"Publish or Perish": How to survive in the research world?
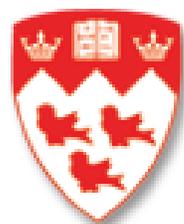

McGill Division of Geriatric Medicine
11th Annual Research Day
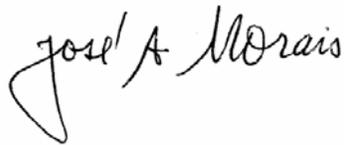# April 28th, 2006

Vendredi le 28 avril, 2006

Soyez le bienvenu à la 11è Journée de recherche de la Division de gériatrie de l'Université McGill. Nous avons assemblé pour vous ce cahier sur le déroulement de la journée contenant l'horaire des activités ainsi que les résumés des présentations orales et par affiche. Nous espérons que vous aurez une journée très agréable toute en étant instructive.

Friday, April 28th, 2006

Welcome to the 11th Annual McGill Division of Geriatric Medicine Research Day. In this program you will find a general agenda for the conference as well as abstracts relating to the podium and poster presentations. We are pleased that you were able to join us on this occasion and we hope that you walk away with an instructive experience.

José A. Morais, MD, FRCPC   Gustavo Duque, MD, PhD   David Lussier, MD, FRCPC

Remerciements :

MERCK FROSST
Découvrir toujours plus. Vivre toujours mieux.
Discovering today for a better tomorrow.

NOVARTIS

McGill Division of Geriatric Medicine ◆ Division de Gériatrie de McGill
11ᵗʰ Annual Research Day Conference 2006 ◆ 11ième Journée de Recherche 2006

"Publish or Perish : How to Survive in the Research World"

◆

"Comment publier vos résultats "

◆

Holiday Inn Montréal-Midtown
Montréal, Québec, Canada

Research Day Program ◆ Programme de la journée de recherche

8:15 - 08:30	Continental Breakfast – Welcome Petit déjeuner continental - Accueil
8:30 - 9:00	"Getting Published or How I Learned to Stop Worrying and Love Peer Review" Ken M. Flegel, MD, MSc, FRCPC, FACP Associate Editor of the Canadian Medical Association Journal Division of Internal Medicine Royal Victoria Hospital
9:00 - 9:30	"Editing a Major International Scientific Journal, Challenges and Pitfalls" Ernesto L. Schiffrin MD, PhD, FRCPC Associate Editor of the Journal Hypertension Physician-in-Chief and Chair, Department of Medicine, SMBD Jewish General Hospital
9:30 – 10 :00	Discussion Period / Table ronde
10 :00 - 11:00	Poster session • coffee & tea / Présentation des affiches • café et thé (Gouverneur I)
11:00 - 12:30	Paper session / Session de présentations orales (Senateur)
12:30 - 14:00	Lunch / Déjeuner
14:00 - 16:00	Paper session / Session de présentations orales (Senateur)
16:00- 16:15	Jury Deliberation • Coffee and refreshments / Discussions • café et thé
16 :15 – 16 :30	Award Presentations / Prix

Detailed Research Presentations Schedule ⬦ Programme détaillé des présentations

Poster Session / Session de présentation des affiches
10 :00 – 11:00
Abstracts / Résumés P1 – P24

Oral Presentations AM Session / Session des présentations orales AM
11 :00-12 :30
Abstracts / Résumés O1 – O6

11:00 – 11:15
O1–Age-related expression of Lamin A/C in cardiomyocytes: the integrity of the nuclear envelope as a new aging mechanism
Jonathan Afilalo

11:15 – 11:30
O2–Predictors of Nutritional Risk in Community Dwelling Seniors
Karen Roberts

11:30 – 11:45
O3–Contributors of fear of falling in community dwelling elderly: Are we missing orthostatic hypotension?
Claudia Tellier

11:45 – 12:00
O4– The use of Cholinesterase Inhibitors in the Long-Term Care Setting
Joyce Lee

12:00 – 12:15
O5–Inhibition of TNF alpha induced apoptotic signaling by parathyroid hormone related protein (PTHRP)
Liliane Okoumassoun

