture of microbial antigens for serological procedures.**

## **BIOTECHNOLOGY ACTIVITIES:**

## **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Assay development (eg. ELISA) and direct test technology.**

**Contract work.**

MANUFACTURING: **Manufacture of microbial antigens for serological procedures.**

SALES/OTHER(S): **Manufacture of diagnostic tests for other companies under private labels.**

## AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Would welcome both Canadian and international collaboration.**

## COMMENTS:

CONTACT PERSON: **William Gastle**

# MICROELITE PLANT LABORATORIES INC.

<p><u>HEAD OFFICE</u>  <b>P.O. Box 308</b>  <b>Kentville, Nova Scotia B4N 3X1</b></p> <p>Telephone: <b>(902) 679-1170</b>          Telex:          Fax: <b>(902) 679-1170</b></p> <p>President: <b>Allison Woodworth</b></p> <p>R &amp; D Director: <b>Robert Cervelli</b>          Telephone: <b>(902) 679-1170</b></p> <p>Employees: <b>4</b>          R &amp; D Employees: <b>4</b>          (In biotechnology: <b>4</b>)</p>	<p><u>RESEARCH FACILITY</u>  <b>15 Chipman Drive, Suite #9</b>  <b>Annapolis Valley Industrial Park</b>  <b>Kentville, Nova Scotia</b>  <b>(Mailing address at left)</b></p> <p>Manufacturing Director:  <b>Robert Cervelli</b></p> <p>Telephone: <b>(902) 679-1170</b></p> <p>Founded: <b>1987</b>          Annual Sales: <b>\$0-1M</b>          R &amp; D Expenses: <b>\$0-0.5M</b>          (In biotechnology: <b>\$75K</b>)</p>
<p><b>PRINCIPAL ACTIVITIES: Plant micropropagation, contract propagation or contract re-          search.</b></p>	
<p><b>BIOTECHNOLOGY ACTIVITIES:</b></p> <p><u>RESEARCH &amp; DEVELOPMENT:</u> <b>Plant tissue culture. Contract propagation. Propagation refinement studies.</b></p> <p><u>MANUFACTURING:</u> <b>Micropropagation. Wholesale nursery.</b></p> <p><u>SALES/OTHER(S):</u> <b>Plantlets in plug, liner or nursery stock sizes.</b></p>	<p><b>OTHER ACTIVITIES:</b></p> <p><b>Services for conventional propagation through seed, rooted cuttings, etc.</b></p>
<p><b>AFFILIATIONS: Tissue Culture Association; International Plant Propagators Society; Cooperative Research with Marbicon Biological Consultants.</b></p>	
<p><b>FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Access to new plant varieties, marketing collaboration for same.</b></p>	
<p><u>COMMENTS:</u></p>	
<p><u>CONTACT PERSON:</u> <b>Robert Cervelli, General Manager.</b></p>	

# MICROTEK RESEARCH AND DEVELOPMENT LIMITED

<p><u>HEAD OFFICE</u></p> <p><b>P.O. Box 2460</b>  <b>101-9865 West Saanich Road</b>  <b>Sidney, British Columbia V8L 3Y3</b>          Telephone: (604) 655-1455          Telex:          Fax: (604) 655-7131</p> <p>President: <b>Dr. W.W. Kay</b></p> <p>R &amp; D Director: <b>Stephen G. Newman, Ph.D.</b>          Telephone: (604) 655-1455</p> <p>Employees: 7          R &amp; D Employees: 4          (In biotechnology: 4)</p>		<p><u>RESEARCH FACILITY</u></p> <p><b>Same as Head Office</b></p> <p>Manufacturing Director:  <b>Stephen G. Newman, Ph.D.</b>          Telephone: (604) 655-1455</p>	
<p>Founded: 1984          Annual Sales: \$0-1M          R &amp; D Expenses: \$0-0.5M          (In biotechnology: \$0-0.5M)</p>		<p>PRINCIPAL ACTIVITIES: <b>Aquaculture-oriented research, vaccine development, polyclonal antibody production, aquaculture health services, diagnostic kit development.</b></p>	
<p><b>BIOTECHNOLOGY ACTIVITIES:</b></p>		<p><b>OTHER ACTIVITIES:</b></p>	
<p><u>RESEARCH &amp; DEVELOPMENT:</u> Vaccines - aquaculture and agriculture nucleic acid probes.</p>		<p>Monoclonal antibody production.</p>	
<p><u>MANUFACTURING:</u> Vaccines - aquaculture, polyclonal diagnostic antisera.</p>			
<p><u>SALES/OTHER(S):</u> Vaccines - aquaculture, polyclonal antisera.</p>			
<p><u>AFFILIATIONS:</u> 50% owner of CBM Bioventures Ltd.</p>			
<p><u>FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:</u> Seeking joint ventures in aquaculture/agriculture diagnostic kit and vaccine areas.</p>			
<p><u>COMMENTS:</u> We have expertise in recombinant nucleic acid research and monoclonal antibody production.</p>			
<p><u>CONTACT PERSON:</u> Stephen G. Newman, Ph.D.</p>			

# MOLSON BREWERIES OF CANADA LIMITED

## HEAD OFFICE

**3300 Bloor Street West  
Suite 3500  
Toronto, Ontario M8X 2X7**

## RESEARCH FACILITY

**2486 Dunwin Drive  
Mississauga, Ontario L5L 1J9**

Telephone: **(416) 232-1786**  
Telex: **06-984833**  
Fax: **(416) 232-1717**

President: **John C. Carroll**

Vice-President, R & D and Quality Assurance: **Dr. David W. Hysert**  
Telephone: **(416) 828-1786**

Employees: **4000**  
R & D Employees: **10**

Founded: **1786**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$1-3M**

PRINCIPAL ACTIVITIES: **Brewing.**

## **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Genetic engineering of yeast.**

MANUFACTURING:

SALES/OTHER(S):

## **OTHER ACTIVITIES:**

AFFILIATIONS: **Operating company of the Molson Companies Limited.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Dr. David W. Hysert**

# MYCOTECH - For Research & Development

## HEAD OFFICE

**142 Whitchurch Mews  
Mississauga, Ontario L5A 4B3**

Telephone: **(416) 279-4154**  
Telex:  
Fax:

President: **Mujeeb H. Zoberi, Ph.D.**

R & D Director: **Mujeeb H. Zoberi, Ph.D.**  
Telephone: **(416) 279-4154**

Employees:	<b>3</b>	Founded:	<b>1985</b>
R & D Employees:	<b>1</b>	Annual Sales:	<b>\$0-1M</b>
(In biotechnology: <b>1</b> )		R & D Expenses:	<b>\$0-0.5M</b>

PRINCIPAL ACTIVITIES: **Biodegradation, biomonitoring and bioengineering.**

## RESEARCH FACILITY

**Faculty of Forestry  
University of Toronto  
Toronto, Ontario M5S 1A1**

Telephone: **(416) 978-3849**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Environmental and industrial microbiology, plant pathology, physiology, ecology and biochemistry. Biodegradation using fungi, protozoa and bacteria. Micropropagation of hardwoods using microorganisms for containerized tree seedlings.**

MANUFACTURING:

SALES/OTHER(S): **Services.**

AFFILIATIONS: **University of Toronto.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Information regarding Canadian and/or international biotechnological projects where our expertise may be required.**

COMMENTS: **Mycotech is a newly-born organization for research and development. One of its objectives is to control the microbiological quality of our environment.**

CONTACT PERSON: **Dr. M.H. Zoberi**

### **OTHER ACTIVITIES:**

# NELSON'S DAIRY

## HEAD OFFICE

**180 Ormont Drive  
Weston/City of North York, Ontario M9L 1N7**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 742-6811**  
Telex:  
Fax: **(416) 624-2469**

Manufacturing Director:  
**D. Armstrong**

Telephone: **(416) 742-6811**

President: **Peter Lowes**

R & D Director: **Arvind Gelda**  
Telephone: **(416) 742-6811**

Employees: **100**  
R & D Employees: **6**

Founded: **1969**  
Annual Sales: **\$15-30M**  
R & D Expenses: **\$0.5-1M**

PRINCIPAL ACTIVITIES: **Immobilization of lactase enzyme for the manufacture of lactose reduced dairy products.**

## **BIOTECHNOLOGY ACTIVITIES:**

## **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Purification and immobilization of lactase enzyme.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Arvind Gelda**

# NEW AGE DEVICES

## HEAD OFFICE

**P.O. Box 1809  
740 Baker Crescent  
Kingston, Ontario K7M 6P6**

Telephone: **(613) 384-1753**  
Telex:  
Fax:

President and C.E.O.: **Michael Bye**

R & D Director: **R. Casnig**  
Telephone:

Employees: **6**  
R & D Employees: **2**  
(In biotechnology: **2**)

Founded: **1987**  
Annual Sales: **\$1-3M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$0-0.5M**)

PRINCIPAL ACTIVITIES: **Automation of research equipment currently being used in the life sciences.**

## RESEARCH FACILITY

**Same as Head Office**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Working on electroporation methods via genetic engineering.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS: **Queen's University; NRC; Chips Computers.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS: **100% Canadian owned.**

CONTACT PERSON: **Percy Barr, Tel.: (613) 384-1753.**

### **OTHER ACTIVITIES:**

**Electrophoresis units (vertical and horizontal). Termination devices for electrophoresis units.**

# NORANDA RESEARCH CENTRE

## HEAD OFFICE

**Noranda Inc.**  
**Suite 4500, Commerce Court West**  
**Toronto, Ontario M5L 1B6**

Telephone: (416) 982-7111  
Telex: 06524231  
Fax: (416) 982-7021

President: **David Kerr**

R & D Director: **Dr. P. Tarasoff**  
Telephone: (514) 697-6640  
Fax: (514) 697-9589  
Employees: **3,000+**  
R & D Employees: **140**

Founded: **1963**  
Annual Sales:  
R & D Expenses: **\$14+M**

PRINCIPAL ACTIVITIES: **Noranda Inc.: minerals, forest products, manufacturing, oil and gas. Contracts-out research in biotechnology.**

## RESEARCH FACILITY

**240, boulevard Hymus**  
**Pointe-Claire (Québec) H9R 1G5**

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: Expertise in mineral leaching and effluent treatment, active in biological oxidation of sulphide tailings, interests in biological treatment of hazardous wastes and bioleaching of pulp. Contracts-out R & D in biotechnology.

### MANUFACTURING:

### SALES/OTHER(S):

AFFILIATIONS: **Noranda, Inc.; MacMillan Bloedel.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

### COMMENTS:

CONTACT PERSON: **Dr. G.R. Kubanek (514) 697-6640.**

### OTHER ACTIVITIES:



# NOVA CHEM LIMITED

## HEAD OFFICE

**P.O. Box 1030 Armdale  
Halifax, Nova Scotia B3L 4K9**

## RESEARCH FACILITY

**c/o Department of Chemistry  
Acadia University  
Wolfville, Nova Scotia B0P 1X0**

Telephone: **(902) 455-4690**

Telex:

Fax:

President: **D.H. Davies, Ph.D.**

R & D Director: **E.R. Hayes, Ph.D.**

Telephone: **(902) 542-2201**

Employees: **5**

R & D Employees: **5**

Founded: **1978**

Annual Sales: **\$0-1M**

R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: Research concerning chitosan and its derivatives; contract re-  
search and testing.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Slow release agent for drugs and  
hormones; preservative coating for fruits and vegetables;  
recovery of pigment from shellfish.**

MANUFACTURING: **Expected in one to two years.**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Testing and marketing.**

COMMENTS:

CONTACT PERSON: **D.H. Davies, Ph.D.**

## OTHER ACTIVITIES:

# NOVA HUSKY RESEARCH CORPORATION LIMITED

## HEAD OFFICE

#2928-16 Street North East  
Calgary, Alberta T2E 7K7

## RESEARCH FACILITY

Same as Head Office

Telephone: (403) 250-4700

Telex:

Fax: (403) 290-6379

President: Dr. George B. Miller

R & D Director: Dr. George B. Miller

Telephone: (403) 250-4767

Employees: 74

R & D Employees:

(In biotechnology: 4)

Founded: 1981

Annual Sales: N/A

R & D Expenses: N/A

PRINCIPAL ACTIVITIES: **Basic and Applied research in the oil and gas sector for the parent companies: NOVA Corporation of Alberta and Husky Oil Operations Ltd.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: Petroleum microbiology, microbially-enhanced oil recovery; biodeterioration of materials, biodegradation of wastes and toxics in the environment; value-added products from fermentation; microbially-enhanced corrosion.

## MANUFACTURING:

## SALES/OTHER(S):

## AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Collaboration in cost sharing or joint venture for high-risk, cost intensive studies like fermentation to produce new products for market.

## COMMENTS:

CONTACT PERSONS: Dr. Mike Francis, Tel.: (403) 250-4713; Dr. Tom Jack, Tel.: (403) 250-4751.

