

Who works inside the Biologics Manufacturing Centre?



Members of the production team at the Biologics Manufacturing Centre cleaning, disinfecting and transferring materials for the manufacturing process in compliance with good manufacturing practices.

The NRC hired more than 80 highly skilled biomanufacturing experts over the past year to work in the new Biologics Manufacturing Centre. With expertise in good manufacturing practices (GMP) and all stages of vaccine production—from cell culture to warehouse management to quality control—these highly qualified specialists are putting in the hard work and long hours needed to get our new biomanufacturing facility fully operational. They are the same people who will be producing the vaccines and other biologics at the facility.

Producing vaccines and other biologics

A skilled and seasoned production team at the Biologics Manufacturing Centre is responsible for all the steps to manufacture biologics-based vaccines in accordance with rigorous GMP standards. These biomanufacturing experts are responsible for everything from growing the cell culture to filling vials at the fill-and-finish stage.

The team is working to prepare the production rooms and equipment for commissioning,

qualification and validation, and getting ready to start the next stage of technology transfer to produce the facility's first vaccine.

This team includes seasoned professionals with decades of experience in their field, and several university students who are spending their co-op terms learning from our experts.

Quality assurance and compliance

The quality assurance team establishes and implements the quality system that ensures everything happening inside the Biologics Manufacturing Centre meets the strict requirements for GMP compliance.

This team is critical to ensuring that everyone at the facility consistently follows the same procedures. They review and provide training on all of the standard operating procedures (SOPs), for everything from how to write an SOP to how to operate a bioreactor.

Not only does this team monitor everything already inside the facility, they also monitor everything coming into the facility to ensure that only materials they have approved are used. This includes managing a qualification and auditing program for our suppliers.

They also monitor everything that goes out of the facility to ensure that only products they have approved are released. As part of this, they review the required documentation before releasing raw materials, packaging materials and finished goods.

Quality control

If the quality assurance team sounds detail-oriented, wait until you hear about the quality control team, who take meticulous to a whole new level. Working in the quality control laboratory, this team runs regular tests on pretty much everything in the Biologics Manufacturing Centre to ensure it meets the exact requirements needed for a GMP-compliant facility.



Members of the skilled production team at the Biologics Manufacturing Centre are responsible for all steps of manufacturing vaccines in accordance with rigorous GMP standards.

Quality control analysts run tests on everything from the raw materials coming into the facility, to the clean rooms and water systems, to conducting final release testing for the end product before it leaves the facility.

This team also includes an instrumentation specialist who is responsible for maintenance, calibration, certification and repair of all the laboratory equipment; and a logistics coordinator, whose primary responsibility is to ensure the quality control lab itself consistently meets GMP requirements.

Facilities, engineering and information technology

There is a lot of specialized equipment and many high-tech systems inside the Biologics Manufacturing Centre. This requires a highly technical team to support and manage it all, including regular maintenance and calibration for optimum performance. This team is also responsible for validating that all the equipment and systems meet the intended specifications and are compliant with GMP.

Supply chain and warehouse

The supply chain and warehouse team manages the flow of materials needed to manufacture vaccines and other biologics with the precision required in a GMP-compliant environment.

The production planner on this team is responsible for ensuring all required materials have been received and are released for use. This role is a bit like an orchestra conductor, as they ensure all the different functions within the facility are well coordinated.

Other experts and supporting roles

The team at the Biologics Manufacturing Centre also includes experts in:

- health, safety and environment – to provide expert technical information, monitoring, reporting and advisory services
- manufacturing science – to provide scientific and technical support
- project management – to track and report on all required activities
- technology transfer – to collaborate with clients on planning and executing technology transfers for each specific client project
- operations, policy, stakeholder engagement, finance and administration

Read other stories in this series to learn more:

<https://nrc.canada.ca/en/research-development/nrc-facilities/readying-biologics-manufacturing-centre>

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