

Centre on AGING

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Centre on Aging Research Fellowship Recipients

The Centre on Aging is pleased to announce the recipients of the 2009/2010 Centre on Aging Research Fellowships, **Benedict Albeni**, PhD, Pharmacology and Therapeutics/Neurodegenerative Disorders (balbeni@sbr.ca), and **Christina Lengyel**, PhD, Human Nutritional Sciences (lengyel@cc.umanitoba.ca).

The focus of Dr. Albeni's research is to understand how normal memory works and what happens when it is impaired.

From a neurochemical and neuropharmacological perspective, he is working to identify molecular signalling pathways and pharmacological mechanisms that could be targeted with promising therapeutics.

Researchers in his laboratory are examining biological processes involving calcium regulation and neuronal excitability as these thresholds play a large role in not only normal memory processing but also in the processes of brain injury and disease. According to Dr. Albeni, this research is important because:



- "It provides a valuable platform for scientists to understand how neurons change at the molecular level during the formation

of memory;

- finding a gene or genes that are activated in both the transgenic mouse and human strongly suggests the gene is involved in memory;
- magnetic resonance imaging (MRI) of the brain can reveal loss of gray matter and other important changes years before symptoms of dementia; and,
- it could ultimately lead to the development of drugs to treat memory disorders and other brain diseases of neurodegenerative conditions."

Publications resulting from Dr. Albeni's research include:

Thiessen, J., K. Collister, L. Kurjewicz, M. Del Bigio, B.C. Albeni, & M. Martin. 2007. Magnetic Resonance Imaging and Behavioural Test Comparisons in a Mouse Model of Alzheimer's Disease. *Physics in Canada* 63(3).

Albeni, B.C., D. Oliver, J. Toupin, and G. Odero. 2007. Electrical Stimulation Protocols for Hippocampal Synaptic Plasticity and Neuronal Hyperexcitability: Are They Effective or Relevant? *Experimental Neurology* 204 (1):1-13.

Dr. Lengyel focuses her research on nutrition and health-related issues of older adults.

Currently she is investigating the associations between nutritional risk, successful aging, and self-rated health of community-dwelling older men using data from the Manitoba Follow-up Study (MFUS). The MFUS, a long-term prospective study involving a cohort of 3,983 initially healthy young men is in its 60th year and continues to gather data from its 900 surviving members (mean age: 87 years).



Previous research with the MFUS demonstrated that the daily consumption of vegetables/fruit and grain products are associated with healthier self-rated diets compared to men consuming these food groups most days. In addition, frequent consumption of fruits and vegetables contributed to the perception of better health and greater life satisfaction of the men in the MFUS.

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Research Fellowships (Cont'd)

In December 2007 a self-administered survey was sent to 690 MFUS members. SCREEN II, *Seniors in the Community Risk Evaluation for Eating and Nutrition* (Keller, Goy & Kane, 2005), and questions about successful aging and health were included. Completed surveys were returned by 560 men. A second survey was mailed to these men in December 2008; a third will be sent in December 2009 to form a longitudinal component.

Dr. Lengyel is measuring the associations between nutritional risk, successful aging and self-directed

diet/nutrition. She is also assessing predictability of nutritional risk of those who have aged successfully, as determined by the annual Successful Aging Questionnaires administered in May 2008 and May 2009 on a sub-group of self-reported successful individuals identified in the 2007 and 2008 Nutrition Surveys. She will use these three years of data to determine if there is a pattern of nutritional risk and successful aging.

Dr. Lengyel plans to use the findings to develop effective nutrition education and intervention programs targeting individuals aged 85 years and older, the fastest growing segment of the Canadian population (Statistics Canada 2007a). It is

also expected that they will assist “aging in place” programs enabling individuals to remain independent in their homes as long as possible.

Recent publications by Dr. Lengyel include:

Lengyel CO, Whiting SJ, Zello, GA. 2008. Nutrient inadequacies of elderly residents of long-term care facilities in a health district in Saskatchewan. *Canadian Journal of Dietetic Practice and Research* 69(2):82-88.

Lengyel CO, Tate RB, Bayomi DJ. 2007. Food group consumption and self-rated diets of elderly community-dwelling Canadian men. The Manitoba Follow-up Study. *The Journal of Nutrition, Health & Aging* 11(1):8-13.

Centre on Aging Research Forum 2009

The Centre on Aging will hold its 16th Annual Research Forum on **Monday, March 30 from 12:00 noon - 3:00 p.m.** **Parminder Raina, PhD**, Professor, Department of Clinical Epidemiology & Biostatistics, McMaster University, and Lead Principal Investigator, CLSA, will present a lecture entitled *The Canadian Longitudinal Study on Aging (CLSA), Understanding the Complexity of Aging and Health through Interdisciplinary Research* beginning at noon in Theatre A, Basic Medical Sciences Building, Bannatyne Campus. This will be followed by a workshop for more in-depth discussions with Dr. Raina.

Recent advances in biosciences and population health herald exciting opportunities to conduct high-impact population health research. On a background of



Dr. Parminder Raina

technological and scientific innovation, the CLSA is being launched as a program of research and platform to investigate the complexities of the aging process and improve our understanding of the transitions and trajectories of healthy aging. The CLSA is a Canada-wide, 20-year follow-up study of 50,000 people between the ages of 45 and 85 years at baseline. It is a research initiative that bridges biological and population sciences to create a future “Legacy Research

Platform” that will provide scientists with the resources essential to pursue leading-edge research.

All respondents will provide a common set of information on demographic, social, physical/clinical, psychological, economic, and health service utilization aspects of health and aging. Thirty thousand individuals will also be involved in a physical/clinical assessment and provide biological specimens such as blood and urine in 10 sites across the country (Vancouver, Victoria, Calgary, Winnipeg, Toronto/Hamilton, Ottawa, Montreal, Sherbrooke, Halifax and St. John’s) with the capability of high volume throughput. Participants will be followed every 3 years until the age of 80, and yearly follow-up for participants over the age of 80.

Centre on Aging 26th Annual Spring Research Symposium

Where can you find the latest research and information on these important topics.... At the Centre on Aging, University of Manitoba's 26th annual Spring Research Symposium on Monday, May 4, 2009.

The Symposium is held to promote a dialogue between University researchers and the community-at-large. University researchers present findings from their research and community representatives discuss the impact of the research on policy, practice and quality of life for older adults. The Symposium is one of the activities held to support the Centre's vision: to be a recognized leader in research in aging, to improve the lives of older adults, their caregivers and families, and to enhance communities within and outside of Manitoba; and our goal: Effective Community Partnerships and Knowledge Dissemination.

The Symposium will be held at our Bannatyne Campus. Registration will be in the Brodie Centre Atrium, 727 McDermot Ave. Last year 350 individuals registered for the event.

Topics vary from year to year. This year's Symposium will focus on:

- Living Life to the Fullest
- Community Re-Engagement,

Participation and Quality of Life after Stroke

- Aging in Place: Explore the Options!
- Anti-Aging Medicine, Hype or Hope?
- Medication Use among Older Adults: Issues and Outcomes
- Nutrition and Older Adults: Issues among Community and Long-Term Care Residents
- Taking Control of One's Health: Living a Healthy Life with Chronic Conditions

Community agencies and organizations will set up exhibits to provide participants with information on their programs and services. A poster session will also be held. A \$50.00 University of Manitoba gift certificate will be awarded for the best student poster.

There is no charge for the symposium. All are welcome to attend. For information, please contact the Centre at 474-8754. Registration materials have been mailed and will also be available on our web site:

www.umanitoba.ca/centres/aging

It promises to be an exciting and educational day!