## OTHER ACTIVITIES:

# NOVO LABORATORIES LTD.

## HEAD OFFICE

**1755 Steeles Avenue West  
Willowdale, Ontario M2R 3T4**

## RESEARCH FACILITY

Telephone: **(416) 663-6686**  
Telex: **06-218538**  
Fax: **(416) 667-1545**

General Manager: **Dr. John Clement**

R & D Director:  
Telephone:

Employees: **55**  
R & D Employees: **3**

Founded: **1983**  
Annual Sales: **\$15-30M**  
R & D Expenses: **N/A**

PRINCIPAL ACTIVITIES: **Manufacture of insulin and of insulin pharmaceutical products. Extraction and production of biological substances. Marketing of bioindustrial products.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Product and process development in biological extractables, including insulin. Related analytical R & D. Clinical trials.**

MANUFACTURING: **Insulin (bulk supplies); insulin pharmaceutical products (marketed under Connaught Novo label).**

SALES/OTHER(S): **Canadian marketing representative for Novo Bioindustrial products. Sales of cell culture reagents, antibiotics, growth factors, hormones, and enzymes. Distribution of a line of analytical products including RIA kits for identification and assay of endocrine substances.**

AFFILIATIONS: **Wholly-owned subsidiary of Novo Industries A/S. (Danish Parent Co. has 5780 employees world-wide and spends 11% of turnover on R&D). Canadian insulin sales represented through Connaught Novo Ltd.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Open to consider potentially beneficial contacts, re: manufacturing, supply, representation, joint development, etc.**

COMMENTS: **Novo is a world leader in biotechnology, industrial fermentation/purification, industrial enzymes, and insulin.**

CONTACT PERSON: **Dr. John Clement**

### **OTHER ACTIVITIES:**

# ORTHO PHARMACEUTICAL (CANADA) LTD.

## HEAD OFFICE

**19 Greenbelt Drive  
Don Mills, Ontario M3C 1L9**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 449-9444**

Telex:

Fax: **(416) 449-2658**

President: **Percy Skuy**

Vice-President, Research: **Laurence Russ**

Telephone: **(416) 449-9444**

Employees: **280**

R & D Employees: **51**

(In biotechnology: **30**)

Founded: **1941**

Annual Sales: **\$30+M**

R & D Expenses: **\$5-7M**

(In biotechnology: **\$~2M**)

Vice-President, Operations:

**Austin Woodhouse**

Telephone: **(416) 449-9444**

**PRINCIPAL ACTIVITIES: Development and marketing of human pharmaceuticals and medical devices.**

## **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Development of biologically-derived cell growth factors and immunosuppressive compounds. Development of therapeutic monoclonal antibodies.**

MANUFACTURING: **Pilot plant mammalian cell culture facility in place.**

SALES/OTHER(S): **Marketing of orthoclone okt \*3, monoclonal antibody that reverses organ transplant rejection.**

## **OTHER ACTIVITIES:**

**Research and development in the areas of infectious disease, family planning and general gynecology.**

AFFILIATIONS: **Member of the Johnson & Johnson family of companies.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Access to information pertaining to new product development in the area of medical biotechnology and to potential markets for biotechnology-derived products developed by Ortho.**

COMMENTS:

CONTACT PERSON: **Laurence J. Russ, Ph.D., Vice-President, Research.**

# PACIFIC PHARMACEUTICALS LTD.

## HEAD OFFICE

**Suite 1130-1176 West Georgia Street  
Vancouver, British Columbia V6E 4A2**

Telephone: **(604) 683-8566**  
Telex:  
Fax: **(604) 681-0207**

Executive Director: **F. Michael P. Warren**

R & D Director: **Dr. Ray MacDougal**  
Telephone: **(613) 549-3907**

Employees: **3**  
R & D Employees: **N/A**

## RESEARCH FACILITY

**Biomedical Research Centre  
University of British Columbia  
Vancouver, British Columbia  
V6T 1W5**

Director of Research:  
**Dr. John Schrader**

Telephone: **(604) 228-7810**

Founded: **1980**  
Annual Sales: **\$0-1M**  
R & D Expenses: **N/A**

PRINCIPAL ACTIVITIES: **Research, develop and market new drugs for the treatment of cancer and related medical conditions.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Collecting and coordinating clinical data relating to the treatment of various cancers with alpha interferon and submitting to HPB - Ottawa.**

MANUFACTURING: **In the planning stage at this time.**

SALES/OTHER(S): **Marketing alpha interferon for the treatment of hairy cell leukemia and juvenile laryngeal papillomatosis.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **J. Graham Mowatt, Acting General Manager, Tel.: (604) 683-8566.**

## OTHER ACTIVITIES:

# PALADIN HYBRIDS INC.

HEAD OFFICE

**210 Wanless Drive  
Brampton, Ontario L6V 2L2**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 846-3983**  
 Telex: **069-7535**  
 Fax: **(416) 846-6909**

President: **Gabe Eros**

R & D Director: **Paul G. Arnison, Ph.D.**  
 Telephone: **(416) 846-3983**

Employees: **14**  
 R & D Employees: **13**

Founded: **1985**  
 Annual Sales: **\$0-1M**  
 R & D Expenses: **\$0.5-1M**

**PRINCIPAL ACTIVITIES: Hybrid canola cultivar development.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Brassica: cell and anther culture, hybrid systems development transformation and molecular biology.**

**Plant breeding.**

MANUFACTURING: **Microspore-derived inbred line production.**

SALES/OTHER(S):

AFFILIATIONS: **Oseco Inc.; Canadian Seed Coaters Inc.; Pioneer Grain Ltd.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Open to inquiries from all interested parties.**

COMMENTS:

CONTACT PERSON: **G. Eros, President.**

# PALLISER ANIMAL HEALTH LABORATORIES LTD.

## HEAD OFFICE

**P.O. Box 1327  
#2825 - 12th Avenue North  
Lethbridge, Alberta T1J 4K1**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(403) 328-1844.**  
Telex:  
Fax:

Manufacturing Director:  
**Dr. J.A. Bradley**

Telephone: **(403) 381-1191 (home)**

President: **Dr. C. leQ Darcel**

R & D Director: **Dr. C. leQ Darcel**  
Telephone: **(403) 327-3741 (home)**

Employees: **4**  
R & D Employees: **3**

Founded: **1986**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: R & D: ELISA (especially leptospirosis and domestic animal virus infections).**

## **BIOTECHNOLOGY ACTIVITIES:**

## **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Diagnostic test development.**

MANUFACTURING:

SALES/OTHER(S): **Large-scale serological monitoring.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Provincial and Federal government contracts and consulting; large-scale serological monitoring of animal diseases, FAO, WHO, CIDA, etc.; large-scale serological monitoring of animal and zoonotic diseases.**

COMMENTS:

CONTACT PERSON: **Dr. J.A. Bradley**

# PAQUES LAVALIN

## HEAD OFFICE

**2235 Sheppard Avenue East  
Willowdale, Ontario M2J 5A6**

Telephone: **(416) 756-9687**  
Telex: **06-23765**  
Fax: **(416) 756-4998**

President: **Derk Z. Matt, P.Eng.**

R & D Director: **Mark Ferguson, P.Eng.**  
Telephone: **(416) 756-9687**

Employees: **12**  
R & D Employees: **4**

## RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**David S. Fisher, P.Eng.**

Telephone: **(416) 756-9687**

Founded: **1985**  
Annual Sales: **\$15-30M**  
R & D Expenses: **\$1M**

**PRINCIPAL ACTIVITIES: Design and supply of BIOPAQ anaerobic wastewater treatment facilities.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Industrial effluent pilot plant studies. Fundamental research into granulation of anaerobia bacteria for industrial pollution control and energy from waste.**

MANUFACTURING: **Specialized plastic corrosion-resistant "settler" modules.**

SALES/OTHER(S): **Complete BIOPAQ anaerobic wastewater treatment facilities.**

AFFILIATIONS: **Biotechnology Research Institute (a division of NRCC in Montreal).**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Ron Cameron, P.Eng. Director of Marketing.**

## OTHER ACTIVITIES:



# PARACEL LABORATORIES LTD.

## HEAD OFFICE

**#8 - 17 Grenfell Crescent  
Nepean, Ontario K2G 0G3**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(613) 225-2447**  
Telex:  
Fax:

President: **Dr. W. Craig**

R & D Director: **Dr. W. Craig**  
Telephone:

Employees: **7**  
R & D Employees: **6**  
(In biotechnology: **6**)

Founded: **1985**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$300K**)

PRINCIPAL ACTIVITIES: **Chemistry of biologically important compounds, assessment of fungal contamination of indoor air, development of ELISA systems.**

### BIOTECHNOLOGY ACTIVITIES:

### OTHER ACTIVITIES:

RESEARCH & DEVELOPMENT: **Polyclonal and monoclonal antibodies synthesis of hapten conjugates.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **External distributors.**

COMMENTS:

CONTACT PERSON: **Dr. W. Craig**

# PEGASUS INDUSTRIAL SPECIALTIES LTD.

<p><u>HEAD OFFICE</u>  <b>4490 Sheppard Avenue East          Agincourt, Ontario M1S 4J9</b></p> <p>Telephone: <b>(416) 298-3141</b>          Telex: <b>065-26147</b>          Fax: <b>(416) 291-4948</b></p> <p>President: <b>Neal Trent</b></p> <p>R &amp; D Director: <b>Ron Trent</b>          Telephone:</p> <p>Employees: <b>15</b>          R &amp; D Employees: <b>3</b>          (In biotechnology: <b>3</b>)</p>	<p><u>RESEARCH FACILITY</u>  <b>Same as Head Office</b></p> <p>Manufacturing Director:  <b>Neal Trent</b></p> <p>Telephone: <b>(416) 298-3141</b></p> <p>Founded: <b>1968</b>          Annual Sales: <b>\$1-3M</b>          R &amp; D Expenses: <b>\$0-0.5M</b>          (In biotechnology: <b>\$45K</b>)</p>
<p><b>PRINCIPAL ACTIVITIES: Designing, engineering and building research pilot and production units for distillation, extraction, absorption, fermentation; reactors and evaporators.</b></p>	
<p><b>BIOTECHNOLOGY ACTIVITIES:</b></p> <p><u>RESEARCH &amp; DEVELOPMENT:</u> Fermentation system design. Bio-reactor design. Alcohol concentration process.</p> <p><u>MANUFACTURING:</u> Fermentors: laboratory, bench-scale, pilot-scale. Custom-design fluidized bed reactors. Special external loop air lift fermentor. Custom-manufactured glass vessels. Biosensors: pH, pO<sub>2</sub>, temperature monitoring systems.</p> <p><u>SALES/OTHER(S):</u></p>	<p><b>OTHER ACTIVITIES:</b></p> <p>Distillation and extraction system design.</p> <p>Specialized glass vessel design and manufacture.</p> <p>Custom glassware fabrication.</p> <p>Glass acid waste drain system.</p> <p>Distilled water systems.</p>
<p><u>AFFILIATIONS:</u> <b>Pegasus Glass Specialties; Pegasus Biotech.</b></p>	
<p><u>FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:</u> <b>Product manufacturing licence agreements.</b></p>	
<p><u>COMMENTS:</u></p>	
<p><u>CONTACT PERSON:</u> <b>R.T. Fraser, Marketing Manager.</b></p>	

# PHARMACIA (CANADA) INC.

## HEAD OFFICE

**500, boulevard Morgan  
Baie d'Urfé (Québec) H9X 3V1**

## RESEARCH FACILITY

Telephone: **(514) 457-6661**  
Telex: **05-821607**  
Fax: **(514) 457-4616**

President: **Michel Geadah**

R & D Director:  
Telephone:

Employees: **120**  
R & D Employees: **N/A**

Founded: **1967**  
Annual Sales: **N/A**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Sale of reagents and complete range of instrumentation for HPLC, FPLC, amino acid analyser, electrophoresis. Peptide and DNA synthesis and recombinant DNA technology.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: In bioprocessing, specializing in the separation of biotechnology-derived products; economical process for separation and purification of biological large-scale purification products; purification of monoclonal antibodies and synthetic oligonucleotides in laboratories across Canada via contracts.

### MANUFACTURING:

SALES/OTHER(S): Distribution of reagents and complete range of instrumentation for HPLC, FPLC, amino acid analyser, electrophoresis, peptide and DNA synthesis and recombinant DNA technology - made in Sweden.

