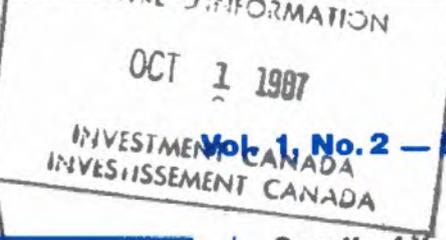
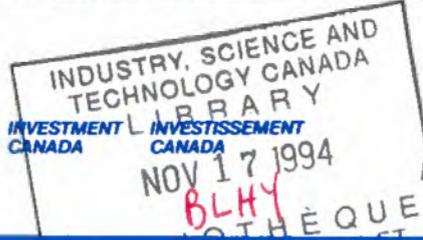


INVESTING IN CANADA

A NEWSLETTER ON CANADA'S INVESTMENT CLIMATE



Vol. 1, No. 2 — September 1987

Venture Capital in Canada

A New Era of Enterprise Building

by Mary Macdonald, President, Venture Economics Canada Limited

The organized venture capital industry in Canada is on the move. Since the beginning of the 1980s, the total base of capital committed to Canadian venture investment funds has risen from less than \$400 million to more than \$1.5 billion. Annual disbursements from these funds have climbed from \$36 million to more than \$200 million. And the proportion of this investment captured by Canadian companies has grown from 60 per cent to more than 86 per cent in the last three years alone. Clearly, the Canadian venture capital industry is coming of age, and an

increasing number of growth-oriented Canadian enterprises are reaping the benefits.

What is Venture Capital?

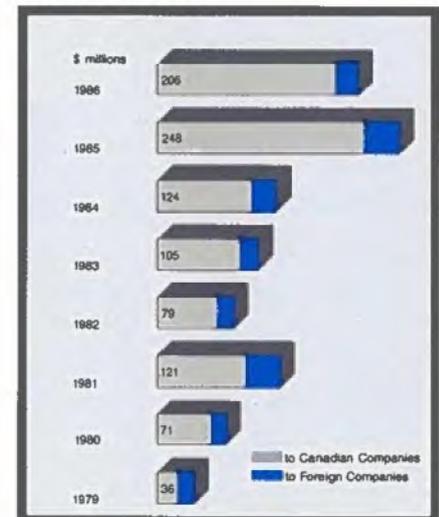
Venture capital is often assumed to be speculative, high-risk capital invested in start-up companies with a technology orientation. In fact, venture capital is better defined as equity or quasi-equity capital invested in new or established businesses that have significant growth potential but are unable to secure the financing they need from conventional sources. Venture capital investments are made at every stage of the business development cycle and across the full range of industry sectors. In short, the focus of venture investing is on business development for long-term capital appreciation.

Where is the Capital Being Invested?

In 1986, Canadian venture capital funds invested \$206 million in a total of 177 companies. More than 86 per cent of this capital went to Canadian firms, compared with 71 per cent in 1985 and 60 per cent in 1984 — evidence of the rapid growth in attractive investment opportunities here in Canada. At present, Ontario, Quebec, and Alberta generate about 75 per cent of all Canadian venture fund investment activity.

Some 26 per cent of the capital invested in 1986 provided seed money or start-up funds for firms still in the early stages of

Growth of Venture Capital Disbursements



Source: Venture Economics Canada Limited

development. Forty per cent of the capital went to companies to finance expansion; most of the rest financed leveraged buyouts or acquisitions. During the past three years, the Canadian venture capital industry has invested about \$250 million in small and medium sized technology companies in Canada. A large share has gone to firms in the computer-related, communications, and industrial automation sectors. Although the link between the venture capital industry and the technology sector has not been as strong as in the United States, it has unquestionably played a critical role in the growth and development of many Canadian technology firms.

Industry Growth Offers New Opportunities

The expansion of the venture capital industry in Canada is creating new opportunities for

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New Edition of The Canadian Edge

An updated version of this comprehensive guide to investment in Canada

For Your Calendar

Bright Future for Canada's Biotechnology Industry

by Chummer Farina, Policy Analyst, Investment Canada

Modern biotechnology is a strategic technology with applications in many different sectors — in agriculture and the food-processing industries, industrial chemicals, medicine and pharmaceuticals, mining, forest products, and many more. Although predictions of future sales of biotechnology products vary widely — from the U.S. Industrial Biotechnology Association's estimate of \$60 billion worldwide by the year 2000 to a forecast of \$180 billion within a decade by the Science Council of Canada — virtually all observers agree that biotechnology is destined to have a wide-ranging and fundamental impact on industry and the world economy.

In the broadest sense, biotechnology simply refers to the use of living organisms for practical purposes. In addition to old techniques such as fermentation, modern biotechnology uses powerful tools that have only become available during the 1970s and 80s. These new techniques include cell fusion; gene splicing (the insertion of foreign DNA into a cell to create new types of organisms); and monoclonal antibodies — formerly scarce antibodies produced in large quantities by cells formed from the union of cancer and antibody-producing lymphocyte cells.

Increased Investment Spurs Growth

Because of the commercial promise of these new techniques, the industry has grown rapidly throughout North America over the past decade.

