



# The 7 Step Innovation Process at Ghent University – provaxs

with **provaxs**



The top-notch research performed by our scientists is renowned worldwide and constitutes the basis of our innovation program. With the support of Ghent University's Industrial Research Fund, we can mature technologies from basic concept to a TRL (Technology Readiness Level) that is attractive for further development in partnership with industry.

**Step 1: Research** Our scientists are in close contact with the field, which is also reflected in the basic research they perform.



We provide solutions for concrete needs and opportunities in society and in the marketplace, combining state-of-the-art technologies of multidisciplinary teams.

The collaboration between veterinarians, physicians and scientists from different disciplines present at Ghent University takes the research to a higher level and creates many opportunities for innovation.

Our Faculty of Veterinary Medicine, number 1 on the global Shanghai ranking from 2017 to 2021, is at the same time a source of high-level research results and a centre for testing and validating technologies in vitro, in vivo and in the field.

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## Step 2: New Applications



Our business development team, dedicated to the animal-health sector, facilitates connections and interactions between our researchers and industry. They are in daily contact with our scientists and keep abreast of new scientific insights and developments. At the same time, our daily contact with the animal-health industry enables us to understand the sector's needs and opportunities and to identify possible links between discoveries and those needs and opportunities. These links are then translated into new proof-of-concept studies leading to great innovations. The industrial value of new technologies is thus evaluated at an early stage (concept phase).

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## Step 3: Testing



We are in a unique position where Ghent University can also finance proof-of-concept studies with its in-house Industrial Research Fund.

At this level, too, our Faculty of Veterinary Medicine plays a pivotal role. At our Faculty of Veterinary Medicine innovations can be tested in our own facilities and on the target species. This is an important element for de-risking our technologies and increasing their value for further development in collaboration with our industrial partners.

The combined results of basic research and proof-of-concept studies are a solid basis for new IP and patent applications.

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## Step 4: Patenting



When our inventions can be of interest to industry or society, we analyse their patentability.

An organization that holds a patent on a technology and their licensees have the right to prevent others from making or selling that technology. This control on the commercial use of the technology is important to secure the investments that are required to further develop the technology towards a product that is fit for the market.

To obtain a patent an inventor needs to demonstrate that the technology is new (novel), useful and not obvious to someone working in the related field.

An invention is considered new if it is not included in the state of the art. The state of the art (also "prior-art") consists of everything that has been made available to the public before the filing date of the patent application by a written or oral description, use or any other means. This may be, for example, the commercialisation of the invention, press conferences, press articles, publications or public exhibitions.

Preserving the novelty of an invention implies keeping it secret and out of the public domain before filing a patent application.

To maximise our chances to protect our technologies with a patent

- All our scientists assign their rights on research results, discoveries and inventions to Ghent University who has the exclusive right to protect such inventions by the application for patents
- Our IP-advisors, together with our scientists and business developer, perform a thorough analysis of the prior-art that is described in the public domain (scientific literature, patents and patent applications, press releases, posters, ...) to check the novelty of our inventions
- The scope of the patent and the claims should secure the industrial/commercial application of the technology and is defined based on our supportive proof-of-concept data and the prior results of the prior-art analysis
- We file the patent applications before the underlying results are published. When possible, the publication is postponed until the patent application becomes public.
- Before the inventions enter in the public domain, either as a scientific publication or a patent application, the technology is only disclosed to third parties after signature of a confidentiality agreement

A patent can last up to 20 years, but the patent holder usually has to pay certain fees periodically throughout that 20-year period for the patent to remain valid.

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### Step 5: Tech Offer

Before a patent application enters in the public domain, we reach out to industry with a new Technology Offer.



This Technology Offer is a non-confidential document describing

- The invention/technology in general terms
- Our first proof-of-concept data
- The industrial application and market potential we identified

With this Technology Offer we can inform our partners of the new opportunity for collaboration and start discussions on their possible interest.

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### Step 6: Proof of Concept



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### Step 7: Valorisation

Our technologies and innovations reach the market through out-licensing to our industrial partners or through the creation of our own spin-offs.



Also during this phase of technology transfer our combination of scientific expertise, knowledge and know-how on animal health with an entrepreneurial organisation of scientists and experienced tech-transfer professionals is an important asset for a successful collaboration with our partners.

We are in contact with EMA (European Medicines Agency) and national agencies who evaluate applications for market authorizations. We understand the requirements and conditions and hence are familiar with the process of developing innovations towards market authorization. Our interactions with these agencies' Innovation Offices enable us to receive early input on the regulatory landscape related to our innovations and to take this into account as much as possible in the design of our proof-of-concept studies.

If a company decides to enter into a license or option agreement with us, we are open to assist during the phases of technology transfer, development, and registration. This can be done through transfer of material and assays as well as by performing efficacy and first-safety studies in our facilities and on the target species.