### AFFILIATIONS:

### FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

### COMMENTS:

### CONTACT PERSON:

### **OTHER ACTIVITIES:**

# PHERO TECH INC.

## HEAD OFFICE

**1140 Clark Drive  
Vancouver, British Columbia V5L 3K3**

Telephone: **(604) 255-7381**  
Telex: **04-351279**  
Fax:

President: **Steve Burke**  
Chief Executive Officer: **Peter Putland**  
R & D Director: **Dr. Staffan Lindgren**  
Telephone: **(604) 255-7381**

Employees: **15**  
R & D Employees: **5**  
(In biotechnology: **2**)

Founded: **1981**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **<\$250K**)

## RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Peter Putland**

Telephone: **(604) 255-7381**

PRINCIPAL ACTIVITIES: **Insect pest management with semiochemicals (pheromones).**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Semiochemical improvements.  
Field testing of management products.**

MANUFACTURING: **Chemical synthesis of semiochemicals,  
especially optically active ones (using enzymes).**

SALES/OTHER(S): **Cost/benefit analysis of insect manage-  
ment with semiochemicals. Technology transfer to end  
user.**

### AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Sourcing of polymers, films and other  
plastics or formulations, field trials with concerned forestry or agricultural communities.**

### COMMENTS:

CONTACT PERSONS: **Steve Burke; Peter Putland.**

### **OTHER ACTIVITIES:**

# PHILOM BIOS INC.

## HEAD OFFICE

**#15 Innovation Boulevard  
Saskatoon, Saskatchewan S7N 2X8  
Mailing address: Mail #2, #4-110 Research Drive**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(306) 665-6211**  
Telex: **TFF6462**  
Fax:

President: **John V. Cross**

R & D Director:  
Telephone:

Employees: **21**  
R & D Employees: **21**

Founded: **1980**  
Annual Sales: **\$0-1M**  
R & D Expenses: **N/A**

PRINCIPAL ACTIVITIES: **Development, manufacture and marketing of biological input products for the plant growth industries.**

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Bioherbicides, biofertilizers, biofungicides.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **New technologies and products in area of biological input systems; strategic alliances with established marketing corporations outside Canada.**

COMMENTS:

CONTACT PERSON: **J.V. Cross**

### OTHER ACTIVITIES:

# PISCICULTURE DES ALLEGHANYS INC.

## HEAD OFFICE

**2755, chemin Grande Ligne  
Saint-Philemon  
Comté de Bellechasse (Québec) G0R 4A0**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(418) 469-2823**

Telex:

Fax: **(418) 681-7806**

President: **Yves Boulanger**

R & D Director: **Yves Boulanger**

Telephone: **(418) 469-2823**

Employees: **8**

R & D Employees: **2**

(In biotechnology: **2**)

Founded: **1972**

Annual Sales: **\$0-1M**

R & D Expenses: **\$0-0.5M**

(In biotechnology: **\$75K**)

Manufacturing Director:

**Yves Boulanger**

Telephone: **(418) 469-2823**

**PRINCIPAL ACTIVITIES: R & D and production of salmonidae.**

## **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Development of all-female, sterile, hybrid and disease-free strains.**

**MANUFACTURING: Production of all-female, sterile, hybrid and disease-free strains.**

**SALES/OTHER(S): Eggs and fry of rainbow and speckled trout.**

**AFFILIATIONS: Biorex G.C. Inc.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:**

**COMMENTS:**

**CONTACT PERSONS: Yves Boulanger; Marc Gagnon.**

## **OTHER ACTIVITIES:**

# POLLUTECH LIMITED

## HEAD OFFICE

**768 Westgate Road  
Oakville, Ontario L6L 5N2**

## RESEARCH FACILITY

**Same as Head Office and  
1149 Varvier Road  
Sarnia, Ontario N7S 3Y6**

Telephone: **(416) 847-0065**  
Telex: **via CNCP-PIFRCOM 21:POU004**  
Fax: **(416) 847-3840**

President: **Dr. J.D. Norman, P.Eng.**

R & D Director: **R.V. Laughton, B.Sc.M.Eng.**  
Telephone: **(416) 847-0065**

Employees: **20**  
R & D Employees: **16**  
(In biotechnology: **16**)

Founded: **1969**  
Annual Sales:  
R & D Expenses:

PRINCIPAL ACTIVITIES: **Environmental consultants, principally in biotreatment.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Biological waste treatment. Conversion to single cell protein and other feed stocks.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Richard Laughton, Vice-President.**

### **OTHER ACTIVITIES:**

**Methods development. Occupational health and safety.**

# POS PILOT PLANT CORPORATION

## HEAD OFFICE

**118 Veterinary Road  
Saskatoon, Saskatchewan S7N 2R4**

Telephone: **(306) 975-7066**  
Telex: **074-2882**  
Fax: **(306) 343-5966**

President: **Roy A. Carr**

R & D Director: **Paul Fedec, Ph.D.**  
Telephone: **(306) 975-7066 ext. 45**

Employees: **38**  
R & D Employees: **25**  
(In biotechnology: **2**)

## RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Janos Mikle**

Telephone: **(306) 975-7066 ext. 43**

Founded: **1973**  
Annual Sales: **\$1-3M**  
R & D Expenses: **\$1-3M**  
(In biotechnology: **\$300K**)

**PRINCIPAL ACTIVITIES: R & D into processing of agricultural products pilot unit. Food industry and health care products test market production capabilities. Analytical services, information retrieval services.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Enzyme-aided aqueous extraction of oils and fats from oilseeds. Enzymic modification of oils and fats pilot-scale test run of immobilized enzymes.**

MANUFACTURING: **Test market production of selected therapeutic components and products.**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **POS offers fee-for-service pilot facility and staff. International access.**

COMMENTS:

CONTACT PERSON: **Roy A. Carr, President.**

## OTHER ACTIVITIES:



# PRECISION BIOLOGICALS INC.

## HEAD OFFICE

**11A Pettipas Drive  
Dartmouth, Nova Scotia B3B 1K1**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(902) 463-0119**

Telex:

Fax: **(902) 463-6421**

President: **Tony Bebbington**

R & D Director: **Tony Bebbington**

Telephone: **(902) 463-0119**

Employees: **8**

R & D Employees: **2**

Founded: **1984**

Annual Sales: **\$0-1M**

R & D Expenses: **\$0-0.5M**

Manufacturing Director:

**Sandra LeBlanc**

Telephone: **(902) 463-0119**

**PRINCIPAL ACTIVITIES: Manufacture of clinical diagnostic products; specializing in blood coagulation studies and microbiology products.**

## **BIOTECHNOLOGY ACTIVITIES:**

## **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: Investigations into rapid ID systems for microbiology.

MANUFACTURING: Precision manufacture of products for coagulation studies (thromboplastin, APTT reagent controls) and products for microbiology laboratories.

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Our company is looking for international distribution and technology infusion in the field of microbiology.

COMMENTS:

CONTACT PERSON: **Tony Bebbington**

# PREMIER PEAT MOSS LIMITED

HEAD OFFICE

**Chemin Témiscouata, C.P. 2600  
Rivière-du-Loup (Québec) G5R 4C9**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(418) 862-6356**  
Telex: **051-3964**  
Fax: **(418) 862-6685**

Manufacturing Director:  
**Jean-Marie Gagnon**

Telephone: **(418) 862-6356**

President: **Bernard Bélanger**

R & D Director: **Alain Bélanger, Ph.D.**  
Telephone: **(418) 862-6356**

Employees: **220**  
R & D Employees: **38**  
(In biotechnology: **30**)

Founded: **1933**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$1-3M**  
(In biotechnology: **\$1+M**)

**PRINCIPAL ACTIVITIES: Extraction of peat moss and manufacture of peat moss-based products.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Biofertilizers (mycorrhizae), biofilters, composts, value-added substrates.**

MANUFACTURING: **Peat moss-based mixes, value-added specialties.**

SALES/OTHER(S): **Consulting. Service of substrates analyses. Research contracts.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Research cooperation. Carrying-out of private research contracts. Marketing of new products.**

COMMENTS:

CONTACT PERSON: **Dr. Michel Caron**

**OTHER ACTIVITIES:**

**Machines for peat moss extraction. Equipment for peat moss wrapping. Machines for stocking peat moss. General mixes made of sphagnum moss and raw peat moss.**

# PROBTEC CORPORATION

## HEAD OFFICE

**Room 236, Farquharson Building  
4700 Keele Street  
North York, Ontario M3J 1P3**

Telephone: **(416) 736-5390**

Telex:

Fax: **(416) 736-5594**

President: **B.W. Glickman, Ph.D.**

R & D Director: **R.M. Glickman**  
Telephone: **(416) 736-5390**

Employees: **10**

R & D Employees: **8**

(In biotechnology: **8**)

Founded: **1987**

Annual Sales: **\$0-1M**

R & D Expenses: **\$0.5-1M**

(In biotechnology: **\$0.5-1M**)

**PRINCIPAL ACTIVITIES: Health care industry: DNA diagnostics for genetic and forensic analysis. DNA detection, toxicology, drug development, gene therapy.**

## **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Genetic probe analysis for genetic diseases, forensics, toxicology testing and systems development, drug design.**

**MANUFACTURING:**

**SALES/OTHER(S):**

## **OTHER ACTIVITIES:**

**AFFILIATIONS: York University; Molson Companies; North American Life; North York General Hospital. Agricultural diagnostics with Agdia, Ontario Molecular Diagnostics Incorporated (1988).**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Strategic partnering with members of health care industry.**

**COMMENTS:**

**CONTACT PERSON: B.W. Glickman**

# PROPLANT GARDEN PRODUCTS LTD.

## HEAD OFFICE

**2552 Burns Road  
Port Coquitlam, British Columbia V3C 3V4**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(604) 942-5756**  
Telex:  
Fax:

Directors: **D.R. Polonenko, J.H. Peach, E. Jan.**

R & D Director: **Dr. D. Polonenko**  
Telephone: **(604)942-5756**

Employees: <b>25</b>	Founded: <b>1987</b>
R & D Employees: <b>2</b>	Annual Sales: <b>\$1-3M</b>
	R & D Expenses: <b>\$0-0.5M</b>

**PRINCIPAL ACTIVITIES: Wholesale horticultural greenhouse and nursery operation.**

## **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Plant tissue culture.**

MANUFACTURING: **Production of tissue-cultured tropical foliage plants.**

SALES/OTHER(S): **Plant liners.**

AFFILIATIONS: **Flowers Canada; United Flower Growers Co-operative.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Dr. D. Polonenko**

## **OTHER ACTIVITIES:**

**Growth of tropical, bedding and ornamentals for wholesale to commercial buyers.**

# PULP AND PAPER RESEARCH INSTITUTE OF CANADA

<p><u>HEAD OFFICE</u>  <b>570, boulevard St. John's          Pointe Claire (Québec) H9R 3J9</b></p> <p>Telephone:           <b>(514) 630-4100</b>          Telex:               <b>05-821541</b>          Fax:                 <b>(514) 640-4134</b></p> <p>President:           <b>P.E. Wrist</b></p> <p>R &amp; D Director:   <b>Dr. D. Atack</b>          Telephone:</p> <p>Employees:         <b>377</b>          R &amp; D Employees: <b>304*</b>          (In biotechnology: <b>7</b>)</p>	<p><u>RESEARCH FACILITY</u>  <b>Same as Head Office</b></p> <p>Founded:            <b>1925</b>          Annual Sales:     <b>N/A</b>          R &amp; D Expenses:  <b>\$22M</b>          (In biotechnology: <b>\$1M</b>)</p>
<p>PRINCIPAL ACTIVITIES: <b>Research institute; miscellaneous services.</b></p>	
<p><b>BIOTECHNOLOGY ACTIVITIES:</b></p> <p><u>RESEARCH &amp; DEVELOPMENT:</u> <b>Biological bleaching. Anaerobic fermentation of industry effluents. Pollutions control: waste treatment. Studies on ligninolytic and cellulolytic enzymes.</b></p> <p><u>MANUFACTURING:</u></p> <p><u>SALES/OTHER(S):</u> <b>Educating students in microbiology with Macdonald College of McGill University.</b></p> <p><u>AFFILIATIONS:</u></p> <p><u>FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:</u></p> <p><u>COMMENTS:</u> <b>Partnership between Canadian government, Canadian Pulp and Paper Association, McGill University and University of British Columbia.</b></p> <p><u>CONTACT PERSON:</u> <b>Dr. Lubo Jurasek</b></p>	<p><b>OTHER ACTIVITIES:</b></p> <p>The Institute carries out fundamental and applied research related to pulp and paper mill operations and trains graduate students in fundamental research related to pulp and paper technology.</p> <p>Student program in collaboration with: University of Montreal, École Polytechnique de Montréal, McGill University and University of British Columbia.</p>

\* Research scientists, engineers and technicians.

# PURDEL COOPÉRATIVE AGRO-ALIMENTAIRE

## HEAD OFFICE

**155, rue St-Jean Baptiste  
Bic  
Comté de Rimouski (Québec) G0L 1B0**

## RESEARCH FACILITY

**2465, 1<sup>re</sup> avenue  
Québec (Québec)**

Telephone: **(418) 736-4363**  
Telex:  
Fax:

Executive Director: **Denis Cassista**

R & D Director: **J. Alexandre Blais**  
Telephone: **(418) 641-0764**

Employees: **1,500**  
R & D Employees: **3**

Founded: **1948**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Dairy products and fishery products.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Shrimp: enzyme, pigment, flavour extraction, meat residue. Dairy: stability of milk proteins. Valorization of new products.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **J. Alexandre Blais**

## OTHER ACTIVITIES:

# QA LABORATORIES LIMITED

HEAD OFFICE

**135 The West Mall  
Toronto, Ontario M9C 1C2**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 622-6705**

Telex:

Fax: **(416) 622-6591**

President: **Phyllis Entis**

R & D Director: **Phyllis Entis**  
Telephone: **(416) 622-6705**

Employees: **N/A**

R & D Employees: **N/A**

Manufacturing Director:

**Michael P. Entis**

Telephone: **(416) 622-6705**

Founded: **1979**

Annual Sales: **N/A**

R & D Expenses: **N/A**

**PRINCIPAL ACTIVITIES: R & D of microbiology products and techniques for use in food and pharmaceutical industries; marketing of same.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: R & D of visible colour DNA probes for detection of salmonella and listeria, to be used in conjunction with HGMF technology.

MANUFACTURING: Manufacture of filtration units, membrane filters (HGMF's), ISO grid "line counters", all to be used in conjunction with above mentioned DNA probes.

SALES/OTHER(S): Sale of all the above products.

Also developing and/or improving HGMF technology for detection and enumeration of:

- Total bacteria;
- Total coliform;
- Fecal coliform;
- E. Coli;
- Yeast and mold;
- S. aureus;
- and others, as applied to the food and pharmaceutical industries.