12:15 – 12:30
O6– Identification of QUAKING Protein Complex
Geneviève Lacroix

Oral Presentations PM Session / Session des présentations orales PM
Abstracts / Résumés O7 – O14

14:00 – 14 :15
O7–Insulin sensitivity level among healthy, nonobese older postmenopausal non-sarcopenic and class 1 and class 2 sarcopenic women.
Eric Goulet

14 :15 – 14 :30
O8–Aledronate has an anabolic effect on bone through the differentiation of mesenchymal stem cells
Daniel Rivas

14:30 – 14:45
O9–Socio-economic circumstances and prevalence of cognitive impairment among the elderly of seven capitals in Latin America
Beatriz Eugenia Alvarado

14:45 – 15:00
O10–The association between the muscle mass index and functional capacity in Well-Functioning Older Individuals
Danielle R. Bouchard

15:00 – 15:15
O11–Generation of super mouse: that is protected from age related osteoporosis and dietary obesity
Nazi Torabi

15:15 – 15:30
O12–Effet de l'amplitude de la perte de poids sur la masse musculaire de femmes obèses post-ménopausées
Hélène Arguin

15:30 – 15:45
O13–The discriminative validity of the McGill ingestive skills assessment
Charmine Francis

15:45 – 16:00
O14–Quaking: Tumor suppressor and Regulator of Cell Fate
Carol Anne Chénard

Poster Session / Session de présentation des affiches
10 :00 – 11 :00

P1

EVALUATION OF AN EDUCATIONAL PROGRAM ABOUT COMFORT CARE IN ADVANCED DEMENTIA: A COLLABORATIVE QUALITY IMPROVEMENT PROJECT WITH MAIMONIDES GERIATRIC CENTRE

Marcel Arcand, Johanne Monette, Michèle Monette, Howard Bergman, Nadia Sourial, Lynn Fournier, Brian Gore, Eva Jeliaskowa
Université de Sherbrooke, Family Medicine, Sherbrooke, Quebec, Canada

End-of-life care represents an important task for clinicians working in Nursing Homes since about 30% of residents die each year. The large majority of these deaths occur in the context of advanced dementia. Lately, end-of-life care in Nursing Homes has raised concerns in the scientific literature especially when compared to hospices. Poor staffing and inadequate physician presence have been cited as persistent problems and the latter linked to inappropriately high rates of hospitalization, problems in communication and decision-making, inadequate symptom management, and general dissatisfaction of family members. In order to address the information needs of the family and to facilitate the healthcare team's task, Marcel Arcand and Chantal Caron have recently published a booklet entitled "Comfort Care at the end of life for persons with Alzheimer's disease or other degenerative diseases of the brain, a guide for caregivers". This booklet tries to answer most questions frequently asked by families about clinical issues, decision making process and symptom management of end of life in dementia. In 2006, Maimonides Geriatric Centre in collaboration with Dr Arcand is carrying out a quality improvement project on end-of-life care. The project is essentially an educational program which would foster use of the booklet in appropriate circumstances after training of doctors and nursing staff about its content, and the proper way to use it. Since assessment of satisfaction of families with end-of life care is presently the best indicator of quality of care at the end of life in Nursing Home, we will interview close relatives of patients who died at

MGC in 2005, before the educational program, and compare their level of satisfaction to relatives of patients who died in 2006, after the implementation of the educational program. The assessment of satisfaction will be done with a validated instrument ("After-death bereaved family member interview / Nursing Home version"). This instrument assesses 7 domains of care and looks for areas in need of improvement.

P2

A CENSUS OF CANCER PHYSICIANS IN QUEBEC: CLINICAL EXPERIENCE WITH ELDERLY PATIENTS

Doreen Wan-Chow-Wah, Frédérique Retornaz, Johanne Monette, Michèle Monette, Nadia Sourial, Gerald Batist, Howard Bergman
McGill Division of Geriatric Medicine and Oncology, and Solidage Research Group, Lady Davis Institute, SMBD Jewish General Hospital, Montreal.

