

Technology Futures is a service organization for technical industries, that works to accelerate the growth of prosperous business in Alberta.

## Technology

# New window on a small world

Client: Norcada

## Opportunity

Modern microscopes are advanced instruments that use electron beams or even X-rays to image samples. For an optimal viewing, the material must be placed on a sample holder that is transparent to the beams.

In 2005, Norcada created a micro-structure membrane window that could be used as a sample holder for microscopes. Customers responded well to the product, but the company's founders, Yuebin Ning and Graham McKinnon, thought they could expand their market significantly if they were able to improve the performance of the device.

In order to address this need, the Edmonton-based company received support from Technology Futures through the Alberta Innovates Industry r&D Associates program. This allowed Norcada to hire Hooman Hosseinkhannazer, an engineer, to enhance the performance of the device, develop new products, and increase sales.

## Technology

Hooman first spent time analyzing the needs of customers in the MEMS\* market. He then improved the window product platform to make thinner and cleaner membranes. The projects he managed led to the creation of new device features, including perforated holes, and new membrane material, which helped clients more effectively observe nanostructures. Norcada also expanded its product offering for liquid and biological samples, as well as test beds for nanowires.

\*Micro-Electro-Mechanical Systems



*Hooman Hosseinkhannazer holds a custom-fabricated membrane device in the nanoFAB research facility.*

## Alberta Innovates Industry r&D Associates

This program allows companies to recruit recent Master's and PhD graduates to conduct research. The contribution consists of an annual stipend of \$55,000 from Technology Futures and an annual research allowance of \$7,000. The funding term is up to a maximum of two years.

## Status

With Hooman's help, Norcada's product sales have increased by five times. Norcada now annually serves 500 companies and research institutions in more than 40 countries.

With support from the Alberta Innovates Industry r&D Associates program, Norcada was able to afford the high-quality and highly specialized personnel it needed to help the business develop its product line.

While the funding term has ended, Hooman remains part of Norcada's team. Efforts continue to develop new applications and expand the technology and product reach to other sectors.

Through its different business stages, Norcada received valuable support from the Alberta Innovates system. The company benefited from the expertise and infrastructure of the Alberta Centre for Advanced MNT Products (ACAMP) to develop its technology, and received funding from nanoBridge for the development of new early stage device prototypes. Through the Innovation Vouchers, Industry r&D Associates and nanoWorks programs, Technology Futures supported the advancement of Norcada's business development. Utilizing nanoFAB, a cutting edge and open access micro and nanofabrication R&D facility, Norcada can produce up to 60,000 devices yearly.

Technology Futures offers a number of programs targeted at building small and medium-sized enterprises (SMEs) within Alberta.

Find out how we can help you advance your products, business and commercialization efforts:  
[albertatechfutures.ca/IndustryFunding](http://albertatechfutures.ca/IndustryFunding)

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