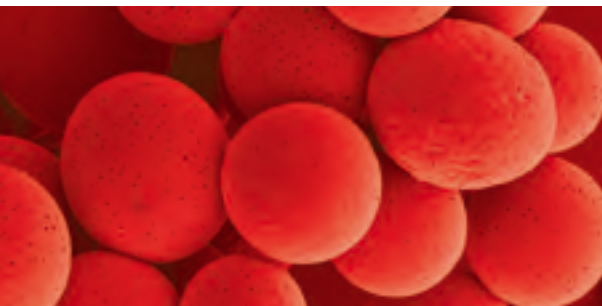




innocore  
pharmaceuticals



# Science delivering tomorrow's medicines

Corporate brochure

InnoCore Pharmaceuticals is a biopharmaceutical drug delivery company specialized in the development of long acting and minimally invasive drug delivery products for the treatment of chronic diseases.

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### Science delivering tomorrow's medicine

InnoCore Pharmaceuticals is dedicated to the development of drug delivery products that offer optimal control over the release kinetics and bioactivity of therapeutic agents as to improve pharmacotherapeutic efficacy and reduce side effects. InnoCore partners with pharmaceutical, biotechnology and medical device companies to develop and commercialize pharmaceutical depot formulations and drug eluting medical devices based on its advanced biodegradable polymeric drug delivery systems.

InnoCore's strategy is to capitalize on its proprietary drug delivery technologies, manufacturing capabilities and pharmaceutical development expertise by:

- Internal and partnered development of promising drug delivery technologies;
- Licensing of its technologies and providing pharmaceutical development capabilities and services to third parties to develop proprietary drug delivery products for a wide range of molecules and therapeutic indications;
- Co-development of promising products based on its drug delivery platforms.

InnoCore is dedicated to the creation of tomorrow's medicines by applying proprietary and non-proprietary technologies, its scientific expertise and development services. InnoCore offers its proprietary drug delivery technologies for licensing and has entered into a number of successful partnerships with third parties to co-develop controlled release formulations. The company has been profitable since the start.

### Drug delivery technologies

InnoCore has developed and co-markets various biodegradable polymeric drug delivery technologies for the development of long acting and minimally invasive parenteral depot formulations for virtually all drug classes.

**SynBioys® biodegradable polymers** Proprietary biodegradable multi-block co-polymer platform for the controlled release of small molecules, peptides and proteins.

**Injectable solid implants** Our injectable solid implants are used as injectable subcutaneous and ocular depots for long term drug delivery up to 6 months and are manufactured by low temperature extrusion to preserve the bioactivity of the encapsulated drug molecule.

**Microspheres** InnoCore offers monodisperse microsphere technology for parenteral depot formulations with superior injectability and precisely controlled drug delivery (in collaboration with Nanomi).

**Medical device coatings** Biodegradable drug eluting coatings to improve the functionality of medical devices such as drug eluting stents.

**Injectable hydrogels** Physically crosslinked injectable hydrogels for controlled release of proteins and other drugs (in collaboration with InGell Labs).

**Protein stabilization** Stabilization of proteins and biological macromolecules via encapsulation in inulin glasses, a natural polysaccharide (GRAS status).



## Proprietary product pipeline

InnoCore is co-developing a number of proprietary products based on its drug delivery platforms and manufacturing technologies. Please visit our website [www.innocorepharma.com](http://www.innocorepharma.com) to view the current status of our pipeline and for partnering and licensing opportunities. InnoCore is interested in new partnerships to co-develop injectable drug delivery products for generic drugs or promising new therapeutic molecules that may benefit from the combination with its proprietary and non-proprietary drug delivery technologies.

Product	Indication	R&D	Pre-clinical	Phase I/II	Phase III	Market
Sirolimus eluting coronary stent	Atherosclerosis	████████████████████	████████████████████	████████████████████	████████████████████	
ICP101 eluting coronary stent	Atherosclerosis	████████████████████	████████████████████			
Goserelin, 1 month depot	Prostate cancer	████████████████████	████████████████████			
Goserelin, 3 months depot	Prostate cancer	████████████████████	████████████████████			
Goserelin, 6 months depot	Prostate cancer	████████████████████				

## Pharmaceutical development

Founded in 2003, InnoCore has become an expert center for the development of biodegradable polymeric drug delivery products for the pharmaceutical, biotech and medical device industry. Core competences and services include custom polymer synthesis, cGMP polymer manufacturing, analytical development, pharmaceutical development, process development and scale-up, phase I/II clinical manufacturing, and regulatory support.

As per 2009 InnoCore opened a new biopharmaceutical R&D facility equipped with dedicated process equipment for:

- extrusion of solid injectable implants
- ultrasonic spraycoating of drug eluting stents
- small scale microsphere manufacturing
- lyophilization.

Furthermore InnoCore has the disposal of cleanrooms (ISO class 6 and 8) for manufacturing of animal trial material as well as climate chambers for ICH stability studies.