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Michael P. Entis, Vice-President.**

# QUADRA LOGIC TECHNOLOGIES INC.

HEAD OFFICE

**520 West 6th Avenue  
Vancouver, British Columbia V5Z 4H5**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(604) 872-7881**  
Telex: **0454654**  
Fax: **(604) 875-0001**

President: **James J. Miller**

R & D Director: **Dr. Julia G. Levy**  
Telephone: **(604) 872-7881**

Vice-President, Operations,  
Diagnostics: **Joseph Shaw**  
Vice-President, Operations,  
Phototherapeutics: **R.W. Gilroy**  
Executive Vice-President, Q.L.T.  
Pharmaceuticals Inc.: **E. Todla**

Telephone: **(604) 872-7881**

Employees: **65**  
R & D Employees: **35**  
(In biotechnology: **35**)

Founded: **1981**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$5-10M**  
(In biotechnology: **\$5-10M**)

**PRINCIPAL ACTIVITIES: Diagnostic and therapeutic products for human and veterinary medicine.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Immunodiagnostic and DNA probe assay systems, pregnancy and ovulation, infectious diseases, cancer, fish pathogens, antisomatostatin growth stimulant, immune regulation agents.**

MANUFACTURING: **Microbiological reagents and instrumentation, pregnancy test kits, photodynamic therapy compounds.**

SALES/OTHER(S): **Microbiological reagents and instrumentation.**

**OTHER ACTIVITIES:**

**Growth stimulant field trials in swine in U.S.A.**

**Phototherapeutic compounds in Phase III clinical trials in U.S.A. and Canada.**

**AFFILIATIONS: DRES (Canadian Department of National Defence); Genentech; Industria Farmaceutica Cosmetica Italiana; International Minerals and Chemicals Corporation; American Cyanamid; Gongdong Enterprises Inc. (F.R.C.).**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: In-licensing/joint venture arrangements for therapeutic and diagnostic products in discrete geographical areas; distribution arrangements for diagnostic disposables and instrumentation.**

COMMENTS:

CONTACT PERSON: **Ronald G. MacKenzie, Executive Vice-President.**



# QUALITY SEAFARMS LTD.

HEAD OFFICE

**Box 68, Campbell River  
British Columbia V9W 4Z9**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(604) 286-3023**

Telex:

Fax: **(604) 286-3541**

President: **A. Heimenberg**

Manager: **Keith Ware**  
Telephone: **(604) 286-3023**

Employees: **9**  
R & D Employees: **2**  
(In biotechnology: **2**)

Founded: **1985**  
Annual Sales: **\$1-3M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$250K**)

Manufacturing Director:  
**Barry Baldwin**

Telephone: **(604) 286-3023**

PRINCIPAL ACTIVITIES: **Salmon farming. Salmonid hatchery technology.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: Sterilization of salmonids via temperature shock and gamete separation of milt. Technology is developed with Clearwater Marine (UK) in cooperative effort. R & D is carried out and follow-up analysis is done at grow-out sites, Read Island (Oil Bay) and Bold Point (Quadra Island).

MANUFACTURING:

SALES/OTHER(S): Hatchery equipment, technology consulting.

AFFILIATIONS: Clearwater Marine, (UK).

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: Keith Ware, Manager.

**OTHER ACTIVITIES:**

Scallop culture development. Quality Seafarms has the first genera.

# RAYLO CHEMICALS

(Division of Terochem Laboratories Ltd.)

<p><u>HEAD OFFICE</u>  <b>8045 Argyll Road</b>  <b>Edmonton, Alberta T6C 4A9</b></p> <p>Telephone:           <b>(403) 468-6060</b>  Telex:                   <b>37-43236</b>  Fax:                      <b>(403) 468-4784</b></p> <p>President:             <b>Dr. G. Tertzakian</b></p> <p>R &amp; D Director:     <b>Dr. W.H. Muhs</b>  Telephone:</p> <p>Employees:           <b>55</b>  R &amp; D Employees:   <b>20</b>  (In biotechnology:   <b>5</b>)</p>	<p><u>RESEARCH FACILITY</u>  <b>Same as Head Office</b></p> <p>Manufacturing Director:  <b>Dr. J. Smith</b></p> <p>Founded:              <b>1961</b>  Annual Sales:         <b>\$7-10M</b>  R &amp; D Expenses:     <b>\$0.5-1M</b>  (In biotechnology:   <b>\$250K</b>)</p>
<p>PRINCIPAL ACTIVITIES: <b>Manufacture of specialty chemicals, pharmaceutical intermediates, bulk active ingredients, biochemicals, reagents for gene synthesizers.</b></p>	
<p><b>BIOTECHNOLOGY ACTIVITIES:</b></p> <p><u>RESEARCH &amp; DEVELOPMENT:</u> <b>Nucleoside-based pharmaceuticals. Anti-viral agents.</b></p> <p><u>MANUFACTURING:</u> <b>Experimental AIDS drugs (for clinical studies).</b></p> <p><u>SALES/OTHER(S):</u></p> <p><u>AFFILIATIONS:</u></p> <p><u>FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:</u> <b>Presently N/A.</b></p> <p><u>COMMENTS:</u></p> <p><u>CONTACT PERSON:</u> <b>J.M. Colomb, Communications Officer.</b></p>	<p><b>OTHER ACTIVITIES:</b></p> <p><b>Scale-up R &amp; D.</b></p> <p><b>Fine chemicals and reagents.</b></p>

# RECBIOMINE INC.

## HEAD OFFICE

**2095, boulevard Charest ouest, Suite 220  
Sainte-Foy (Québec) G1N 4L8**

## RESEARCH FACILITY

**2575, rue Watt, Suite 6  
Sainte-Foy (Québec) G1P 3T6**

Telephone: **(418) 687-2887**  
Telex:  
Fax:

President: **Dr. Roger Guay**

R & D Director: **Edmond St-Jean**  
Telephone: **(418) 653-2310**

Employees: **4**  
R & D Employees: **3**

Founded: **1986**  
Annual Sales: **N/A**  
R & D Expenses: **N/A**

PRINCIPAL ACTIVITIES: **Bacterial leaching of minerals.**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Recovery of metals of commercial value using bacterial leaching. Arsenopyrite degradation by *T. ferrooxidans*. Selection and development of adapted bacterial strains on different metal sulfides.**

### MANUFACTURING:

**SALES/OTHER(S): Feasibility studies.**

**AFFILIATIONS: Enviromine Inc.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Research collaboration with European French-speaking communities and countries.**

### COMMENTS:

**CONTACT PERSON: Roger Guay, Ph.D., Tel.: (418) 656-5795.**

### **OTHER ACTIVITIES:**

**Gravimetric and physical upgrading of commercial ores from tailings.**

**Determination of commercial recoverable values from tailings.**

# HSC RESEARCH DEVELOPMENT CORPORATION

## HEAD OFFICE

**88 Elm Street  
Toronto, Ontario M5G 1X8**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 598-5982**

Telex:

Fax: **(416) 598-7163**

President: **Dr. J.A. Lowden**

R & D Director: **Dr. A. Pollak**

Telephone: **(416) 598-5982**

Employees: **20**

R & D Employees: **15**

(In biotechnology: **15**)

Manufacturing Director:

**Matt Bailey**

Telephone: **(416) 598-5982**

Founded: **1981**

Annual Sales: **\$0-1M**

R & D Expenses:

(In biotechnology: **\$990K**)

PRINCIPAL ACTIVITIES: **Technology transfer, contract research. Applied research, direct sales.**

## **BIOTECHNOLOGY ACTIVITIES:**

## **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Nonisotopic gene probes.**

MANUFACTURING: **Rare biochemicals, biologicals; research equipment.**

SALES/OTHER(S):

AFFILIATIONS: **The Hospital for Sick Children; CyberFluor Inc.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Venture investments, out-licensing opportunities.**

COMMENTS:

CONTACT PERSON: **Dr. J.A. (Sandy) Lowden**

# RHIZOGEN CORP.

## HEAD OFFICE

**Bay 5, #116-103rd Street East  
Saskatoon, Saskatchewan S7N 1Y7**

Telephone: **(306) 373-3060**  
Telex:  
Fax:

President: **M. Trapp**

R & D Director: **Dr. J.H. Stephens**  
Telephone: **(306) 373-3060**

Employees: **5**  
R & D Employees: **3**  
(In biotechnology: **3**)

## RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Dr. J.H. Stephens**

Telephone: **(306) 373-3060**

Founded: **1987**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$50K**)

PRINCIPAL ACTIVITIES: **Nitrogen fixation: initial product is legume inoculant. Currently expanding R & D to other areas of agriculture, forestry and mining.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Upgrading legume inoculants and R & D directed toward a range of other potentially-important bacteria in agriculture and industry.**

MANUFACTURING: **Legume inoculant.**

SALES/OTHER(S): **To distributors only.**

## AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Co-operative ventures and/or licensing of techniques, organisms, products, etc., preferably incoming to Rhizogen.**

COMMENTS: **We are open to virtually all groups having a product, or potential product for use in agriculture, forestry, mining, etc.**

CONTACT PERSON: **Dr. J.H. Stephens**

## OTHER ACTIVITIES:

# LES LABORATOIRES RHIZOTEC INC.

## HEAD OFFICE

**780, rue Commerciale  
Saint-Jean Chrysostôme (Québec) G6Z 2C9**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(418) 839-5931**  
Telex:  
Fax:

Manufacturing Director:  
**Alain Marchand**

Telephone: **(418) 839-5931**

President: **D<sup>r</sup> Maurice Lalonde**

R & D Director: **Jean-François Bourassa**  
Telephone: **(418) 839-5931**

Employees: **6**  
R & D Employees: **4**  
(In biotechnology: **4**)

Founded: **1981**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$0-0.5M**)

PRINCIPAL ACTIVITIES: **R & D and production: biofertilizers; fungus fermentation; biopesticides.**

## BIOTECHNOLOGY ACTIVITIES:

## OTHER ACTIVITIES:

RESEARCH & DEVELOPMENT: **Process development for fermentation; fungus biofertilizers (forestry).**

MANUFACTURING: **Actinorrhizal Frankia and ectomycorrhizae fungus (nitrogen-fixing biofertilizer).**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **To be defined.**

COMMENTS:

CONTACT PERSONS: **Maurice Lalonde or Alain Marchand.**

# RIO ALGOM LIMITED

## HEAD OFFICE

**120 Adelaide Street West  
Toronto, Ontario M5H 1W5**

Telephone: **(416) 367-4000**

Telex:

Fax: **(416) 365-6870**

Chairman: **Ross J. Turner**

R & D Director: **Biman Bihari**  
Telephone: **(705) 461-4457**

Employees: **2400**

R & D Employees: **20**

(In biotechnology): **3**

## RESEARCH FACILITY

**Process Development Department  
P.O. Box 1500  
Elliot Lake, Ontario P5A 2K1**

Founded: **1960**

Annual Sales: **N/A**

R & D Expenses: **\$0.5-1M**

(In biotechnology): **\$100K**

**PRINCIPAL ACTIVITIES: Mining and processing of uranium ores at Elliot Lake Operations; interests in copper molybdenum, metallurgical coal, potash, tin; specialty steel and stainless steel manufacturing; metal distribution in Canada, U.S.A. and Australia.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Improvement and application of bacteria-assisted leaching technique for uranium ores.**

MANUFACTURING: **Added production of uranium by bacteria-assisted leaching process in underground mines.**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Exchange of technical and research data and information.**

COMMENTS:

CONTACT PERSON: **Biman Bihari**

### **OTHER ACTIVITIES:**

# INSTITUT ROSELL INC.

## HEAD OFFICE

**8480, boulevard Saint-Laurent  
Montréal (Québec) H2P 2M6**

Telephone: **(514) 381-5631**  
Telex: **05-825559**  
Fax: **(514) 383-4493**

President: **Édouard Brochu**

R & D Director: **Jean-Paul Julien**  
Telephone: **(514) 381-5631**

Employees: **40**  
R & D Employees: **6**  
(In biotechnology: **6**)

## RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Jean-Louis Bilodeau**

Telephone: **(514) 381-5631**

Founded: **1934**  
Annual Sales: **\$1-3M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$0.25M**)

**PRINCIPAL ACTIVITIES: Production of microorganisms for use in food industries, agriculture, industry and for the prevention and treatment of disease.**

## **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Several projects are moving re: the selection of microbial species and methods for their production.**

**MANUFACTURING: Bacteria, yeasts and moulds.**

**SALES/OTHER(S): Within Canada and in many foreign countries.**

**AFFILIATIONS: Rougier Inc.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Cooperation in research with the public sector.**

**COMMENTS:**

**CONTACT PERSON:**

## **OTHER ACTIVITIES:**



# ROYAL PACIFIC SEA FARMS LTD.

## HEAD OFFICE

**1407 - 700 West Pender  
Vancouver, British Columbia V6C 1G8**

## RESEARCH FACILITY

Telephone: **(604) 685-8340**  
Telex:  
Fax: **(604) 685-4282**

Manufacturing Director:  
**Brian Clive**

President: **Tom May**

R & D Director: **George Hunter**  
Telephone:

Employees: **80**  
R & D Employees: **12**

Founded: **1987**  
Annual Sales: **15-30 M\$**  
R & D Expenses: **0.5-1M\$**

PRINCIPAL ACTIVITIES: **Production of salmon and trout; production of fish meal.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Recombinant somatotrophin; hybridization; induced triploidy; genetic selection.**

MANUFACTURING: **Sex control salmon; hydrolysis of fish offal.**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Joint venture R & D in salmonid aquaculture/fish protein production.**

COMMENTS:

CONTACT PERSON: **George Hunter**

### **OTHER ACTIVITIES:**

# RUTLAND BIOTECH LIMITED

HEAD OFFICE

**3220 Park Place  
666 Burrard Street  
Vancouver, British Columbia V6C 2X8**

Telephone: **(604) 669-9515**

Telex:

Fax: **(604) 683-5612**

President: **Nicholas Synenko**

R & D Director: **Dr. Richard H. Roydhouse**

Telephone: **(604) 228-0303**

Employees: **20**

R & D Employees: **5**

(In biotechnology: **5**)

RESEARCH FACILITY

**4339 West 10th Avenue  
Vancouver, British Columbia  
V6R 2H6**

Manufacturing Director:

**Alan Partridge**

Telephone: **(604) 439-1559**

Founded: **1984**

Annual Sales: **\$0-1M**

R & D Expenses: **\$0.5-1M**

(In biotechnology: **\$0.5-1M**)

**PRINCIPAL ACTIVITIES: Research, development and marketing including direct sales and third party licensing of proprietary oral health care products, human tissue lubricants and cleansers and environmental and occupational health products.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: Human oral, skin and tissue-care products using thin liquid film technology. Control and detoxification of heavy metal contamination with "liquid crystals".