INTRODUCTION**:** The increasing cancer burden constitutes a major public health issue. Canadian estimates for 2005 reveal that 64 900 new cases (44%) and 41 500 cancer deaths (60%) occur in patients aged 70 years or older. Evidence from the literature suggests that there are age-related disparities in the provision of cancer care which may be partially explained by: ageist attitudes within the health care system, misconceptions regarding elderly patients' desire to be treated and ability to withstand cancer treatments, and lack of evidence-based guidelines to treat this population. The objective of this study is to evaluate attitudes and practice patterns of medical oncologists and hematologists caring for older cancer patients in the province of Québec. Methods The study will be a cross-sectional descriptive survey. Participants will be recruited based on the Collège des médecins du Québec 2005-2006 medical directory. The questionnaire will be pilot tested amongst a few physicians. A cover letter, consent form, and self-administered questionnaire will be mailed to the physicians. Data such as gender, year of graduation, specialty certification, type of practice and proportion of patients 70 years and older in their practice will be collected. Factors involved in clinical decision-making when managing older patients will be explored. For example, physicians will be asked to identify factors considered important when evaluating a patient's suitability to receive chemotherapy and to outline factors that seem to correlate with poor

outcomes post-chemotherapy. Questions on assessment measures used and issues surrounding patient enrolment in clinical trials will also be asked. Conclusion Findings from this study will serve as a background for future studies aimed at developing strategies to improve cancer care of elderly patients.

P3

CHARACTERIZATION OF THE HEALTH AND FUNCTIONAL STATUS OF CANCER PATIENTS, AGED 70 YEARS AND OLDER, REFERRED TO ONCOLOGY CLINIC FOR CHEMOTHERAPY

Frédérique Retornaz, Johanne Monette, Michèle Monette, Nadia Sourial, Doreen Wan-Chow-Wah, Gerald Batist, Howard Bergman
Lady Davis Institute, McGill University

Introduction: Both the incidence and mortality rate of cancer increase with age. The manifestations and course of cancer in older patients are still poorly understood. The selection of the most appropriate treatment is strongly conditioned by older patient's characteristics that are relatively independent of the nature, severity, and extent of the cancer. Previous studies have suggested that older patients referred to oncology have a lower prevalence of comorbidity and are more functionally independent than the general senior population. For the old and very old who appear to be healthy, physically active and cognitively intact, data on their susceptibility to stress and the amount of unused functional reserve need to be ascertained. This study will investigate a large spectrum of domains and use more sensitive instruments to describe the health and functional status in this population. Methods: The principal objective of this descriptive, cross-sectional study is to characterize the health and functional status of cancer patients, who are aged 70 years and older, with a diagnosis of solid tumor with or without metastasis (breast, colorectal, pancreatic, gastroesophageal, lung cancers) or hematological malignancies (lymphoma, leukemia, myeloma), who have been referred to oncology for chemotherapy. The second objective is to estimate the proportion of patients in each of the following categories: healthy, independent with chronic diseases, frail (vulnerable) and disabled in terms of activities of daily living. Demographic and oncologic data will be collected. Fourteen domains will be evaluated: functional status, comorbidities, medication, nutrition, pain, neurosensory deficit, cognition,

mood, mobility, strength, endurance/energy, physical activity, quality of life and social support. Conclusion A better characterization of the susceptibility to the stress of chemotherapy will eventually help oncologists decide on the most appropriate type and level of chemotherapy treatment and prevent adverse outcomes.

P4

THE EFFECTS OF AGING ON LEPTIN AND ITS RELATIONSHIP TO FAT DEPOTS DEFINED BY MAGNETIC RESONANCE IMAGING (MRI)

José A. Morais, Lily Shakibnia, Réjeanne Gougeon
Division of Geriatric Medicine and McGill Nutrition and Food Science Centre, McGill University