## Analytical laboratories

Analytical techniques for chemical characterization of our polymers (and depot formulations) include intrinsic viscosity, GPC, DSC, GC, <sup>1</sup>H NMR, FT-IR, RP-HPLC and Karl Fisher. Further analytical techniques include dissolution testing, Coulter Counter particle size analysis and scanning electron microscopy. Analytical biochemistry and immunochemistry involves identification and quantification of proteins, peptides and other biomolecules using techniques including RP-HPLC, UPLC, SEC-HPLC, UV/IR spectrometry, circular dichroism, FT-IR, mass spectrometry, BCA, ELISA and SDS-PAGE.

## cGMP manufacturing for clinical studies

cGMP manufacturing of SynBiosys polymers for clinical and commercial purposes is outsourced to a CMO under a supply agreement. InnoCore is currently integrating its microsphere and implant manufacturing processes into cGMP facilities for aseptic fill and finish of parenteral products. As per 2012 cGMP manufacturing of parenteral depot formulations will be offered to facilitate phase I/II clinical studies following successful product development.



## Development in partnership

It is our mission to serve the pharmaceutical and medical device industry with advanced drug delivery systems. We do this in many different ways but always in collaboration with our customers.

Besides out-licensing of our proprietary drug delivery technologies, we offer fully integrated pharmaceutical development of drug delivery products. This includes formulation development, stability testing, synthesis and scale-up of custommade polymers, process development and cGMP manufacturing of clinical trial material.

Whether you are in the pharmaceutical, biotech or medical device industry, working on generic products or in need of a novel drug delivery system to meet the formulation challenges of your new biological therapeutic, we can help you to achieve your strategic goals faster.

## Improvement through collaboration

With our in-house polymer synthesis and drug delivery formulation expertise, we can create sustained release depot formulations for your bioactive compounds and according to your specifications. Together with our strategic partners, we offer innovative solutions for formulation and delivery of therapeutic peptides and biotech-derived drugs, including:

### Monodisperse microspheres

InnoCore partners with Nanomi on monodisperse controlled release microsphere technology. Monodisperse microspheres allow for minimally invasive and less painful injection through very thin needles (27 Gauge and smaller) and enable new delivery strategies, such as capillary embolization following intra arterial administration. Moreover, particle related immunoactivation is circumvented due to the absence of  $< 10 \mu\text{m}$  particles.

The combination of InnoCore's SynBiosys polymer platform with Nanomi's robust and scalable Monosphere Technology™ process, offers an attractive route for development of parenteral depot formulations with superior injectability for the systemic or site-specific delivery of even the most challenging biological molecules.

### Sugar glass protein stabilization technology

Proteins are typically formulated using buffered aqueous solutions. However, protein solutions may be unstable and not suitable for further processing into advanced dosage forms. InnoCore collaborates with the University of Groningen on stabilization of proteins through lyophilization and spray-drying of proteins in amorphous sugar matrices.

### Service and capabilities

Proof of concept studies  
Feasibility assessment

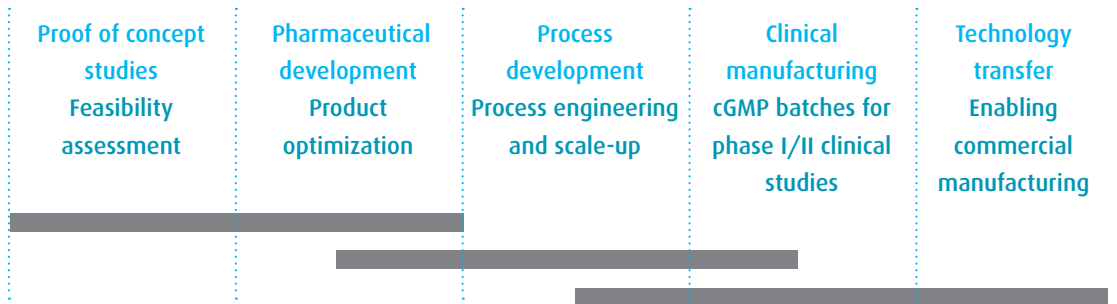
Pharmaceutical development  
Product optimization


Process development  
Process engineering and scale-up

Clinical manufacturing  
cGMP batches for phase I/II clinical studies

Technology transfer  
Enabling commercial manufacturing

Drug delivery technologies  
Clinical product development  
cGMP Manufacturing





InnoCore's drug delivery technologies are currently applied in co-development programs to create proprietary products for the following disease areas and administration routes:

**Diseases**

- Prostate cancer
- Schizophrenia
- Pain management
- Atherosclerosis
- Macular degeneration
- Cardiac repair
- Kidney disease
- Osteoarthritis
- Melanoma

**Administration routes**

- Subcutaneous
- Intramuscular
- intraocular
- intra articular
- intrathecal
- intra arterial

**Partnering opportunities**

InnoCore is interested in licensing its proprietary technologies and in new partnerships to co-develop injectable drug delivery products for generic drugs and promising new therapeutic molecules that may benefit from the combination with InnoCore's proprietary drug delivery technologies. Being a small sized organization, we are flexible in constructing partnership agreements and focused on efficient product development. Our priority is to build successful long-term partnerships. We believe that only truly collaborative relationships lead to mutually beneficial partnerships.

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InnoCore Pharmaceuticals is based in Groningen. The city of Groningen is located in the northern part of The Netherlands.

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