MANUFACTURING: By contract to outside manufacturers.

SALES/OTHER(S): Direct by two company subsidiaries (EPS and Britley House). Licencing to others for manufacture and distribution on a royalty arrangement.

**OTHER ACTIVITIES:**

Environmental and occupational health.

AFFILIATIONS: EPS Environmental Protection Systems Limited; Britley House Corp.; Advanced Oral Health Corp. Limited; RBL Advanced Tissue Care Research Limited.

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Patent protection extends to some 35 countries. The company has certain licensing agreements in place for certain products and is actively pursuing large distribution organization world-wide to market other certain products. Assistance in contacting and completing international arrangements could be helpful.

COMMENTS: The company has spent approximately \$4,000,000.00 since inception on research and development of unique, patentable technology, has several market-ready proven products, has direct sales and licensing agreements for manufacturing, sales and distribution of several products.

CONTACT PERSON: William G. Gillies, Vice-President, New Product Development.

# SAFER LTD.

## HEAD OFFICE

**455 Milner Avenue  
Unit #1  
Scarborough, Ontario M1B 2K4**

Telephone: **(416) 291-8150**  
Telex: **065-25244**  
Fax: **(416) 291-1755**

Vice-President and General Manager: **Paul D. Goodspeed**

R & D Director: **Dr. George Puritch**  
Telephone: **(604) 652-4426**

Employees: **35**  
R & D Employees: **26**

Founded: **1976**  
Annual Sales: **\$1-3M**  
R & D Expenses: **\$1-3M**

## RESEARCH FACILITY

**6761 Kirkpatrick Crescent  
R.R. #3  
Victoria, British Columbia V8X 3X1**

Manufacturing Director:  
**Sherry Shaw**

Telephone: **(416) 291-8150**

**PRINCIPAL ACTIVITIES: Development and marketing of safe, effective pest controls and plant care products.**

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: Natural plant and animal oils as pest control products. Formulation of biological organisms for pest control.

MANUFACTURING: Pest control products.

SALES/OTHER(S):

### OTHER ACTIVITIES:

Marketing in lawn and garden industry in Canada and overseas.

AFFILIATIONS: University of Ottawa; University of British Columbia; University of Victoria.  
U.S. Head Office: 60 William Street, Boston, Massachusetts 02181, U.S.A.

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: Paul D. Goodspeed, Vice President and General Manager.

# SANEXEN INTERNATIONAL INC.

HEAD OFFICE

**7777, boulevard Louis-H. Lafontaine  
Anjou (Québec) H1K 4E4**

Telephone: **(514) 355-3351**  
Telex: **05-829559**  
Fax: **(514) 354-2493**

President: **Jean-Guy Soulard, Ing., M.Sc.**

R & D Director: **Mme Diana Mourato, M.Sc.**  
Telephone: **(514) 355-3351**

Employees: **500**  
R & D Employees: **7**  
(In biotechnology: **7**)

Founded: **1968**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$0.5M**)

RESEARCH FACILITY

**10700, boulevard Henri-Bourassa  
P.A.T. (Québec) H1C 1G9**

Technical Director:  
**Jean Paquin**

Telephone: **(514) 355-3351**

**PRINCIPAL ACTIVITIES: Transport of toxic wastes, reclamation of contaminated areas, treatment of wastewater and wastes.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: Biodegradation of high-chlorine PCB present in contaminated soils by adapting micro-organisms already found in the soils.

MANUFACTURING: Prefabricated modular system of biological treatment - biolyse process.

SALES/OTHER(S): Biodegradation of contaminants present in soils (i.e. HPA, HMA, phenols, hydrocarbons).

AFFILIATIONS: **Groupe Sanivan**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS: **Sanexen considers affiliations with American companies operating in the fields of treatment of toxic wastes.**

CONTACT PERSONS: **Jean Paquin, Executive Director; Mrs. Diana Mourato, Director of Research and Development; Pierre Hudon, Site Restoration.**

**OTHER ACTIVITIES:**

Extraction of contaminants present in soils.

Detoxification of liquid effluents.

System of wastewater and wastes treatment.

Vacuum truck - Filtration Unit.

Site restoration.

Management of dangerous wastes.

Prevention.

# SCI CAN DIAGNOSTICS

HEAD OFFICE

**#14601-134th Avenue  
Edmonton, Alberta T5L 4S9**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(403) 455-6079**  
 Telex: **037**  
 Fax: **(403) 455-6099**

Manufacturing Director:  
**Garth Likes**

Telephone: **(403) 455-6079**

President and C.E.O.: **Terry Hay**

R & D Director: **Dr. T. Wegman**  
 Telephone: **(403) 432-2275**

Founded: **1985**  
 Annual Sales: **\$0-1M**  
 R & D Expenses: **\$0.5-1M**

Employees: **12**  
 R & D Employees: **4**

PRINCIPAL ACTIVITIES: **Immunological-based products. Immunological R & D.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Immune monitoring. Diagnostics-Testing.**

MANUFACTURING: **T-Cell Recovery Column, B-cell Recovery Columns.**

SALES/OTHER(S): **Urinary tract infection kits complement.**

AFFILIATIONS: **Distributors in Canada, Singapore, Thailand, U.S.A.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **International distribution. Joint venture - product development, technology exchange.**

COMMENTS:

CONTACT PERSON: **Garth Likes, Tel.: (403) 453-6079.**

# JOSEPH E. SEAGRAM & SONS LIMITÉE

## HEAD OFFICE

**1430, rue Peel  
Montréal (Québec) H3A 1S9**

Telephone: **(514) 849-5271**  
Telex: **055-66261**  
Fax: **(514) 366-3271**

President: **G. Jellinek**

R & D Director: **A. Peterson**  
Telephone: **(514) 366-2410**  
Fax: **(514) 366-3271**

Employees: **1,400**  
R & D Employees: **19**

## RESEARCH FACILITY

**225, avenue Lafleur  
Ville LaSalle (Québec)  
H8R 3H2**

Manufacturing Director:  
**D. J. Pashleigh**

Telephone: **(514) 849-5271**

Founded: **1887**  
Annual Sales: **N/A**  
R & D Expenses: **N/A**

PRINCIPAL ACTIVITIES: **Production of beverages.**

## **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Alcohol fermentation process development; Selection and evaluation of yeast strains; fermentation process optimization; applications of extra cellular enzymes.**

MANUFACTURING:

SALES/OTHER(S):

## **OTHER ACTIVITIES:**

**Development of new beverage products.**

AFFILIATIONS: **Subsidiary of The Seagram Company Ltd. Equity interest in Biotechnica International, USA.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS: **Research facilities are located in Montreal, White Plains, N.Y., and Keith, Scotland. R & D Employees are for Canada only.**

CONTACT PERSON:

# SEASPRINGS FARMS LTD.

## HEAD OFFICE

**38 Water Street, P.O. Box 2377  
Charlottetown, Prince Edward Island C1A 8C1**

## RESEARCH FACILITY

Telephone: **(902) 566-1145**  
Telex: **014-44222**  
Fax: **(902) 566-5358**

President: **O. Dyrkton**

R & D Director: **O. Soleim**  
Telephone:

Employees: **10**  
R & D Employees: **varies**  
(In biotechnology: **2**)

Founded: **1986**  
Annual Sales: **\$5-7 M**  
R & D Expenses: **\$0-0.5 M**  
(In biotechnology: **\$50K**)

**PRINCIPAL ACTIVITIES: Development of land-based, intensive density fish farms.**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Aquaculture. Genetic engineering for fish strains; water treatment and resources; man-made environments for fish growth.**

### MANUFACTURING:

### SALES/OTHER(S):

### **OTHER ACTIVITIES:**

AFFILIATIONS: **Aquacare A.S. Nesttun, Norway.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Exchange of information relating to fish strains and raising of fish in captivity; commercial applications.**

### COMMENTS:

CONTACT PERSON: **O. Dyrkton**

# SEMICO INC.

## HEAD OFFICE

**4905, boulevard Laurier  
Sainte-Rosalie (Québec) J0H 1X0**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(514) 799-3225**  
Telex: **05-830507**  
Fax:

Manufacturing Director:  
**René Saint-Jean**

Telephone: **(514) 799-3225**

President: **René Cloutier**

R & D Director: **Denis Bastien**  
Telephone: **(514) 799-3225**

Employees: **60**  
R & D Employees: **3**

Founded: **1971**  
Annual Sales: **\$15-30M**  
R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: Treatment, sale and distribution of agricultural products.**

## BIOTECHNOLOGY ACTIVITIES:

## OTHER ACTIVITIES:

RESEARCH & DEVELOPMENT: **Genetic improvement of spring barley.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS: **Association canadienne des producteurs de semences; Association professionnelle des meuniers du Québec; Association du commerce des semences du Canada.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSONS: **René Cloutier; Cécile Tétreault.**



# SERDARY RESEARCH LABORATORY INC.

## HEAD OFFICE

**P.O. Box 5036  
1643 Kathryn Drive  
London, Ontario N6G 2R7**

Telephone: **(519) 434-4419**  
Telex: **064-78585**  
Fax:

President: **B. Serdarevich, Ph.D.**

R & D Director: **B. Serdarevich, Ph.D.**  
Telephone: **(519) 434-4419**

Employees: **3-4**  
R & D Employees: **3-4**  
(In biotechnology: **2**)

## RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Mark Olbrychski**

Telephone: **(519) 434-4419**

Founded: **1969**  
Annual Sales : **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$20K**)

**PRINCIPAL ACTIVITIES: Production and development of high technology biochemicals for medical research.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **New biochemicals in the lipid field. Organic synthesis and biosynthesis from animals and vegetables; separation and purification by chromatography. Synthetic development from glycerols.**

MANUFACTURING: **Biomedical chemicals in lipid field.**

SALES/OTHER(S): **15% Canada, 85% Japan, U.S.A.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Mark Olbrychski**

## OTHER ACTIVITIES:

# SHAVER POULTRY BREEDING FARMS LIMITED

HEAD OFFICE

**P.O. Box 400  
Cambridge, Ontario N1R 5V9**

RESEARCH FACILITY

**Same as Head Office**

Telephone: (519) 621-5191  
Telex: 069-59337  
Fax: (519) 621-9407

President: **T. Schmidt**

R & D Director: **Dr. R.S. Gowe**  
Telephone: (519) 621-5191

Employees: **370**  
R & D Employees: **25**

Founded: **1957**  
Annual Sales : **\$15-30M (Worldwide)**  
R & D Expenses: **\$1-3M**

**PRINCIPAL ACTIVITIES: Breeding superior meat and egg stock for sale to contract producers.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: (Co-operation with Shaver Research Chair at McGill U.). Relationship of endogenous avian leucosis genes to production traits. Research in the use of transgenic birds using recombinant avian leucosis virus.

MANUFACTURING: None at present, only research.

SALES/OTHER(S): None at present, only research.

**AFFILIATIONS:** Institut sélection animale, France; Animal Research Centre Agriculture Canada, Ottawa; McGill University (Macdonald College); USDA Regional Poultry Research Laboratory, East Lansing.

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:** Co-operative research on the introduction of genes into the germ line of poultry by use of recombinant avian leucosis virus.

**COMMENTS:** At early stage of research program co-operating with other research agencies preparatory to developing an in-house capacity to work in this area.

CONTACT PERSON: **Dr. R.S. Gowe**

# LE GROUPE SNC INC.

## HEAD OFFICE

**2, Place Félix Martin  
Montréal (Québec) H2Z 1Z3**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(514) 866-1000**  
Telex: **055-60042**  
Fax: **(514) 866-0795**

President: **Jean-Paul Gourdeau**

R & D Director: **Réal L'Archevêque**  
Telephone: **(514) 866-1000**

Employees: **4,000**  
R & D Employees: **120**  
(In biotechnology: **4**)

Founded: **1911**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$10+M**  
(In biotechnology: **\$400K**)

PRINCIPAL ACTIVITIES: **Structural engineering, defence products, industrial products.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Bioprocesses: fermentation, waste treatment, enzymes.**

MANUFACTURING: **Feed/food; dyes; biopolymers.**

SALES/OTHER(S): **Processes and services.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Jacques G. Martel, Ph.D.**

### **OTHER ACTIVITIES:**

# B.V. SORBEX INC.

## HEAD OFFICE

471, avenue Berkley  
St-Lambert, Montréal (Québec)  
or: c/o Department of Chemical Engineering  
McGill University, 3480, rue University  
Montréal (Québec) H3A 2A7

Telephone: (514) 398-4276, (514) 671-7534  
Telex:  
Fax: (514) 398-3594 (McGill University)  
President: Dr. B. Volesky

R & D Director: Dr. N. Kuyucak  
Telephone: (514) 398-4920

Employees: 7  
R & D Employees: 5  
(In biotechnology: 5)

Founded: 1987  
Annual Sales: No sales so far  
R & D Expenses: \$0-0.5M  
(In biotechnology: \$0-0.5M)

PRINCIPAL ACTIVITIES: Development of new biosorbent products as a basis for removal and/or recovery of heavy metals from aqueous solutions (wastewaters). Design of biosorption process.

