

# Enzymatic Bioprocessing for Value-added Products

**NRC-CMRC**

**Aquatic and Crop Resource Development**

## Leverage NRC's expertise

Go beyond your core talent with NRC's Natural Health Products (NHP) program. When you supplement your experts and capabilities with ours, you enlist an ally committed to—and measured by—your success.

Fortify your team with NRC's NHP expertise to co-develop new and differentiated products, all backed by science. We can enable you to expand your existing product lines, create value from waste streams and shorten your product development cycles.



## Gain a competitive edge

You want to outpace your global competition with value-added products from biomass and biomass waste. NRC can assist you to develop proteins, peptides, amino acids, dietary fibre or natural fibres destined for products like NHPs, functional beverages like sport drinks, foods, animal feed or cosmetics.



NRC expertise and technologies can help you to:

- co-develop safe, differentiated and effective NHPs
- develop new production processes
- reduce production costs
- speed up your time to market
- develop differentiated products with novel features and functionality
- demonstrate Canadian quality

Let us share our expertise, specialized equipment, research technologies and processes to help you solve technical challenges and reduce your product-development risks before you invest in expensive, large-scale production.

Choose to co-develop NHPs with NRC and we will aim to shorten your product development cycle to present you with first-to-market benefits. We can also co-invest in enabling technologies to reduce your development costs and deal with technical hurdles challenging you, or the industry at large, in bringing products to market.



National Research  
Council Canada

Conseil national de  
recherches Canada

Canada

## Natural Health Products Program

### The NRC advantage

#### Enzymatic bioprocessing expertise

Through the NHP program, you will benefit from access to highly skilled researchers with extensive experience in lab- to pilot-scale bioprocessing, analytical support for monitoring process development, and engineering and application development of custom and industrial enzymes. NRC researchers can:

- guide you from raw biomaterial processing through to final product development
- analyze composition, enzyme activity, protein extractability, amino acid profiles, solubility, product quality and anti-nutritional activity
- perform extraction (aqueous; enzyme-assisted), separation (solid/liquid, soluble), product concentration and drying
- modify enzyme thermostability, alkaliphilicity, acidophilicity, thermophilicity and psychrophilicity
- isolate target compounds and remove contaminants

### Contact

#### Business Related Inquiries:

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[www.nrc-cnrc.gc.ca/eng/solutions/collaborative/nhp\\_index.html](http://www.nrc-cnrc.gc.ca/eng/solutions/collaborative/nhp_index.html)



#### Technology capabilities

- Bioprocessing facility with scale-up equipment for biomass pretreatment, separation, reaction, product concentration and drying
- Integrated analytical platforms including viscometry and kjeldahl digestion
- Membrane process development: lab-, pilot- and full-scale commercial facilities spanning fabrication and characterization, membrane modules and complex feeds

- Membrane-based separation process development, surface characterization and sieving technology, and anti-fouling cleaning protocols

Depend on NRC's enzymatic bioprocessing expertise and facilities to accelerate your time to market, reduce production costs, differentiate products and develop new production processes.

### Get started today

Contact NRC to discuss product co-development opportunities, unique research technologies or technical services that match NRC capabilities to your specific research and product needs.