In the United States, there are now some 100 public and 700 privately held biotechnology companies. In January of 1987, market capitalization of the 60

publicly traded U.S. biotechnology companies stood at \$8 billion, double the value of a year earlier. Genentech, the leading U.S. biotechnology company, accounts for about half of this investment.

In Canada, there has been similar rapid growth in the number of firms involved in biotechnology. According to the Ministry of State for Science and Technology (MOSST), there are now between 110 and 130 Canadian companies.

Although there has been considerably less public funding of biotechnology in Canada, three firms have gone public within the last two years. Quadra Logic Technologies Inc. of Vancouver raised some \$3 million on the Vancouver stock exchange. IAF Biochem of Montreal, which went public in December 1986, raised \$15 million on the Montreal exchange. In late July 1987, Biomira Inc. of Alberta went public on the Montreal exchange. Other publicly traded companies, such as CDC Life Sciences and MDS Health, have interests in biotechnology but their main product lines are in more traditional health care areas.

Canadian venture capital companies have invested approximately \$35 million in the Canadian industry. Biomira, for example, received start-up funding of \$9 million from Altimira Capital Corporation of Montreal — one of the largest investments in a start-up biotechnology firm to date in North America.

MOSST estimates that Canadian biotechnology firms invest about \$90 million a year in research and development. Allelix of Toronto, Canada's largest biotechnology firm, allocated \$16 million to R&D in 1985 and ranked 21st in the Financial Post's annual survey of company-financed R&D in Canada

in 1986. Allelix was formed in 1983 as a joint venture between the Canadian Development Corporation, Labatt's, and the Ontario government. Allelix, with two other organizations — Institut Armand Frappier and Bio-Mega Inc. — accounted for 40 per cent of all reported R&D expenditures in biotechnology in 1986.

According to a review in a recent *Globe and Mail Report on Business*, the Canadian biotechnology industry is establishing itself firmly in the market: "As investors and executives became increasingly sceptical about biotech's prospects, Canadian biotech companies were forced to become more market-oriented in their research and more hardheaded about financing. They have also turned what seemed like a disadvantage — a five-year lag behind biotechnology in other countries — into a competitive advantage. From Vancouver to Halifax, Canadian biotech now is picking its own niches and catching up fast."

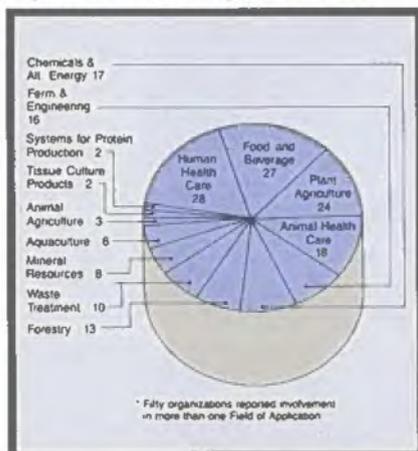
Canadian biotechnology companies have scored some notable successes. IAF Production Inc. of Quebec developed monoclonal antibody detection tests for herpes and for antibodies against AIDS. Connaught Laboratories of Ontario is working on micro-encapsulation of insulin-producing cells to eliminate a diabetic's need for insulin injections. Chembiomed Ltd. of Alberta was one of the first companies in the world to market a line of monoclonal antibody-based blood-typing reagents. Giant Bay Resources of British Columbia is constructing the first North American bioleaching plant to recover gold and silver from ores and concentrates high in sulfide.

Strong Research Links Needed

Biotechnology applications depend heavily on research and most if not all of the successful Canadian firms have close and productive relationships with Canadian universities. Some, such as Connaught, Quadra Logic, Biomira, and Chembiomed, have their roots in the universities. Others such as Allelix and Biomega participate in joint research projects with them. Some 25 Canadian universities have nationally and internationally recognized research programs in biotechnology.

New links are also being forged between government laboratories and commercial enterprises. The National Research Council offers collaborative programs and fosters close cooperation with industry, the universities, other government agencies, and the Council's own biotechnology labs in Montreal and Saskatoon. Agriculture Canada's regional laboratories and its centres for animal and food research are placing increasing emphasis on industrial applications of biotechnology. Other government centres of expertise include the Department of Fisheries and Oceans' Centre for Aquaculture Biotechnology and Genetics Research, Environment Canada's Centre for Inland

Distribution of R&D activities by field of application based upon reports of 110 organizations



Source: 1986 Canadian Biotechnology Sourcebook, MOSST, August 1986.

Waters, and Energy, Mines and Resources' Centre for Mineral and Energy Technology.

Control and Regulation

One impediment to the rapid development of the biotechnology industry has been concern about the dangers of new drugs developed by genetic engineering and the release of genetically altered organisms into the environment. Canada and other countries are working to develop a regulatory framework that will safeguard consumer health and the environment and, at the same time, provide the biotechnology industry with a clear, cost-effective system for bringing new products to market.

Patent legislation for biotechnology products and particularly for genetically engineered organisms also poses difficult social, political, and legal questions. Canada's Patent Act currently provides for the compulsory licensing of drugs after four years. The government has proposed new legislation which would provide greater protection for innovative firms.