## RESEARCH FACILITY

c/o Chemical Engineering  
McGill University  
3480, rue University  
Montréal (Québec) H3A 2A7

### BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: Development and formulation of biosorbent materials based on microbial biomass. New biosorbent technology for removal/recovery of heavy metals.

MANUFACTURING: Planned production of biosorbents for heavy metal removal. Utilization of microbial biomass. Process equipment for biosorptive detoxification of wastewaters and/or metal recovery.

SALES/OTHER(S): The biosorbent products are not being marketed as yet. What will be marketed are both product(s) and services (process). Consulting services: detoxification of metal containing wastewaters, metal recovery from dilute solutions.

### AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: For biosorbent material development and testing a German counterpart has also been brought in. Canadian and U.S.A. partners (and potential clients) are being actively sought for a demonstration plant test operation.

COMMENTS: B.V. Sorbex Inc. is a newly established company to develop and market new biosorbent line of products and technological process based on them for metal removal from wastewaters and recovery of valuable metals.

CONTACT PERSON: Dr. B. Volesky, President, B.V. Sorbex Inc. and Associate Professor, Chemical Engineering, McGill University, 3480, rue University, Montréal (Québec) H3A 2A7, Tél.: (514) 398-4276.

### OTHER ACTIVITIES:

# SPECIALTY MARINE PRODUCTS LTD.

## HEAD OFFICE

**1814 Maritime Mews  
Granville Island  
Vancouver, British Columbia V6H 3X2**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(604) 685-5499**

Telex:

Fax: **(604) 685-8249**

President: **D.J. Saxby**

R & D Director:

Telephone:

Employees: **5-10**

R & D Employees: **3**

(In biotechnology: **3**)

Founded: **1986**

Annual Sales: **\$0.5-1.5M**

R & D Expenses: **\$0.5M**

(In biotechnology: **\$0.5M**)

**PRINCIPAL ACTIVITIES: Aquaculture, fisheries (underutilized species) and extraction of pharmaceuticals and chemicals from the ocean.**

### **BIOTECHNOLOGY ACTIVITIES:**

### **OTHER ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Culture oysters. Krill research. Chemical and pharmaceutical product extraction.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **D. Saxby**

# SPECTREX LTÉE / LTD.

## HEAD OFFICE

**5250, rue Ferrier, Bureau 508  
Montréal (Québec) H4P 1L6**

Telephone: **(514) 738-3377**  
Telex: **05-825543**  
Fax:

President: **Charles Salama**

R & D Director: **Charles Salama**  
Telephone: **(514) 738-3377**

Employees: **10**  
R & D Employees: **3**  
(In biotechnology: **3**)

## RESEARCH FACILITY

Manufacturing Director:  
**Daryl D. Salama**

Telephone: **(514) 738-3377**

Founded: **1968**  
Annual Sales: **\$2-4M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$500K**)

**PRINCIPAL ACTIVITIES: Manufacture and sale of biotechnological equipment (bioreactors, etc.).**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Bioreactors, biosensors, electronic monitors.**

MANUFACTURING: **Bioreactors, pH meters.**

SALES/OTHER(S): **Bioreactors, pH probes, peristaltic pumps, genetic engineering membranes, cell harvesters, freeze dryers.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Distribution of our products in foreign countries.**

COMMENTS:

CONTACT PERSON:

### **OTHER ACTIVITIES:**

**Laboratory equipment for chemical and spectrographic analyses.**

# S.P.I. SYNTHETIC PEPTIDES INCORPORATED

## HEAD OFFICE

**(Western region)**  
**Department of Bio-Chemistry**  
**Room 355, Medical Sciences Bldg**  
**University of Alberta**  
**Edmonton, Alberta T6G 2H7**

Telephone: **(403) 432-3155**  
Telex:  
Fax: **(403) 432-7168**

President: **Dr. Robert S. Hodges**

R & D Director: **Dr. J.M.R. Parker**  
Telephone: **(403) 432-3155**

Employees: **6**  
R & D Employees: **2**

## RESEARCH FACILITY

**(Eastern region)** **Same as Head Office**  
**12285 Yonge Street**  
**P.O. Box 417**  
**Richmond Hill, Ontario**  
**L4C 4Y6**

**(416) 773-2820**  
**06-986549 NANUG RHIL**  
**(416) 773-2489**

Founded: **1986**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: R & D: peptide pharmaceuticals, diagnostics and synthetic vaccines; computer software for biotechnology.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Peptide synthesis, synthetic vaccines.**

MANUFACTURING:

SALES/OTHER(S): **Computer software for biotechnology.**

### **OTHER ACTIVITIES:**

AFFILIATIONS: **Alberta Peptide Institute; Richmond Pharmaceuticals Inc.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Funding for R & D projects. Collaboration on joint ventures.**

COMMENTS:

CONTACT PERSONS: **Eastern Region: J.G. McElroy, Tel.: (416) 773-2820; Western Region: Dr. R.S. Hodges, Tel.: (403) 432-3155.**

# STAKE TECHNOLOGY LTD.

HEAD OFFICE

**208 Wycroft Road  
Oakville, Ontario L6K 3T8**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 842-4560**  
Telex: **06-982285**  
Fax:

Manufacturing Director:  
**Cyril Ing**

Telephone: **(418) 842-4560**

President: **Jeremy N. Kendall**

R & D Director: **John D. Taylor**  
Telephone: **(416) 842-4560**

Employees: **21**  
R & D Employees: **5**

Founded: **1973**  
Annual Sales: **\$3-5M**  
R & D Expenses: **\$0.5-1M**

PRINCIPAL ACTIVITIES: **Biomass conversion technology and equipment.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Chemicals and SCP from forest and agricultural residues.**

**Pulp and paper and wood composites.**

MANUFACTURING: **Continuous high pressure biomass processing equipment.**

**Heat recovery equipment.**

SALES/OTHER(S): **Equipment and process technology.**

**Turnkey heat recovery systems.**

AFFILIATIONS: **Stake Technology has subsidiary, Best Energy Systems Inc., which supplies turnkey industrial heat recovery systems.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Joint development of new applications of technology.**

COMMENTS:

CONTACT PERSON: **John D. Taylor**



# ST. LAWRENCE REACTORS LTD.

HEAD OFFICE

**St. Lawrence Reactors Limited  
50 Elmwood Avenue South  
Mississauga, Ontario L5G 3J7**

Telephone: (416) 271-1100  
Telex:  
Fax: (416) 271-6929

President: **H.A. Krech**

R & D Director: **Dr. P.G. Assarsson**  
Telephone: (416) 271-1100

Employees: **13**  
R & D Employees: **6**

RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**D.K. Pearce**

Telephone: (416) 271-1100

Founded: **1980**  
Annual Sales: **N/A**  
R & D Expenses: **N/A**

**PRINCIPAL ACTIVITIES: Engineering in all aspects of starch conversion technology and ethanol fermentation technology. R & D modified starch products; ligno-cellulosics; biomass conversions; food additives; sweeteners.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Biomass conversions. Ligno-cellulosic conversion.**

MANUFACTURING: **Glucose syrup processing technology and equipment. Ethanol fermentation technology.**

SALES/OTHER(S):

**AFFILIATIONS: Subsidiary of St. Lawrence Starch Limited; Joint Venture Partner - BIO-HOL Developments.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Interest in co-operative research and development projects. Marketing and licensing of Bio-Hol Technology.**

**COMMENTS: Carry out joint ventures with Bio-Hol in production of value-added products from ligno-cellulosics.**

CONTACT PERSONS: **P.D. Campbell, P. Eng.**

# SYLVAN INDUSTRIES LTD.

HEAD OFFICE

**28355 Fraser Highway  
Aldergrove, British Columbia V0X 1A0**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(604) 533-4444**

Telex:

Fax: **(604) 856-8929**

President: **Neil MacDonald**

R & D Director: **Neil MacDonald**

Telephone: **(604) 533-4444**

Employees: **25**

R & D Employees: **3**

(In biotechnology: **2**)

Founded: **1987**

Annual Sales: **\$1-3M**

R & D Expenses: **\$0-0.5M**

(In biotechnology: **\$0-0.5M**)

Manufacturing Director:

**Greg Harms**

Telephone: **(604) 533-4444**

**PRINCIPAL ACTIVITIES: Specialty mushroom farm.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **New species and cultivation techniques for specialty mushrooms on waste cellulosic materials.**

MANUFACTURING: **Engaged in large-scale production of pleurotis species of mushrooms.**

SALES/OTHER(S): **Specialty mushrooms sold to Canada, Japan, U.S.A. and Europe.**

AFFILIATIONS: **Advanced Biotechnology Ltd.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Joint venture expansion near other urban markets.**

COMMENTS: **World leader in specialty mushroom technology.**

CONTACT PERSONS: **Dwight Jefferson, Vice President, Marketing; Neil MacDonald, President.**

# SYNDEL LABORATORIES LTD.

HEAD OFFICE

**8879 Selkirk Street  
Vancouver, British Columbia V6P 4J6**

Telephone: **(604) 266-7131**  
Telex: **04-507726**  
Fax: **(604) 266-0156**

President: **J.M. Little**

R & D Director: **Robert Bose, Ph.D.**  
Telephone: **(604) 266-7131**

Employees: **12**  
R & D Employees: **3**  
(In biotechnology: **2**)

RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Richard Bradshaw**

Telephone: **(604) 266-7131**

Founded: **1977**  
Annual Sales: **\$1-3M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$30K**)

**PRINCIPAL ACTIVITIES: Manufacturing pharmaceuticals for fish health; human diagnostics; raw materials for genetic engineering.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Deoxyribonucleoside production. Natural product pesticides.**

MANUFACTURING: **Sex reversal hormones for fish. Hormones for induced breeding for fish.**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSONS: **J.M. Little; M.K. Harker.**

**OTHER ACTIVITIES:**

**Pharmaceuticals from fish by-product. Fish drugs and feed supplements.**

**Pharmaceuticals. Drugs.**

**Fish disease diagnostic laboratory. Veterinary services for fish. Consulting: fisheries and aquaculture.**

# SYNPHAR LABS. INC. AND TAIHO ALBERTA LTD.

## HEAD OFFICE

#24-4290-91A Street  
Edmonton, Alberta T6E 5V2

## RESEARCH FACILITY

Same as Head Office

Telephone: (403) 462-4044

Telex:

Fax: (403) 461-0196

President: Dr. R.G. Micetich

R & D Director: Dr. R.G. Micetich

Telephone: (403) 462-4044

Employees: 40

R & D Employees: 33

Founded: 1987

Annual Sales: N/A

R & D Expenses: N/A

**PRINCIPAL ACTIVITIES: Pharmaceutical research and development. Therapeutic use of monoclonal antibodies.**

## **BIOTECHNOLOGY ACTIVITIES:**

## **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: Design, synthesis and testing of potential new drugs with emphasis on infectious diseases.

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS: Taiho Pharmaceutical Company Ltd., Japan.

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: This has already been established.

COMMENTS: The company is working in close collaboration with Taiho Pharmaceutical Company Limited of Japan. In addition, SynPhar Laboratories Incorporated already has extremely good contacts with major pharmaceutical companies in the U.S.A., Europe, Japan, South Korea and India.

CONTACT PERSONS: Dr. R.G. Micetich; Mrs. Donna Wenzel; Christopher G. Micetich.

# SYNTEX INC.

## HEAD OFFICE

**2100 Syntex Court  
Mississauga, Ontario L5N 3X4**

Telephone: **(416) 821-4000**  
Telex: **0623349**  
Fax: **(416) 821-2902**

President: **Melvin Booth**

R & D Director: **Dr. Allen Krantz**  
Telephone: **(416) 821-4000 ext. 265**

Employees:  
R & D Employees: **25**  
(In biotechnology: **18**)

Founded: **1963**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$3-5M**  
(In biotechnology: **\$2M**)

PRINCIPAL ACTIVITIES: **Pharmaceuticals.**

## RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Jean Castonguay (Mr.)**

Telephone: **(416) 821-4000 ext. 282**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: In enzyme mechanics and enzyme inhibitors for pharmaceuticals for human health care.**

MANUFACTURING:

SALES/OTHER(S):

### **OTHER ACTIVITIES:**

AFFILIATIONS: **Syntex Corporation, 3401 Hillview Avenue, Palo Alto, CA 94304, U.S.A.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Application of high technology to drug design with enzyme targets.**

COMMENTS:

CONTACT PERSON: **Ginette Leclair**

# TCI-SUPERIOR DIVISION MUELLER CANADA INC.

## HEAD OFFICE

6500 Northwest Drive  
Mississauga, Ontario L4V 1K4

## RESEARCH FACILITY

Same as Head Office

Telephone: (416) 677-9000  
Telex: 06-968814  
Fax: (416) 677-4988

Manufacturing Director:  
**A.D. Malizia**

Telephone: (416) 677-9000

President: **T. Ashwin**

Director, Product Development: **B.S. Smith**  
Telephone: (416) 677-9000

Employees: **200**  
R & D Employees: **2**

Founded: **1962**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Manufacturing stainless steel process equipment such as bio-reactors and fermenters.**

### **BIOTECHNOLOGY ACTIVITIES:**

### **OTHER ACTIVITIES:**

#### RESEARCH & DEVELOPMENT:

MANUFACTURING: **Manufacturing stainless steel process equipment such as bio-reactors and fermenters.**

**Food and dairy fermentation.**

#### SALES/OTHER(S):

#### AFFILIATIONS:

#### FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

#### COMMENTS:

CONTACT PERSON: **Brian S. Smith**

# TECHNICAL MARKETING ASSOCIATES LIMITED

## HEAD OFFICE

**6695 Millcreek Road, Unit 1  
Mississauga, Ontario L5N 5M5**

## RESEARCH FACILITY

**301 King Street East  
Kitchener, Ontario N2G 2L2**

Telephone: **(416) 826-7752**  
Telex: **06-218227**  
Fax: **(416) 826-8225**

President: **R.H. Daniels**

R & D Director: **Dr. Dennis Fantin**  
Telephone: **(519) 744-9571**

Employees: **90**  
R & D Employees: **1**  
(In biotechnology: **2**)

Founded: **1985**  
Annual Sales: **\$15-30M**  
R & D Expenses: **\$0-0.5M**

PRINCIPAL ACTIVITIES: **Marketing and sale of scientific instrumentation.**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT:** Adaptation of new chemistries for synthesis and sequencing of synthetic DNA/RNA and peptides/proteins.

### MANUFACTURING:

**SALES/OTHER(S):** Marketing and sale of synthesizers, sequencers and extractors for DNA/RNA and peptides proteins.

### AFFILIATIONS:

### FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

**COMMENTS:** We maintain specialists on staff to assist in the design of laboratories where DNA/RNA or peptide/protein synthesis or sequencing facilities will be housed.

**CONTACT PERSON:** Dr. Dennis Fantin, Tel.: (519) 744-9571.

### **OTHER ACTIVITIES: Biology/ Biochemistry**

Marketing and sale of research grade spectrofluorometer, fluorescence lifetime systems and dual wavelength spectrophotometers for biology/biochemistry.

# TEMFIBRE INC.

## HEAD OFFICE

**C.P. 3000  
Temiscamingue (Québec)**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(819) 627-9505**  
Telex: **067-76281**  
Fax:

Manufacturing Director:  
**R.A. Benson**

Telephone: **(819) 627-9505**

President: **F.A. Dottori**

R & D Director: **A. Bialski, Ph.D.**  
Telephone: **(819) 627-9505**

Employees: **20**  
R & D Employees: **2**  
(In biotechnology: **0**)

Founded: **1977**  
Annual Sales: **\$3-5M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$50K**)

PRINCIPAL ACTIVITIES: **Sale of lignosulfonates.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Fermentation of pentose sugars  
in spent sulfite liquor to produce ethyl alcohol.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **We need yeast strains to ferment spent  
sulfite liquor under difficult conditions.**

COMMENTS:

CONTACT PERSON:

### **OTHER ACTIVITIES:**

**Development of new lignosul-  
fonate products.**



# TERRA NOVA FISHERY CO. LTD.

## HEAD OFFICE

**38 Bay Bulls Road  
St. John's, Newfoundland A1G 1A5**

Telephone: **(709) 364-7371**  
Telex: **016-3173**  
Fax: **(709) 364-8759**

President: **Dr. Cosmas Ho**

R & D Director: **Dr. Michael Voigt**  
Telephone: **(709) 737-8553**

Employees: **30+**  
R & D Employees: **4**  
(In biotechnology: **4**)

## RESEARCH FACILITY

**Plant-Clarenville, Newfoundland  
A0E 1J0 and  
Memorial University of  
Newfoundland  
St. John's, Newfoundland**

Manufacturing Director:  
**David Ho**

Telephone: **(709) 466-7186**

Founded: **1979**  
Annual Sales: **\$5-7M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$0-0.5M**)

**PRINCIPAL ACTIVITIES: Development of processes to recover and utilize by-products from fillets and frames of various fish.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: Development of biochemical, physical and sensory data bases associated with the utilization of fish muscle and other marine by-products. Determination of the effects of various environmental and processing factors on the properties of muscle proteins and on the interactions of functional ingredients.

MANUFACTURING: Development of novel products and the development of unique thermal extrusion equipment.

SALES/OTHER(S): The products being developed are being engineered to meet the current requirements for marketing.

AFFILIATIONS: **Memorial University of Newfoundland.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Dr. Cosmas Ho**

## OTHER ACTIVITIES:

# THERMO TECH WASTE SYSTEMS INC.

## HEAD OFFICE

**#203 - 1120 Austin Avenue  
Coquitlam, British Columbia V3K 3P5**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(604) 937-3022**  
Telex:  
Fax: **(604) 937-5274**

Manufacturing Director:  
**René Braconnier**

President: **René Braconnier**

R & D Director: **Dr. Hugh Saben**  
Telephone:

Employees: **15**  
R & D Employees: **10**  
(In biotechnology: **10**)

Founded: **1987**  
Annual Sales: **\$1-3 M**  
R & D Expenses: **\$0.5-1M**  
(In biotechnology: **\$0.5-1M**)

PRINCIPAL ACTIVITIES: **Thermophilic processing or biodegradable materials.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **High temperature (80-90°C) thermophilic process (self-heat) no heat added.**

MANUFACTURING: **Digesters and turnkey thermophilic plant, mobile units.**

SALES/OTHER(S): **Distributorships.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **All types of government assistance, all Ministries of the Environment.**

COMMENTS: **We provide an economical solution for pollution for any type of biodegradable waste.**

CONTACT PERSON:

### **OTHER ACTIVITIES:**

# W.G. THOMPSON & SONS LTD.

## HEAD OFFICE

**Box 250  
Blenheim, Ontario N0P 1A0**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: (519) 676-5411  
Telex: 064-78529  
Fax: (519) 676-3185

President: **W.D. Thompson**

R & D Director: **D.A. Littlejohns**  
Telephone: (519) 676-5411

Employees: **200+**  
R & D Employees: **13**  
(In biotechnology: **4**)

Founded: **1926**  
Annual Sales: **\$30+M**  
R & D Expenses: **\$0.5-1M**

**PRINCIPAL ACTIVITIES: Agriculture: seed chemicals, fertilizer, grain handling and specialty crops including dry beans.**

### **BIOTECHNOLOGY ACTIVITIES:**

### **OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Variety development of double haploid - barley via genetic engineering of wild strain.**

MANUFACTURING: **Agricultural products.**

SALES/OTHER(S): **Agricultural products.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Privately-owned Canadian company.**

COMMENTS:

CONTACT PERSON: **D.A. Littlejohns**

# LES SERVICES T.M.G. INC. (Niobec Mine)

## HEAD OFFICE

**C.P. 70**

**St-Honoré (Québec) G0V 1L0**

Telephone: **(418) 673-4694**

Telex: **051-36226**

Fax: **(418) 673-3157**

Mine Manager: **Michel Rodrigue**

R & D Director: **Rudy Biss**

Telephone: **(418) 673-4694**

Employees: **160**

R & D Employees: **5**

(In biotechnology: **1.5**)

## RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:

**Noel Ayotte**

Telephone: **(418) 673-4694**

Founded: **1976**

Annual Sales: **\$15-30M**

R & D Expenses: **\$0-0.5M**

(In biotechnology: **\$50K**)

**PRINCIPAL ACTIVITIES: Mining and processing of niobium containing ore. Production of pyrochlore (niobium oxide) concentrate.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Use of bacteria to remove residual reagents from the tailing pond-reclaimed water which is used in the mill.**

MANUFACTURING:

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Would like to know what is known in this area on national and international scene.**

COMMENTS:

CONTACT PERSON: **R. Bliss, Tel.: (418) 673-4694.**

### **OTHER ACTIVITIES:**

# TYLER RESEARCH INSTRUMENTS CORPORATION

HEAD OFFICE

#6128-103rd Street  
Edmonton, Alberta T6H 2H8

RESEARCH FACILITY

Telephone: (403) 435-7041

Telex:

Fax: (403) 436-3783

President: Dr. J.M. Tyler, Ph.D.

R & D Director: Dr. J.M. Tyler, Ph.D.

Telephone:

Employees: 4

R & D Employees: 1

(In biotechnology: 2)

Founded: 1987

Annual Sales: \$0-1M

R & D Expenses: \$0-0.5M

(In biotechnology: \$170K)

Manufacturing Director:

J.R. Bennett, P.Eng.

Telephone: (403) 435-7041

PRINCIPAL ACTIVITIES: **Design and manufacture of molecular separations equipment and associated instruments.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT:

**MANUFACTURING: Vertical, horizontal, and mega base electrophoretic systems, electrophoretic transfer systems, electrophoretic elution systems, gel processing tools, gradient forming and fractioning equipment, dialysis and microdialysis systems, ultrafiltration cells, concentrators, microtiter transfer systems, hybridization manifolds for DNA: DNA & DNA: RNA analysis, and radiation shielding designed specially for biochemical and molecular biological applications.**

**In addition, any of our standard items can be modified to suit special applications as required, and we design instruments to meet stated requirements.**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Distribution in the international marketplace.**

COMMENTS:

CONTACT PERSON: **J.R. (Jack) Bennett, P.Eng.**

# UNITED GRAIN GROWERS

HEAD OFFICE

**Box 6600  
Winnipeg, Manitoba R3C 3A7**

Telephone: **(204) 944-5554**  
Telex:  
Fax:

Executive Vice-President and C.E.O.: **Gerry W. Moore**

R & D Director: **G.W. Moore**  
Telephone: **(204) 944-5554**

Employees: **86**  
R & D Employees: **75**  
(In biotechnology: **75**)

RESEARCH FACILITY

**Same as Head Office**

Manager Research Station:  
**A. Gallagher**  
**P.O. Box 179**  
**Miami, Manitoba R0G 1H0**

Telephone: **(204) 435-2063**

Founded: **1985**  
Annual Sales: **N/A**  
R & D Expenses: **\$1-3M**  
(In biotechnology: **\$1-3M**)

PRINCIPAL ACTIVITIES: **Development of hybrid spring canolas.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Allelix provides the biotech skills. We provide the commercial expertise.**

MANUFACTURING:

SALES/OTHER(S): **We will develop the processing and sales delivery system.**

AFFILIATIONS: **Allelix Inc.: for the development of hybrid spring canolas.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS: **Allelix forms the base of the technical research group. We provide expertise in field operations.**

CONTACT PERSON: **G.W. Moore, Executive Vice-President and C.O.O., United Grain Growers.**

**OTHER ACTIVITIES:**

# VANCOUVER ISLAND ANTIBODIES LTD.

HEAD OFFICE

**265 Caldecote Road  
Victoria, British Columbia V8X 3X3**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(604) 479-8671**  
Telex:  
Fax:

Manufacturing Director:  
**Dr. T.W. Pearson**

Telephone: **(604) 479-8671**

President: **Dr. T.W. Pearson**

R & D Director: **Dr. T.W. Pearson**  
Telephone: **(604) 479-8671**

Employees: **2**  
R & D Employees: **2**  
(In biotechnology: **2**)

Founded: **1981**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$20K**)

**PRINCIPAL ACTIVITIES: Production of antisera and monoclonal antibodies. Development of immunodiagnostic reagents. Antigen purification.**

**BIOTECHNOLOGY ACTIVITIES:**

**OTHER ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Production of antisera and monoclonal antibodies. Development of immunodiagnostic reagents. Antigen purification.**

MANUFACTURING: **Purification of antibodies (in small quantities). Antigen purification.**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Marketing and distribution firms. International health agencies. Will do contract production of antibodies.**

COMMENTS:

CONTACT PERSON: **Dr. T.W. Pearson, President.**

# VETERINARY INFECTIOUS DISEASE ORGANIZATION

## HEAD OFFICE

**124 Veterinary Road  
Saskatoon, Saskatchewan S7N 0W0**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(306) 966-7465**

Telex:

Fax: **(306) 966-7478**

Director: **Dr. S.D. Acres**

R & D Director: **Dr. Lorne A. Babiuk**

Telephone: **(306) 966-7465**

Employees: **38**

R & D Employees: **31**

(In biotechnology: **12**)

Founded: **1975**

Annual Sales:

R & D Expenses: **\$3-5M**

(In biotechnology: **\$2M**)

**PRINCIPAL ACTIVITIES: Development of animal health care products, vaccines, diagnostics.**

## **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Development of recombinant and synthetic peptide vaccines, product testing, immunomodulators, lymphokines.**

**MANUFACTURING:**

**SALES/OTHER(S):**

**AFFILIATIONS: Biostar Inc.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Product testing, joint ventures, contracts.**

**COMMENTS:**

**CONTACT PERSONS: Dr. Steve D. Acres or Dr. Lorne A. Babiuk.**

## **OTHER ACTIVITIES:**

**Gnotobiotic animal facilities.**



# VETREPHARM INC.

## HEAD OFFICE

**69 Bessemer Road, Unit 27  
London, Ontario N6E 2V6**

Telephone: **(519) 685-5800**  
Telex: **064-5817**  
Fax: **(519) 685-8825**

President: **Graeme McRae**  
R & D Director: **Dr. Stan Alkemade**  
Telephone: **(519) 685-5800**

Employees: **40**  
R & D Employees: **9**  
(In biotechnology: **9**)

## RESEARCH FACILITY

**Vetrepharm Research Inc.  
P.O. Box 19  
RR# 1  
Putnam, Ontario N0L 2B0**

Manufacturing Director:  
**Rick Culbert**

Telephone: **(519) 485-4731**

Founded: **1980**  
Annual Sales: **\$3-5M**  
R & D Expenses: **\$0.5-1M**  
(In biotechnology: **\$1.5M**)

**PRINCIPAL ACTIVITIES: Production and distribution of veterinary pharmaceuticals, biologics, polyclonal antibodies, immunotherapeutics, immune response activators and highly purified reproductive hormones.**

## **BIOTECHNOLOGY ACTIVITIES:**

### RESEARCH & DEVELOPMENT:

- 1. Follitropin for human I.V.F. and**
- 2. Polyclonal antibodies for disease treatment.**
- 3. Immune system modulators for animals and humans.**
- 4. Extraction of ultrapurified hormones from animal tissues.**

### MANUFACTURING:

- 1. Purified follitropin (FSH).**
- 2. Animal and poultry vaccines.**
- 3. Immunotherapeutics and immunostimulants.**
- 4. Immune response activators as vaccine adjuvants.**

**N.B.: #) Represents order of activities.**

### SALES/OTHER(S):

## **OTHER ACTIVITIES:**

- 1. Pharmaceutical products for human and veterinary applications.**
- 2. Insecticides.**
- 3. Rodenticides.**
- 1. Pharmaceuticals.**
- 2. Insecticides.**
- 3. Feed additives and supplements.**

**AFFILIATIONS: Subsidiary companies: Vetrepharm Research (USA) Inc., Athens, GA. Bioniche Inc., London, Ontario.**

**FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: Licensing or contract research and development of health care products. International distributors for Vetrepharm products and technologies.**

**COMMENTS: Vetrepharm strongly believes in the manipulation of biological systems and immune responses to prevent, control or treat disease conditions.**

**CONTACT PERSON: Dr. Stan Alkemade**

# WAITAKI INTERNATIONAL BIOSCIENCES

HEAD OFFICE

**55 Glen Scarlett Road  
Toronto, Ontario M6N 1P5**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(416) 761-4089**  
 Telex: **06-22874WIBIO**  
 Fax: **(416) 761-4455**

President: **Elliott D. Young (General Manager)**

R & D Director: **W.J. Dobson/B.T. Khouw**  
 Telephone: **(416) 761-4089**

Employees: **40**  
 R & D Employees: **7**  
 (In biotechnology: **7**)

Founded: **1987**  
 Annual Sales: **N/A**  
 R & D Expenses: **N/A**

**PRINCIPAL ACTIVITIES: Extraction and purification of biochemicals from animal by-products.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Growth factors and other defined or non-serum media components for mammalian cell culture.**

MANUFACTURING: **Growth factors, enzymes and other serum-free media components.**

SALES/OTHER(S): **Major markets served include: cell culture, serological, vaccine and diagnostic markets. United States, UK, Europe and Far East.**

**OTHER ACTIVITIES:**

**Biofactors for cosmetic market.**

**Anticoagulant heparin, Enteric coating compound.**

**Pharmaceutical and cosmetic.**

AFFILIATIONS: **Waitaki International Biosciences, Christchurch, New Zealand.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Open to discussion.**

COMMENTS:

CONTACT PERSONS: **Elliott D. Young; General Manager; Roy Val; Sales and Marketing Manager.**

# WARDROP ENGINEERING INC.

## HEAD OFFICE

**77 Main Street  
Winnipeg, Manitoba R3C 3H1**

## RESEARCH FACILITY

**Same as Head Office**

Telephone: **(204) 956-0980**  
Telex: **07-57487**  
Fax: **(204) 957-5389**

President: **D.R. Grimes, P.Eng.**

R & D Director: **Dr. H. Husain, P. Eng.**  
Telephone: **(204) 956-0980**

Employees: **200**  
R & D Employees: **6**  
(In biotechnology: **1**)

Founded: **1955**  
Annual Sales: **N/A**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$20K**)

PRINCIPAL ACTIVITIES: **Engineering services for process and biochemical industries, including food, ethanol, pulp and paper, mineral, space and aerospace.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Downstream processing, especially membrane technology and dehydration. Fermentation including immobilized bioreactors, yeast generation, ethanol production.**

### MANUFACTURING:

### SALES/OTHER(S):

### AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Technology marketing.**

### COMMENTS:

CONTACT PERSON: **Dr. Hadi Husain, P.Eng.**

### **OTHER ACTIVITIES:**

# WESTECH AGRICULTURE LTD.

## HEAD OFFICE

**West Prince Industry Centre  
R.R. #1, Alberton  
Prince Edward Island C0B 1B0**

Telephone: **(902) 853-3636**  
Telex:  
Fax:

President: **Richard Ozon**

R & D Director: **Richard Ozon**  
Telephone: **(902) 853-2181**

Employees: **7**  
R & D Employees: **2**

## RESEARCH FACILITY

**Same as Head Office**

Manufacturing Director:  
**Nora Gaudette**

Telephone: **(902) 853-3636**

Founded: **1983**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**

**PRINCIPAL ACTIVITIES: Strawberry tissue culture. Anther culture and haploid techniques of wheat and barley. Lowland blueberry propagation.**

## BIOTECHNOLOGY ACTIVITIES:

RESEARCH & DEVELOPMENT: **Variety improvement of wheat and barley.**

MANUFACTURING: **Strawberry nursery.**

SALES/OTHER(S): **Strawberry plants.**

AFFILIATIONS: **Agriculture Canada, Charlottetown, P.E.I.**

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Nora Gaudette**

## OTHER ACTIVITIES:

# WESTERN BIOLOGICALS LTD.

## HEAD OFFICE

**P.O. Box 46466, Station "G"  
Vancouver, British Columbia V6R 4G7**

Telephone: **(604) 228-0986**  
Telex:  
Fax:

President: **William Chalmers**

R & D Director: **William Chalmers**  
Telephone:

Employees: **4**  
R & D Employees: **2**  
(In biotechnology: **2**)

## RESEARCH FACILITY

**3852 West, 21th Avenue  
Vancouver, British Columbia  
V6S 1H4**

Founded: **1981**  
Annual Sales: **\$0-1M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$500K**)

**PRINCIPAL ACTIVITIES: Plant tissue culture; mushroom spawn and strain development; pest control.**

### **BIOTECHNOLOGY ACTIVITIES:**

**RESEARCH & DEVELOPMENT: Mushroom spawn and strain development. Plant tissue culture.**

**MANUFACTURING: Mushroom spawn. Pheromones.**

**SALES/OTHER(S): Mushroom spawn, cultures, culture/cultivation equipment/materials. Plant tissue culture supplies.**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **William Chalmers**

### **OTHER ACTIVITIES:**

# W.H.E. BIO-SYSTEMS

## (A Division of W.H.E. Process Systems Limited)

<p><u>HEAD OFFICE</u>  <b>100 Klondike Drive</b>  <b>Weston, Ontario M9L 1X3</b></p> <p>Telephone:       <b>(416) 744-4155</b>          Telex:           <b>06-986391</b>          Fax:             <b>(416) 744-4171</b></p> <p>President:         <b>David J. Eccleston</b></p> <p>R &amp; D Director:   <b>Dan Lynch</b>          Telephone:       <b>(416) 744-4155</b></p> <p>Employees:       <b>90</b>          R &amp; D Employees: <b>6</b>          (In biotechnology: <b>6</b>)</p>	<p><u>RESEARCH FACILITY</u>  <b>Same as Head Office</b></p> <p>Founded:           <b>1979</b>          Annual Sales:     <b>\$10-15M</b>          R &amp; D Expenses:  <b>\$0-0.5M</b>          (In biotechnology: <b>\$0-0.5M</b>)</p>
<p><b>PRINCIPAL ACTIVITIES: Manufacture of fermentation equipment and computer controls for fermentation along with associated stainless steel process piping, valves and equipment.</b></p>	
<p><b>BIOTECHNOLOGY ACTIVITIES:</b></p> <p><u>RESEARCH &amp; DEVELOPMENT:</u> <b>Fermenter and control design. Expert system software development.</b></p> <p><u>MANUFACTURING:</u> <b>Fermenters, controls, dosing systems. Ultrafiltration, microfiltration.</b></p> <p><u>SALES/OTHER(S):</u> <b>Fermenters, controls, dosing systems. Ultrafiltration, microfiltration, instrumentation, sensors and probes.</b></p> <p><u>AFFILIATIONS:</u></p> <p><u>FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:</u></p> <p><u>COMMENTS:</u></p>	<p><b>OTHER ACTIVITIES:</b></p> <p><b>Process equipment for food, dairy and pharmaceutical industries.</b></p> <p><b>Valves, pumps, fittings, tanks, heat exchanger, control systems; field installation.</b></p> <p><b>Design, supply and installation of process systems for the dairy; food and pharmaceutical industries.</b></p>
<p><u>CONTACT PERSONS:</u> <b>Paul Hallman, Vice-President, Sales; Dan Lynch, Division Manager.</b></p>	

# THE WINNIPEG Rh INSTITUTE INC.

## HEAD OFFICE

**University of Manitoba  
Winnipeg, Manitoba R3T 2N2**

## RESEARCH FACILITY

Telephone: **(204) 269-7291**  
Telex: **07587870**  
Fax: **(204) 269-7003**

Manufacturing Directors:  
**Gerry Bazin;**  
**Jeannette Rosolowich.**

President: **Albert D. Friesen, Ph.D.**

R & D Director:  
Telephone:

Employees: **60**  
R & D Employees: **6**  
(In biotechnology: **3**)

Founded: **1969**  
Annual Sales: **\$-1-3M**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$100K**)

PRINCIPAL ACTIVITIES: **Manufacture of plasma products: albumin, factor VIII, factor IX, intravenous immune globulin, Rh immune globulin.**

### **BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Superoxide dismutase.**

MANUFACTURING: **Blood proteins. Industrial scale protein purification.**

SALES/OTHER(S):

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED:

COMMENTS:

CONTACT PERSON: **Albert D. Friesen, Ph.D.**

### **OTHER ACTIVITIES:**

# XYMOTECH BIOSYSTEMS/BIOSYSTÈMES INC.

HEAD OFFICE

**5250, rue Ferrier, Suite 508  
Montréal (Québec) H4P 1L6**

RESEARCH FACILITY

**Same as Head Office**

Telephone: **(514) 738-3377**  
Telex: **05-825543**  
Fax:

President: **Charles Salama**

R & D Director: **Charles Carol**  
Telephone: **(514) 738-3377**

Employees: **7**  
R & D Employees: **5**  
(In biotechnology: **5**)

Founded: **1988**  
Annual Sales: **N/A**  
R & D Expenses: **\$0-0.5M**  
(In biotechnology: **\$500K**)

**PRINCIPAL ACTIVITIES: Manufacture and sale of fermenters, pH controllers and peristaltic pumps. Biosensors.**

**BIOTECHNOLOGY ACTIVITIES:**

RESEARCH & DEVELOPMENT: **Fermenters bench top. Fermenters mammalian cells. Biosensors.**

MANUFACTURING: **BIOCELL-2000 benchtop two litre fermenters. SENTRY-2000 pH monitor and control systems. BIOPUMP - 2000, peristaltic pumps.**

SALES/OTHER(S): **BIOCELL-2000 benchtop two litre fermenters. SENTRY-2000 pH monitor and control systems. BIOPUMP - 2000, peristaltic pumps.**

**OTHER ACTIVITIES:**

AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Seeks overseas distributors in U.S.A., Asia and Europe.**

COMMENTS: **BIOCELL-2000 fermenters incorporate unique features useful in research and development, teaching and industrial applications.**

CONTACT PERSON: **Charles Salama**



# ZETON INC.

## HEAD OFFICE

**4129 Harvester Road  
Burlington, Ontario L7L 5M3**

## RESEARCH FACILITY

Telephone: **(416) 632-3123**  
Telex: **061-8678**  
Fax: **(416) 632-0301**

President: **G.S. Watt**

R & D Director:  
Telephone:

Employees: **12**  
R & D Employees: **0**

Founded: **1986**  
Annual Sales: **\$1-3M**  
R & D Expenses: **0**

**PRINCIPAL ACTIVITIES: Design and manufacture of custom process development units, pilot, demonstration and small-scale production plants.**

### **BIOTECHNOLOGY ACTIVITIES:**

#### RESEARCH & DEVELOPMENT:

**MANUFACTURING: Custom design and manufacture of pilot plants, demonstration plants and small-scale production plants for biotechnology research in downstream processing and scale-up.**

#### SALES/OTHER(S):

#### AFFILIATIONS:

FORM OF CANADIAN/INTERNATIONAL COOPERATION DESIRED: **Manufacture of systems under licence.**

#### COMMENTS:

CONTACT PERSON: **David Beckman**

### **OTHER ACTIVITIES:**

**Design and manufacture of process development units and pilot plants for: Supercritical extraction; Adsorption/desorption; Polymerization; Synthetic fuels; Petroleum processing; Electronic chemicals.**

The following response was not submitted in time to be included in the analysis.



