New studies on pulse crops

By Frank Nolan

Research Promotion

On October 12, Pulse Canada announced $1.25 million in new funding for human clinical trials studying the health benefits of eating pulse crops, including peas, beans and lentils. Part of the Pulse Innovation Project, the funding supports five major studies, including two at the University of Manitoba that have been awarded a total of close to $500,000.

Pete Jones, director of the Richardson Centre for Functional Foods and Nutraceuticals, and Linda Malcomson from the Canadian Centre for Agri-Food Research Promotion, have been awarded a number of significant research grants, including $100,000 from the Scottish Rite Charitable Foundation of Canada awarded in October 2006. He has also received a $100,000 operating grant and a $100,000 establishment grant from the Manitoba Health Research Council.

One of the things that makes Albensi's program unique is the high level of collaboration involved. For example, he has developed an innovative collaboration focused on the use of electrical stimulation to alleviate seizures. This project includes researchers from the department of electrical and computer engineering, as well those with expertise in MRI physics, neuropathology and neurosurgery.

“We’re also doing behavioural research to see how memory is affected in the living animal, and in the next couple of years we’re planning to look at neonatal stroke and its effect on memory,” he said. “In this day and age, you really have to have a wide range of collaborators and consultants. We’re building a program aimed at understanding memory from every angle, and that requires a lot of different technical and clinical expertise. We’ve been very fortunate to develop such good, collaborative relationships in a relatively short time.”

New Faculty
Orientation

Animal Care and Use

Presented by
Dr. Cyrus Shafai
Director, Animal Care and Use Program
November 2, 12:00 - 1:00 pm
S211 Medical Services Bldg.
Bannatyne Campus

This session will address:

• protocol submissions
• veterinary and facility services
• contact information

All NEW faculty are encouraged to attend. Refreshments will be served. For more information, contact Denice Borowski at 789-5960 or email borowski@ms.umanitoba.ca

Smartpark Interactive Breakfast
Speaker Series

Thursday, October 24
Smartpark Lobby Boardroom
‘The Power 30’ with
Mr. Arni Thorsteinson
President
Shelter Canadian Properties

Seating is limited. Please email wiebe7@cc.umanitoba.ca or call 480-1434 to reserve your seat today.

Business of Science Symposium

October 25 & 26
The Fairmont Winnipeg

“From Idea to Execution: Understanding Critical Success Factors and Realizing Opportunities”

The Business of Science Symposium provides a forum to learn new strategies, hear the latest developments and create important industry relationships.

For more information visit their website: www.businessofscience.org

Mechanisms of memory

By Frank Nolan

Research Promotion

In the last few weeks, you’ve probably experienced some kind of memory lapse. Maybe you forgot where you left your keys, or perhaps you couldn’t remember a phone number you’ve known for years. For most of us, these episodes are a minor frustration, and they pale in comparison to the daily hardships faced by people with severe memory deficits.

Memory deficits are involved in a number of different diseases, including Alzheimer’s disease, diabetes, epilepsy and cerebral palsy, as well as things like stroke and head trauma,” said Benedict Albensi, pharmacology and therapeutics. “It has a huge impact on society at a number of different ages, including neonatal, middle-aged and aged populations.”

Albensi’s lab at the St. Boniface General Hospital Research Centre is looking at how memory works at the molecular, cellular and whole-animal levels, and his program is the only comprehensive, multi-disciplinary memory deficits research program in Manitoba.

One aspect of his research is aimed at understanding the “plastic mechanisms” that control memory encoding, including the role of calcium in memory and seizure disorders.

Calcium plays a very important role in normal memory, but when calcium regulation is disrupted, and there is too much intracellular calcium present for prolonged periods, it can cause serious problems,” he said.

Albensi is studying the role of a transcription factor, called NF-kB, which may be involved in memory formation. Like calcium, NF-kB activation might be necessary for normal memory formation, and Albensi’s team is investigating whether or not this transcription factor is also abnormally activated in memory impairments like Alzheimer’s dementia.

“It’s known that when intra-cellular calcium increases, NF-kB increases,” he said. “We also know that in the central nervous system and in memory regions of the brain, NF-kB is increased after acute brain injury and it’s also increased in chronic conditions like Alzheimer’s disease. Our goal is to pin down whether or not NF-kB is as involved in memory as we hypothesize it might be.”

Ultimately, this line of Albensi’s research is aimed at developing new therapeutic strategies for combating memory deficits.

“We want to figure out which targets would be best for pharmacological intervention, and if we can identify a good target in the text five or ten years, then we’ll really have accomplished something.”

Over the last 18 months, Albensi has been awarded a number of significant research grants, including $100,000 from the Scottish Rite Charitable Foundation of Canada awarded in October 2006. He has also received a $100,000 operating grant and a $100,000 establishment grant from the Manitoba Health Research Council.

One of the things that makes Albensi’s program unique is the high level of collaboration involved. For example, he has developed an innovative collaboration focused on the use of electrical stimulation to alleviate seizures. This project includes researchers from the department of electrical and computer engineering, as well those with expertise in MRI physics, neuropathology and neurosurgery.

“We’re also doing behavioural research to see how memory is affected in the living animal, and in the next couple of years we’re planning to look at neonatal stroke and its effect on memory,” he said. “In this day and age, you really have to have a wide range of collaborators and consultants. We’re building a program aimed at understanding memory from every angle, and that requires a lot of different technical and clinical expertise. We’ve been very fortunate to develop such good, collaborative relationships in a relatively short time.”