INTRODUCTION: Plasma leptin levels are related to total and subcutaneous body fat depots, energy balance and greater in women. Aging is associated with increased body fat, changes in fat distribution and reduced dietary intake. We investigated whether these changes affect leptin levels. METHODS: 68 healthy subjects: 18 elderly women (EW; 71 ± 5 y, 57 ± 9 kg), 16 elderly men (EM; 71 ± 5 y, 74 ± 10 kg), 15 young women (YW; 26 ± 5 y, 56 ± 7 kg) and 19 young men (YM; 28 ± 4 y, 67 ± 7 kg) were admitted for 5-7 days for metabolic studies on a weight maintaining diet. Fasting blood was drawn for leptin, substrate and hormone determinations and body composition was measured. 24 of these subjects (8 EW, 4 EM, 6 YW, 6 YM) underwent whole-body MRI with analysis of tissues done by TomovisionTM software. RESULTS: (EW vs. EM vs. YW vs. YM, Effects): Leptin: 13 ± 7 vs. 4 ± 3 vs. 11 ± 7 vs. 2 ± 2 ng/L, Aging: NS, Sex: $p<0.001$; BMI: 23 ± 3 vs. 25 ± 2 vs. 21 ± 1 vs. 22 ± 2 kg/m², Aging: $p<0.001$, Sex: NS; Body Fat: 37 ± 6 vs. 28 ± 5 vs. 23 ± 5 vs. 14 ± 4 %, Aging: $p<0.001$, Sex $p<0.001$; Leptin adjusted for %BF: 6 ± 7 vs. 3 ± 5 vs. 13 ± 5 vs. 9 ± 7ng/L, Aging: $p=0.003$, Sex: $p=0.015$, HOMA score: 2.0 ± 0.5 vs. 3.0 ± 1 vs. 1.8 ± 0.4 vs. 1.9 ± 0.6, Aging: $p=0.001$, Sex: $p=0.001$. MRI volumes in L: Lean tissue: 25 ± 9 vs. 33 ± 11 vs. 26 ± 12 vs. 37 ± 15 L, Aging: NS, Sex: NS; Adipose Tissue (AT): 27 ± 8 vs. 23 ± 4 vs. 16 ± 3 vs. 15 ± 5 L, Aging: $p=0.001$, Sex: $p=0.001$; Visceral AT: 2 ± 1 vs. 4 ± 2 vs. 0.3 ± 0.2 vs. 1 ± 1 L, Aging: $p<0.001$, Sex: $p=0.001$; Subcutaneous AT (SAT): 22 ± 6 vs. 15 ± 2 vs. 13 ± 3 vs. 12 ± 4 L, Aging: $p=0.004$, Sex: $p=0.03$. In stepwise regression analysis, SAT, muscle and arm SAT volumes were retained and explained

81% of the variation in leptin levels (p=0.001). CONCLUSION: Leptin levels adjusted for body fat were lower in the elderly, possibly a result of their insulin resistance that could explain why the concentrations did not differ from the young despite their increased adiposity. By contrast the sex dimorphism of leptin was maintained with aging.

P5
TEACHING EVIDENCE BASED GERIATRICS WITHOUT BEING EVIDENCE BOUND : A SMALL GROUP TEACHING EXPERIENCE

Joyce Lee, MD, Pharm1., Manuel Montero-Odasso MD, PhD1, Gustavo Duque MD, PhD1,2,
Division of Geriatric Medicine 1 and Centre for Medical Education2 McGill University, Montreal, Canada.

Purpose: There is a lack of evidence about how to teach evidence based geriatrics to medical students and residents. Although journal clubs are the most commonly used method their effectiveness is very limited due to the lack of interaction among the participants and between the participants and the reading material. In this study, our primary objective was to evaluate a one hour Evidence-Based Geriatric (EBG) session with medical students and residents. A secondary objective was to evaluate the level of change in the participants' future therapeutic conducts with a potential impact in their further practice. Methods: We developed one hour small group teaching session with medical students and residents during their monthly rotation in Geriatric Medicine. A selected article was given in advance as well a blank form to be completed before the session. Additionally, written information about how to evaluate medical evidence was also included in their packages. Sessions were tutored by a Geriatrician. Participants were then surveyed at the end of the session assessing their global impressions as well as their potential change in practice. Results: 66 trainees (students and residents) attended the sessions between January 2003 and October 2005. Sixty six (66) participants attended the sessions with an average of 5 participants per session. