

# GERONTO-McGILL

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## EATING YOUR WAY TO BETTER CARDIOVASCULAR HEALTH: FOODS THAT REDUCE CHOLESTEROL

by Tania Elaine Schramek

Several foods have been identified as having the ability to lower cholesterol. For instance, studies have shown that eating nuts, soy protein, viscous fibres (e.g., oats, barley, eggplant) and plant sterols can reduce cholesterol levels by 4-7%. Nevertheless, these reductions fall well short of those afforded by cholesterol-lowering drugs. Not surprisingly, these drugs have remained the first choice for reducing elevated cholesterol levels. New research, however, has re-evaluated the effectiveness of cholesterol-reducing foods. A group headed by Philip Connelly at the University of Toronto placed individuals with high cholesterol on a diet rich in each one of these cholesterol-lowering foods, rather than just one. Remarkably, after four weeks, the combination diet reduced LDL cholesterol by 29%, a level quite close to the 34% drop associated with lovastatin, a popular cholesterol-reducing drug. This has led the authors to speculate that such a diet could be useful for reducing cholesterol in

(Continued on page 2)

## MAN ON THE RUN: BIG PRAIRIE SKIES AND THE BIG PICTURE IN BIOMEDICAL ETHICS

An interview with Leigh Turner, Ph.D., of the Biomedical Ethics Unit and the Department of Social Studies of Medicine of McGill University

By Angela J. Ring

They say that the big skies of the Canadian Prairies can have a lasting effect on people, and this may very well be the case for Leigh Turner, an Assistant Professor in the Biomedical Ethics Unit and Department of Social Studies of Medicine at McGill. The beginnings of Dr. Turner's academic career can be found in Winnipeg, Manitoba, and since leaving the big skies behind, Dr. Turner certainly has continued to think about the big picture. After completing his doctoral degree in 1996 at the School of Religion and Social Ethics at the University of Southern California, he embarked on a career as a Clinical Biomedical Ethicist, and has spent the last 10 years moving around North America. The good-natured jokes he makes about the multitude of moving boxes that decorate his office only serve to underscore the impressiveness of his relatively young career.

Starting out as a Research Associate at the Hastings Center in Briarcliff Manor, New York, Dr. Turner then moved to the University of Toronto where he served as Assistant Professor in the Joint Centre for Bioethics, while also serving as a clinical ethicist at Baycrest Centre for Geriatric Care and Sunnybrook Women's College Health Sciences Centre. Dr. Turner then spent time



as a visiting scholar at the Institute for the Medical Humanities of the University of Texas before moving to McGill five years ago. His most recent appointment found him once again trekking south of the border last fall to Princeton, New Jersey, where he is a member of the School of Social Sciences at the Institute for Advanced Study.

So what does a Clinical Biomedical Ethicist do exactly? Many people have heard the term, or seen them interviewed on various news programs commenting on current events such as the recent Terri Schiavo case, but few people have a good sense of what the title really involves. From

(Continued on page 2)

### IN THIS ISSUE

Foods that reduce cholesterol . . . . .	1
Interview with Leigh Turner . . . . .	1
The MILR : Educational pursuits in retirement . . .	1
Dangerous prescriptions in older adults . . . . .	3
A bio-barcode for early detection of AD . . . . .	5
Influences on food intake in geriatric patients . . . .	6

### EDUCATION

## THE MCGILL INSTITUTE FOR LEARNING IN RETIREMENT: CULTIVATING INTELLECTUAL CURIOSITY IN THE GOLDEN YEARS

By Daniel Auld

If you are like many, you may have wanted to pursue an educational opportunity for some time. Of course, as most of us have experienced, career and family responsibilities quite often conspire to make

this a rather difficult undertaking. For increasing numbers of older adults, however, their retirement years are proving to be a golden opportunity for learning and

(Continued on page 4)



## EATING YOUR WAY TO BETTER CARDIOVASCULAR HEALTH: FOODS THAT REDUCE CHOLESTEROL

(Continued from page 1)

individuals with low to moderately elevated cholesterol, before drugs are tried. Moreover, they believe that it might also prove useful as a complement to drug therapy, possibly reducing the dose of drug needed to meet therapeutic target levels of cholesterol.

Rather than a large departure from current practice, this diet would simply be an improvement. In fact, it is common for health care providers to recommend diet and lifestyle changes in response to mildly elevated cholesterol, or to individuals with high risk for elevated cholesterol, such as those with type II diabetes. This study is exciting because it shows that for some people, cholesterol can be lowered very effectively by diet alone. Be sure to consult your doctor and nutritionist about this study and hopefully you could be among those that could eat their way to reduced cholesterol.

Source:

David Jenkins, Cyril Kendall, Augustine Marchie, Dorothea Faulkner, Julia Wong, Russell de Souza, Azadeh Emam, Tina Parker, Edward Vidgen, Elke Trautwein, Karen Lapsley, Robert Josse, Lawrence Leiter, William Singer and Philip Connelly (2005) *Direct comparison of a dietary portfolio of cholesterol-lowering foods with a statin in hypercholesterolemic participants. American Journal of Clinical Nutrition, 81: 380-387.*

## An interview with Leigh Turner, Ph.D., of the Biomedical Ethics Unit and the Department of Social Studies of Medicine of McGill University

(Continued from page 1)

a practical standpoint, as a Clinical Ethicist for the Montreal General Hospital, Dr. Turner serves as part of the general medical team and can be called on for consultation in cases where there is disagreement about treatment. For example, when doctors and families of an unconscious patient disagree about what the next step in treatment should be, Dr. Turner may be called on to consult on the ethical considerations of the case, and this is where his ability to keep the big picture in mind can be of great value.

When discussing issues related to end-of-life-care, Dr. Turner points out that although case law, legislation, and hospital policies have a tendency to focus on patient autonomy, choice, and individual decision-making, the reality is these individuals live within a greater familial and cultural community. In a multicultural society as our own, there can be a great divide between the individual-oriented thinking of North American society that is at the foundation of policy and legislature, and the cultural and familial reality of the patient in question.

Dr. Turner also draws attention to the tendency of the ethical community to focus on the cutting edge issues of the moment, such as the right to die issue in the Terri Schiavo case. In contrast, he prefers to comment on issues related to the day-to-day living of the patient. He points out that there is an unintentional tendency in the ethical community to not discuss or to overlook issues of *quality of life*, and that there is a danger in focusing on larger issues while forgetting the smaller things that are not as dramatic.

He recounts the story of an unconscious patient whose picture and certain personal effects were put on display so that nurses and other medical staff could have a better sense of who this person was, drawing attention to the *person* rather than the *patient*. He also focuses on the importance of architecture and atmosphere in the design of institutions, underscoring the importance of a warm and welcoming environment both for patients and families, as well as the importance of good food! While these issues attract less media attention, they are nevertheless important ones that should not be overlooked.

Another area of interest for Dr. Turner relates to the current phenomenon of the quest for ever-lasting youth and life. While the quest for the *fountain of youth* is not a new one, he points out that with recent advancements in biotechnology, the quest for youthfulness and ever-lasting life has taken on a life of its own in recent times, particularly in North America. He goes so far as to say that the biotechnology industry

has many characteristics of a modern quasi-religion that provides a faith structure (faith in nutritional supplements that say they can help slow down the aging process for example), and even a notion of the afterlife – in this case a non-afterlife, and points to examples of legitimate research currently going on in search of ways to prolong life here on earth indefinitely.

Within the framework of this issue he again draws attention to the bigger picture and away from a discussion of plastic surgery and botox injections. Instead he points out that the cosmetic industry should perhaps be the focus of attention since the majority of people either cannot afford expensive surgery or botox treatments, or are uncomfortable with the idea of invasive strategies to preserve youthfulness. Recognizing this niche market, many cosmetic companies now offer a dizzying array of anti-aging products to fight wrinkles and rejuvenate skin tone that are marketed at a high price. These luxury designer products often offer little to no real benefit, yet society at large insists on believing the claims of those interested in making money.

Along the same lines, he also points to the nutritional supplement industry. A quick visit to the Internet reveals that this industry goes far beyond the herbal supplements sold over-the-counter at your local pharmacy. Many of these supplements are targeted to older adults with claims that they can slow down or reverse the aging processes. This is particularly disturbing to Dr. Turner in that many older adults take these products in good faith, believing they will help them, when in reality they offer little benefit and may come with health risks, not to mention the high cost that many older adults cannot afford. He downplays the cost/benefit/risk reality of these products when he good-naturedly points out that “people in California have been taking these products for years, yet they seem to get as sick and die around the same time as the rest of us”.

Dr. Turner equates this phenomenon with a kind of massive societal denial, and ponders what it is about our society that has made us so fearful of aging and death, to the point where we spend obscene amounts of money, and ignore the truth about the risks and benefits of these products. He asks the questions “What is it about our society that we have become so fascinated with youthfulness and immortality?” “Why do we want to believe these products really work?” and “Why now?” By asking these questions Dr. Turner is more than a Clinical Biomedical Ethicist, he examines real world issues and provides a philosophical analysis of current world views and phenomena, making him a cultural observer like the rest of us, only with the credentials to do it.

## POLICY AND POLITICS

# DANGEROUS PRESCRIPTIONS: ARE SENIORS BEING HURT BY CERTAIN DRUGS MEANT TO HELP THEM?

By Tania Elaine Schramek

A recent investigation by the CBC has raised a warning flag for Canadians over 65 and their families. Using data obtained from Health Canada with the Access to Information Act, the CBC has estimated that up to 3,300 seniors die every year because of adverse effects from drugs they are taking. These estimations add further support to the initiatives afoot to raise the awareness of older patients, caregivers and health professionals alike of the risks posed by certain drugs in older adults. Moreover, the CBC report prompted a response from Federal Health Minister, Ujjal Dosanjh, who said his department will implement changes in order to better address adverse drug reactions in this population.

Experts agree with the CBC report. Dr. Jim Wright, managing director of the Therapeutics Initiative at the University of British Columbia, is quoted by the CBC as speculating that there are likely more than 3,300 deaths per year, but that it is difficult to reliably quantify the extent of the problem. Some believe, Dr. Wright among them, that the number of deaths and adverse reactions to drugs is underreported in elders. It is felt that there is a greater likelihood of ignoring potential adverse drug effects in the elderly because ill health is often considered an inevitable consequence of aging. Moreover, some adverse reactions are likely not recognized as such. Dr. Paula Rochon of the Baycrest Centre for Geriatric Care in Toronto points out that confusion, sedation and changes in appetite can all be adverse drug reactions that are often dismissed as age-related. Thus, while underreporting is a problem, another serious problem is poor recognition of drug reactions, resulting in unnecessary health problems.

The CBC reports that although adults over 65 comprise only 13% of the population, 44% of reported deaths due to adverse drug reactions are in seniors. Health Canada data shows that older adults are large consumers of prescription drugs, accounting for 40% of the Canadian total. Indeed, people are living longer and the older we get, we tend to accumulate more complex, chronic medical conditions. The result of this is that older individuals in poor health are often prescribed multiple drugs for multiple conditions. Thus, seniors are more likely to have adverse reactions to drugs because they are given more drugs. In addition, the older body does not metabolize and get rid of drugs as efficiently as the

young body, which can result in more pronounced and longer lasting drug effects.

In light of these hard facts, the challenge for the nation is to prevent this or at least reduce the occurrence of medication-related deaths. Much thought has already gone into how to make the treatment of illness safer for older adults. For instance, many of the drugs that are cause for concern are listed on the so-called Beers list. Created in 1991 by Dr. Marc Beers – and updated in 2003 by a panel of experts – it lists drugs that can be dangerous for adults over the age of 65. Recognizing a problem and the need to act, Saskatchewan's Health Quality Council recently published a list of suggested safer alternatives for drugs on the Beers list in an effort to disseminate awareness. Indeed, the CBC reports that awareness among family physicians – who prescribe most drugs in Canada – of the Beers list appears to be low. Increased awareness will be critical for reducing these adverse drug reactions in the older population. Dr. Robyn Tamblin, a McGill University epidemiologist, indicated to the CBC that most adverse effects are associated with inappropriate prescribing. This could mean that the wrong drug, the wrong dose or the wrong combination of drugs was given.

Canada's Health Minister, Ujjal Dosanjh, has promised to protect older adults from adverse drug effects with a three-pronged strategy. It includes paying more attention to reports by physicians who believe that a particular drug is causing adverse effects in older adults, the allocation of more resources to monitor drug safety, and the possibility of creating a special seniors' unit at Health Canada to address their medical concerns. He is quoted by the CBC as saying "Health Canada as a regulator will do more".

With the risks for older adults and prescription drugs now much clearer, efforts at multiple levels of government and in the health care system should hopefully raise awareness of the Beers list of drugs that should be avoided when possible in Canada's senior population. This will hopefully result in fewer adverse reactions. Concerned readers should not stop taking any prescribed medication without discussing with their doctors. However, they should certainly ask whether their doctor is aware of the Beers list.

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## THE MCGILL INSTITUTE FOR LEARNING IN RETIREMENT: CULTIVATING INTELLECTUAL CURIOSITY IN THE GOLDEN YEARS

*(Continued from page 1)*

intellectual excitement. Nevertheless, finding an educational opportunity that meets one's needs and desires can be challenging. For many, taking on a full program at a college or university is more of a commitment or expense than is comfortable. But for those who still have the thirst to learn, the McGill Institute for Learning in Retirement (MILR) provides a perfect opportunity. It offers retired individuals a structured program to explore new fields and gives people the opportunity to share their knowledge and experience.

A division of the Faculty of Continuing Education at McGill University, the MILR specializes in peer-directed learning. Study groups constitute the core MILR experience. These groups, which consist of seven to 20 mature learners, consider diverse topics that vary from term to term. Individuals are encouraged to actively participate in the discussion and to bring knowledge to the group after performing their own investigation, which can involve McGill University's extensive library resources. Moreover, the discussion moderators are members themselves. In this way, the learning is spontaneous and peer driven, not 'homework' directed.

Different MILR study groups offer opportunities for enlightenment in the arts, social sciences and humanities, in fields as varied as art history, current events, religion and literature. For instance, recent topics have included analyses of current world crises, of painted landscapes in France, and of great literature. Without a doubt, there is something for everyone with a taste for learning and understanding.

In addition to study groups, members are invited to attend the Friday Lecture Series. Here, invited speakers present varied topics of popular and academic interest. Titles of recent lectures have included: "Jazz Heritages – The Jazz Route,"

"Anti-Semitism in Quebec and Canadian Popular Culture" and "Three Great Women Cartoonists". As is clear, an eclectic selection of Lectures is offered to meet many interests.

To participate with the MILR, one need only become a member, which is \$75 for the Fall or Winter term, and \$45 for the Spring term. Membership gives the right to attend one or two study groups in the Fall or Winter, and one study group in the shorter Spring session. Keep in mind that no one is turned away if they cannot afford the fee.

For some, the MILR is likely to motivate progression towards an organized degree or diploma program. For others, the MILR offers the opportunity to discuss diverse and intellectually stimulating topics without the hassle of a strict program. Regardless of one's motivation for participation, it is certainly great stimulation for the mind. Importantly, stimulation such as this has been shown to be an important protective factor for the onset of dementia and intellectual decline in later life – a kind of use it or lose it phenomenon.

Members are critical in the management of the MILR. Indeed, they elect a Council that manages the various committees, which together guide the activities of the MILR. Thus, not only does the MILR offer an opportunity to learn by participating in study groups and lectures, one can make important contributions to the operation of the MILR, if interested. By helping in the organization, administration and direction of the MILR, retired individuals have the opportunity to apply their lifetime of work and other experience to a worthwhile and enjoyable project.

In addition to being intellectually stimulating, the social aspects of the MILR cannot be emphasized enough. Meeting, discussing and participating in stimulating discussions and committees with one's peers

can offer great satisfaction and an enhanced social network. This, of course, can help one to live a happier life.

For more information on the MILR, please visit their website at <http://www.mcgill.ca/milr/>, call at 514-398-8234, or write to the McGill Institute for Learning in Retirement, 688 Sherbrooke Street West, Suite 229, Montreal, Quebec H3A 3R1. Tell them Geronto-McGill sent you!