Funding for Future Growth

In the U.S., the presence of a large pharmaceutical sector has spurred the development of the biotechnology industry. Pharmaceutical firms have invested in biotechnology companies, entered into joint ventures with them, and funded university research. Canada, on the other hand, has few domestically owned firms in this sector, and Canadian biotechnology companies have not attracted similar investment.

Canada's future prosperity and its competitiveness in the markets of the 21st century depend on its ability to develop and apply new technologies, both in the creation of new industries and in the strengthening of traditional ones. Capitalizing on the momentum Canada has developed in the biotechnology industry requires a

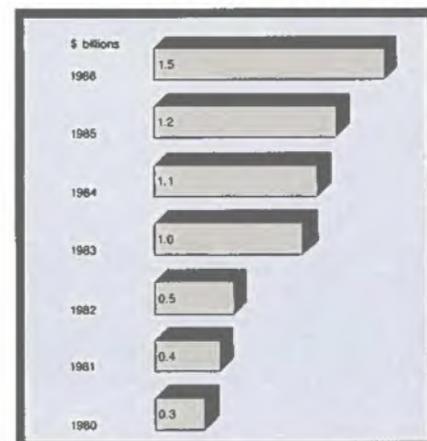
substantial increase in the funding devoted to it and a strengthening of the cooperative bonds that have been forged between industry, governments, and the universities. ♦

Venture Capital in Canada

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entrepreneurial Canadian firms. All signs point to continued growth in the amount of venture capital available and in the number and calibre of growth firms able to attract this capital.

Canadian Capital Committed for Venture Investing — 1980-1986



Source: Venture Economics Canada Limited

These are only some of the highlights of a research report, *Venture Capital in Canada*, prepared by Venture Economics Canada Limited. To obtain a copy of the report free of charge, ask for publication RE-87-02 from:

Publication Manager
Investment Canada
P.O. Box 2800
Station "D"
Ottawa, Ontario
K1P 6A7 ♦

Canada Hosts International Convention of Fast Growing Companies

Network, World Convention of Fast Growing Companies, brought together in Montreal, September 9-11, some 1000 business leaders from more than 50 countries. Participants discussed strategies for high corporate growth and opportunities for expanding business around the world.

Activities during the three-day convention included seminars by foreign delegates on technology transfer and international market opportunities, and visits to Canadian companies showcasing Canadian technology. The federal government conducted a seminar on Canada's industrial opportunities for investment on Thursday, September 10 at 11:00

a.m. As well, an electronic appointments schedule was made available to delegates for "networking."

Network sponsors included the Government of Canada, the Montreal Stock Exchange, the Royal Bank of Canada, the Bank of Montreal, Royal Trust, and Northern Telecom.

Delegates to **Network** also visited the Business World Exhibition, held concurrently at Place Bonaventure in Montreal. Now in its third year, this Canadian business forum featured more than 350 displays mounted by financial institutions, industrial developers, innovators, and governments. At the Canadian government's booth,

counsellors provided information and assistance on federal investment-related services.

For further information about next year's activities for **Network**, World Convention of Fast Growing Companies, or the Business World Exhibition, contact:

P. McEvoy Hull,
Program Manager,
Investment Canada
(613) 995-0759 ♣

For Your Calendar

Following are some important investment development activities taking place across Canada this fall:

Canadian High Technology Week, September 28 – October 4, 1987, Toronto, Ontario.
Contact: Ron MacKenzie,
Account Executive, 2487
Kaladar Avenue, Suite 214,
Ottawa, Ontario K1V 8B9
(613) 731-9850

International Investors' Forum,
November 17-19, 1987,
Vancouver, B.C. Contact: Pacific
Forums Inc., Suite 280,
815 West Hastings Street,
Vancouver, B.C. V6C 1B4.
Attention: Bill Bennett or John
Pavlovich (604) 669-3818.

Transtech, November 25-29,
1987, Montreal, Quebec.
Contact: Centre for Industrial
Innovation Montreal, 6600 Côte-
des-Neiges, Suite 500,
Montreal, Quebec H3S 2A9.
Attention: Pierre Vaillant,
Commercial Director
(514) 340-4266. ♣

New Edition of *The Canadian Edge*

Investment Canada's second edition of *The Canadian Edge*, the most comprehensive data base available on doing business in Canada, will be published in English and French this fall. A software version is also available for IBM and IBM-compatible personal computers.

The purpose of *The Canadian Edge* is to facilitate investment in Canada from both domestic and international sources. The publication goes well beyond traditional investment guides, providing information on technology, labour, energy, the legal framework, and incentive programs at both the federal and provincial levels. The new edition has a special section advising prospective investors on the tax implications of recent tax reform legislation.

The hardcover version has been designed for easy access and includes a detailed table of contents. The software edition has a key-word search capability, enabling users to find information in seconds.

The Canadian Edge in either hardcopy or software is available for C\$150 in Canada and for C\$180 outside the country. For further information, or to order a copy of *The Canadian Edge*, contact:

Marvin Bedward,
Investment Canada
5th Floor
235 Queen Street
Ottawa, Ontario
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