February 28, 2011

Mr. Thomas Jenkins  
Chair, Research and Development Review Panel  
Via email: consultations@rdreview-examenrd.ca

Dear Mr. Jenkins,

The University of Manitoba welcomes the opportunity to respond to the Research and Development Review Expert Panel looking into ways to improve existing federal support for business R&D. The review is an important step in finding ways to increase business-initiated R&D. The current system of funding university related research through the granting councils and other research funding agencies is well established and has been successful in positioning Canada as a global leader in publicly funded research. Canada continues to trail however in the amount invested in research by industry. There is much work to be done to encourage greater business innovation and increased collaboration with academic institutions.

This letter responds to the Panel’s three primary questions:

- What federal initiatives are most effective in increasing business R&D?
- Is the current mix and design of tax incentives and direct support for business R&D and business-focused R&D appropriate?
- What, if any gaps are evident in the current suite of programming, and what might be done to fill these gaps?

The University of Manitoba plays a central role in supporting business innovation in Manitoba and across the country and continues to seek opportunities to link research-based knowledge with market driven needs.

What follows are our recommendations grouped under the categories of the Panel’s three primary questions:
What federal initiatives are most effective in increasing business R&D?

- Maintain the core operating grant budgets of the Tri-Councils at a certain percentage (70%) of the non-administrative budget in order to allow for increased investigator independence in conducting research. Approximately 30% of Tri Council funding should be dedicated to foster collaborative R&D activities between universities and industry.

- NSERC’s *Strategy for Partnership and Innovation Program* was created to encourage industry to collaborate with universities in solving business challenges. The strategy creates a series of industry partnership programs that link together the exceptional strength of Canada’s research universities with industry through access to specialized knowledge, professors and students, as well as state-of-the-art facilities. The strategy and its programs have proven to be extremely successful and should be further enhanced. A better job however, needs to be done in marketing these programs in order to increase awareness among businesses of the opportunities that exist. The other granting councils should also be encouraged to establish or enhance similar programs.

- Bridging programs, such as the business-led National Centres of Excellence (NCE), have proven successful. At the University of Manitoba, the Intelligent Sensing for Innovative Structures (ISIS Canada Resource Centre) has been an excellent example of an NCE supported initiative which has developed into an international leader in the creation of new technologies for construction and monitoring of civil structures such as bridges and highways. Presently, NCEs focus on targeted areas but greater flexibility is required to accommodate networks that focus on industry partnerships, economic return and self-sufficiency – enhanced Networks of Centres of Excellence.

- It is important to understand that new product development is only one aspect of innovation. There also needs to be a greater focus on social innovation and a recognition that the social sciences also contribute significantly to enhanced productivity.

- Maintain the Canada Foundation for Innovation (CFI) as the pre-eminent research infrastructure funding mechanism in Canada. In addition to the Leaders Opportunity Fund, the Panel should explore the feasibility of restoring the “small” innovation fund for infrastructure project costs between $300,000 and $1 million. CFI funded infrastructure projects should be flexible to allow for industry use without making it an ineligible item.

Is the current mix and design of tax incentives and direct support for business R&D and business-focused R&D appropriate?

- The federal government directs a substantial majority of its support for business innovation towards tax credits that are expected to encourage firms to engage in R&D. Industries are not taking sufficient advantage of the SR&ED program. The program needs to be simplified in order to make it easier for businesses to work with academic institutions. For example, if you work with a post-
secondary institution the expenses that you incur should be automatically eligible (for tax deduction). One incentive improvement would be to provide a tax advantage up front to any business that provides an investment to a university to conduct research on its behalf.

- The Review Panel should examine opportunities for small-businesses to engage in R&D. Programs like the Canadian Innovation Commercialization Program (CICP) could be enhanced to better support research partnerships between small businesses and universities. The Small Business Innovation Research (SBIR) program established in the United States could be modeled in Canada to create stronger incentives for small business R&D.

What, if any gaps are evident in the current suite of programming, and what might be done to fill these gaps?

- To encourage the development of Highly Qualified Personnel (HQPs) the government should provide more opportunities for graduate students to participate in internship training with an industry partner. This would promote the transfer of knowledge workers into the workforce. NSERC’s Industrial R&D Fellowship program provides longer term employment experiences for recent graduates with advanced degrees and research training. This type of program should be expanded to provide employment experiences for recent Master’s and PhD graduates across all disciplines to provide incentives for private-sector employers to tap the skills of our HQPs.

- The Panel should consider recommending a mechanism for SMEs to hire university research teams and access university infrastructure, broadening the impact of public investments made through the granting councils and CFI. For example the University of Manitoba is proposing to construct a new Materials Institute. Much of the specialized equipment in that lab could be of benefit to industry if they were to fund university researchers to conduct R&D on their behalf.

- After ideas are generated in the research phase there is often a vacuum where the idea or innovation cannot move into the commercialized or marketing phase. There is no funding program available to assist early prototype models move on to more advanced stages of development for practical application. The Panel should explore ways to support the maturation of new discoveries.

- The Panel should consider investments in social innovation as well as product innovation. Lifestyle changes and continued improvements to living standards in Canada are as important as product discoveries. As an example, with the demographically large baby boomer generation moving into retirement, active aging and cultural studies are important to the development of government policy related to services for this population group. Behavioural change studies are also critical to developing ways to create a healthier and more productive society. Tax incentives to encourage investments in social science research will lead to a better quality of life in Canada.
• A great deal of research in business schools is social sciences based. There is a need to provide federal support for research in business schools related to areas of entrepreneurship, ethics, partnerships and business plan development.

• The Panel should consider developing programs to encourage the retention of Canadian post-doctoral fellows, many of whom obtain federal funding and study in the USA or abroad and do not return to Canada. Federally funded fellowships should include some form of incentive or requirement to return to Canada to work either through a funded position at a university or research institution to ensure that we are not losing our best talent to other countries. Retaining talent is a key ingredient to advancing Canada’s innovation agenda.

• The Federal government needs a rapid response fund to provide immediate research funding to support emergency research to respond to a crisis or area of urgent concern. In this case rapid turnaround is required from discovery, to manufacturing, to delivery to deal with an emerging crisis. Some examples from the health perspective which have occurred in Canada recently have been the need to respond to the SARS epidemic, to the H1N1 Influenza, listeriosis bacteria, Clostridium difficile, and others. In the late 1980s, there was an outbreak of serious gastric and neurological illness in Eastern Canada, arising from contaminated mussels. With rapid funding, researchers at the Atlantic Veterinary College, McGill University and the University of Manitoba discovered the agent responsible (domoic acid) and identified a treatment/antidote (kynurenic acid) in a matter of months after this outbreak. The Panel should consider a mechanism to allow industry and universities to work together to manage these emergency situations. These funds may also be needed to develop technology to prepare for disaster preparation from flood forecasting to research related to environmental remediation following a disaster.

In partnership with government and business, the University of Manitoba is ready to play a greater role in helping address Canada’s innovation and productivity challenges. We look forward to working with the government to assist in increasing private sector innovation and research and we look forward to reviewing the Panel’s final report next October.

Sincerely,

David T. Barnard Ph.D.
President and Vice-Chancellor

cc: Digvir Jayas, Vice-President (Research)
John Alho, Associate Vice-President (External)