## A BIO-BARCODE FOR EARLY IDENTIFICATION OF ALZHEIMER'S DISEASE? WHERE CHEMISTRY AND MEDICINE MEET

By Daniel Auld

As patients, caregivers and clinicians know, Alzheimer's disease (AD) is very difficult to treat. Part of the problem lies with the fact that it can be tough to know if someone really has AD. Basically, clinicians look for an "Alzheimer's-like" pattern of steady intellectual decline and at the same time they try to rule out other possible causes. Determining whether someone truly has AD will become more important as better therapies emerge. Drugs and other treatments that have been developed over the last 15 years or so will probably be available within the next few years. Since many of these drugs focus on a specific feature of AD that contributes to its development, the faster the therapy is delivered, the better. In fact, researchers believe that AD starts long before individuals meet the criteria for a clinical diagnosis, making any treatment delivered at that time akin to a last ditch effort.

However, the advent of new technologies may soon change this. Previous attempts to identify biomarkers in the cerebral spinal fluid of AD patients have been frustrated by inadequate sensitivity. However, a team headed by nano-chemist Chad Mirkin and AD researcher Bill Klein at Northwestern University in Illinois have

recently developed a "bio-barcode" tailored to AD. The bio-barcode detects what are called amyloid-beta diffusible ligands (ADDLs) by having them stick to gold particles. After a complex procedure to quantify the number of ADDL-gold particle complexes, the scientists successfully distinguished between AD patients and people of the same age without AD, based on the presence of ADDLs. In fact, 13 of 15 AD patients had elevated ADDLs, which makes sense in light of the fact that ADDLs are believed to be important for AD pathology. The bio-barcode process reads like it is from the pages of a Michael Crichton book: the ADDLs are selectively bound to DNA-wrapped gold particles coated with anti-ADDL antibodies, which bind ADDL. These particles are then mixed with magnetic particles that also bind ADDL with an antibody. The resulting complex is isolated by exposure to a magnet, which draws the ADLL-bound magnetic and DNA-wrapped particles. The isolated DNA, which is proportional to the amount of ADDL isolated, is then quantified as a surrogate marker for the ADDLs.

These findings need to be proven in a much larger study, but hopes are high that this and other new methods will lead to

earlier diagnosis of AD, which, when coupled with new therapies, will make this disease much more treatable.

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## **SCIENCE HERE AND NOW**

### **DR. MARIE-JEANNE KERGOAT: GERIATRIC RESEARCHER AT LARGE**

By Tania Elaine Schramek

At the *Institut universitaire de gériatrie de Montréal*, affiliated with the *Université de Montréal*, Dr. Marie-Jeanne Kergoat's research addresses many aspects of geriatric medicine. As both a researcher and a clinician, she knows exactly what is most important for her patients. Take for instance her ongoing interest in malnutrition in older hospital patients, which is unfortunately quite common. Dr. Kergoat and her colleagues studied two main factors influencing food intake among hospitalized geriatric patients, namely hunger and aversion (1). They found that positive mood and the perception of health were associated with increased hunger, whereas the perception of pain was associated with food aversion. Their conclusion was that optimal food intake, and in turn improved nutrition, might be better obtained with interventions designed to enhance mood and decrease discomfort.

In a second study, Dr. Kergoat and her group asked whether changes in emotions were associated with changes in food intake by geriatric patients (2). They found that positive mood was associated with increased food intake, anger and anxiety were associated with decreased food intake. They thus believe that monitoring geriatric patients' moods around mealtimes should enable staff to respond in a fashion that will improve eating.

In a rather different area of interest, Dr. Kergoat and her colleagues have studied the visual system in the elderly. They found that aging was associated with thinning and reduced activity of the retinal nerve fibre layer, a part of the eye important for vision (3). This

information should be helpful to establish what is normal in older individuals, and will be important for helping clinicians make accurate diagnoses of eye pathologies in this population. Thus, as a whole, Dr Kergoat's work directly impacts the quality of life of older individuals and provides invaluable information to those involved in their care. Geronto-McGill wishes Dr. Kergoat the best of success for her future research in gerontology.

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