The following organizations accept attendance at the Symposium as **Continuing Education Credits**:

Massage Therapy Association of Manitoba (2.5 Primary, 1.25 Secondary credits)

College of Licensed Practical Nurses of Manitoba (applies to Continuing Competency Program)

Manitoba Pharmaceutical Association (5 CEU's, MPhA File No. 29042M)



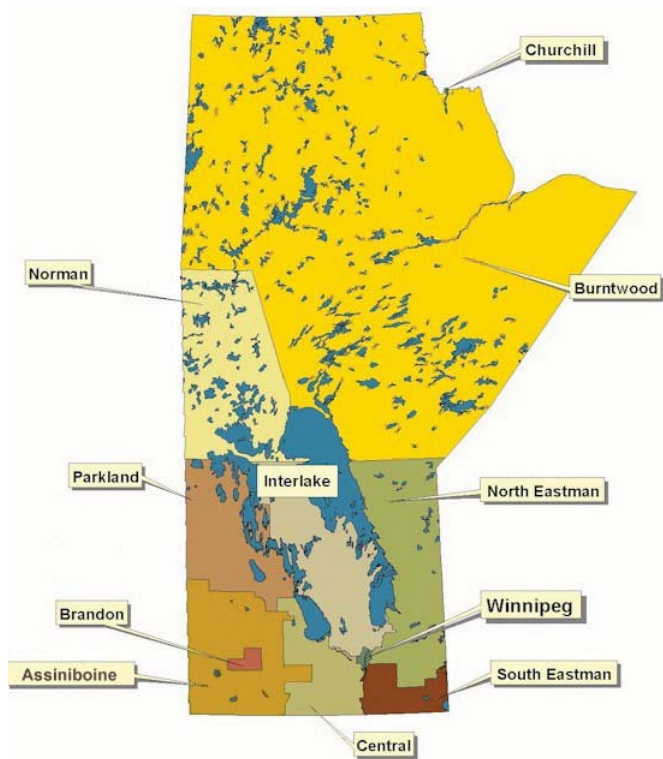
POWER OF ATTORNEY, WILLS AND ESTATES, HEALTH CARE DIRECTIVES

Interested individuals will have an opportunity to sign up for a workshop on these topics being presented by the Manitoba Public Trustee's Office. Space is limited to 40 individuals. Sign up at the registration desk.

Did you know...

- **Brenda Austin-Smith**, PhD, English/Film Studies, focuses her research on senior-aged women viewers of the Golden Age Hollywood melodrama to explore the transatlantic affects of the classic “weepie” woman’s film in the context of the Depression, World War II, and post-war reconstruction. Senior-aged female fans of the “weepie” represent the original, target audience for the “woman’s film” over the thirty years of its classical period, from the Depression to the post-war era, and provide insight into the construction and maintenance of intimate publics through the transnational phenomenon of cinema. The woman’s film’s emphasis on loss, death and grief provides a moving picture analogue of women’s lives in the middle, turbulent decades of the 20th century.
- According to **Richard Milgrom**, PhD, City Planning, between 1996 and 2000, Winnipeg’s demographic growth has increased 133% while its urbanized area has increased 297%. Dr. Milgrom examines the social costs of current development patterns and the implications for older adults. He notes that these include reduced transit efficiency, deterioration of housing stock in the inner city neighbourhoods, and reduced walkability. Plan Winnipeg 2020 is being developed; seniors are mentioned only once in the planning document and there does not appear to be anyone representing their perspective.
- In a recent article, **Daniel Bailis**, Psychology, and co-authors Judith Chipperfield and Tiffany Helgason, explains that collective self-esteem (CSE) is an individual’s self evaluation as a member of social groups. He notes that it promotes health and well-being in later life by moderating the harmful effects of losing personal control over these experiences. In a study of 144 community-dwelling older adults, those with higher CSE at baseline developed significantly fewer chronic conditions over the next 6 years. Bailis, D. S., Chipperfield, J. G., & Helgason, T. R. (2008). Collective self-esteem and the onset of chronic conditions and reduced activity in a longitudinal study of aging. *Social Science & Medicine*, 66(8), 1817-1827.

From the Manitoba Fact Book on Aging Update 2008: Manitoba Seniors 2006 Census Update



<http://www.gov.mb.ca/health/rha/map.html>

Each year, Manitoba Health compiles **population statistics** for each **Regional Health Authority (RHA)** in the province. The population data are based on records of residents registered with Manitoba Health and Healthy Living as at June 1, 2006. In 2006:

- Over one-half (57.5%) of older adults in Manitoba lived in Winnipeg.
- The largest percentage of individuals aged 65 and over outside Winnipeg was in the Central RHA (8.4%), followed closely by the Assiniboine RHA (8.2%), and Interlake RHA at 7.0%.
- Less than 3% of Manitobans aged 65 and over lived in the northern regions of the province of Norman (1.3%), Burntwood (1.1%), and Churchill (< .1%).
- The percentage of a RHA’s population aged 65 and over ranged from only 3.7% of Burntwood’s population to 19.4% of Assiniboine’s population.
- The percentages aged 65 to 69, aged 70 to 74, and aged 75 and over varied slightly among the health regions. Parkland (54.8%), Assiniboine (54.6%), Brandon (53.5%), Winnipeg (52.3%), and Central (52.1%) all reported that over one-half of their 65 and over population was 75 years of age or older.

Source: Manitoba Health. Manitoba Population Report, June 1, 2006. Retrieved from www.gov.mb.ca/health/population/2006/parttwo.pdf

Graduate Students' Research

The **Applied Health Sciences (AHS)** program is a multi-unit, research-based PhD which brings together students in four participating academic units: Human Ecology, Kinesiology and Recreation Management, Nursing, and Medical Rehabilitation. The program is unique in that it includes discussions at a graduate level of applied health sciences as a multi-dimensional entity, while at the same time allowing for individualized high-quality health science research with an individual researcher, or small group of researchers.

On January 9, 2009, the AHS program held a Research Day which included a keynote address by **Dr. David Butler-Jones**, Chief Public Health Officer, Public Health Agency of Canada and a student poster competition.

Dana Kolach, a student in Kinesiology and Recreation Management, presented a poster on *the impact of interior vehicle design on driving posture and vehicle ergonomics*. She notes that the design of a vehicle's interior and seat can have significant impact on the driver's field of vision, posture and range of motion, thereby affecting their ability to drive.



Aging causes changes in the body which also affect driving. Turning to look out the rear window is a common problem in older drivers, which is usually caused by limited neck mobility. Another issue related to

aging is a decrease in visual acuity and peripheral vision.

Pavithra Rajan, a student in Kinesiology, presented a poster entitled *Elastic resistance training: A novel technique to add strength and momentum to life*. Rajan notes participants underwent strength training for 14 weeks, consisting of 14 different exercises using elastic resistant bands, as well as aerobic training consisting of brisk walks for 35 minutes. Significant increases in the levels, as well as the secretion rate, of salivary immunoglobulin A in low functioning older adults were demonstrated. It can thus be inferred that moderate exercises could have a positive effect on mucosal immunity, suggestive of greater resistance to upper respiratory tract infection. In addition, progressive lower body exercises of 10 weeks duration improved power in 25 frail older residents of a long-term care facility as measured on an isokinetic dynamometer.

Juhi Sinha, Kinesiology and Recreation Management presented a poster entitled *The Aging Cervical Spine and the Effects of Neck Flexibility Interventions*. Although stretching has been advocated to improve neck rotation for older adults many of the previous studies have recorded very minimal increase in neck rotation with stretching exercise intervention. A previous study in the Neuromuscular Laboratory at the University of Manitoba did not find any significant increase in neck rotation after 12 weeks of intervention. In this study 50 elderly females, 70 years and older with self reported mobility limitation were randomly allocated into three exercise groups. The training program was of 12 weeks: the intervention group did static stretches of neck flexion, neck rotation, and shoulder retraction 3-4



times each with 10 seconds hold, twice a week. The control groups did power training of ankle muscles. Neither the flexibility nor the control groups significantly improved their range of neck rotation. The flexibility group showed some significant increase in shoulder flexibility. One possible reason for the lack of change in range of motion may be because the stretching program was only 2 days per week.

Mark Your Calendars

Jane Barratt to Visit

Jane Barratt, PhD, Secretary General of the International Federation on Ageing (IFA), will visit the Centre on Aging on September 8, 2009. Dr. Barratt has over 30 years experience in the health, community and aged care, and disability sectors. She has a strong commitment to strengthen the roles and relationships between government, NGOs, academia and the private sector toward improving the quality of life of older people. Dr. Barratt will give a presentation on Active Ageing - The Global Opportunities.

Aging in Manitoba 1971 - 2009

The Aging in Manitoba (AIM) Longitudinal Study was established in 1971 by the Government of Manitoba to determine the needs of older Manitobans and develop resources to meet those needs. The needs data and supporting psycho-social, well-being and epidemiological interview data became the basis for the Aging in Manitoba longitudinal study. The original cohort of 4803 older Manitobans were first interviewed in 1971; two more cohorts were added in 1976 (1302) and 1983 (2877). The social, physical and mental health of the participants were tracked and linked to the individual's health services utilization data. In 1983, 1990, 1996, 2001, 2005, and 2006 the survivors from these three cohorts were re-interviewed.

Findings from these studies have had a direct impact on older Manitobans over the years and are still being used

by the government and the Manitoba Regional Health Authorities in policy and senior service planning. New programs and services such as Home Care were established and Nursing Homes (PCH) were added to the list of insured health services. The findings increased awareness of older women's health, isolation and loneliness among older women and among older men, especially older Veterans.

At the request of the Federal, Provincial and Territorial (FPT) Ministers Responsible for Seniors in Canada, AIM examined social isolation to determine who was most likely to be isolated and why. The FPT requested recommendations for future initiatives to address the problem. AIM held a workshop and presented them with a list of 10 recommendations, including efforts to address gaps in current programs and services, particularly



transportation and supportive housing. AIM Director, **Barbara Payne**, PhD, is writing final reports and wrapping the study up. The data from the study will be housed at the Centre on Aging at the University of Manitoba and to the Data Repository at the Manitoba Centre for Health Policy. It will be available for researchers and students working on projects once they sign a confidentiality agreement recognizing that all participants will continue to be anonymous.

Canadian Association on Gerontology 2009

CAG's 38th Annual Scientific and Educational Meeting will be held October 22-24, 2009 in Winnipeg, Manitoba. The opening keynote address on the Thursday evening will be given by Norma Drosdowech, who for six years served as Chair of the Manitoba Council on Aging, an advisory committee to the Government of Manitoba's Minister responsible for Seniors. As a family caregiver, Norma became increasingly aware of seniors' issues, and appreciates the opportunity of addressing them.

She has represented the Council on the World Elder Abuse Awareness Committee, the Seniors and Elders Day Planning Committee, the Manitoba Committee of Seniors, and the University of Manitoba's Centre

on Aging and sits on the CIHR's Institute on Aging Advisory Board. She has attended CAG over the years as well as regional seminars and workshops, and is working to support Age-Friendly Initiatives in Manitoba.

Norma holds a Master's Degree in Educational Psychology and enjoyed a long career as an educator. Since retirement, her interests have centred around volunteer service with the First Unitarian Universalist Church of Winnipeg, and with GOGO Action Winnipeg, a support group for African grandmothers. Norma enjoys leading rites of passage - marriages, memorial services and child dedications, and her frequent role as a guest speaker on seniors issues.

CENTRE ON AGING

The Centre on Aging, established on July 1, 1982, is a university-wide research Centre with a mandate to conduct, encourage, integrate, and disseminate research on all aspects of aging.

Director: **Verena Menec**, PhD
Canada Research Chair (CRC)
in Healthy Aging
Community Health Sciences
Faculty of Medicine

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Centre on Aging News
338 Isbister Building
University of Manitoba
Winnipeg, MB Canada
R3T 2N2

Tel: (204) 474-8754

Fax: (204) 474-7576

E-mail: aging@umanitoba.ca
Web: <http://www.umanitoba.ca/centres/aging>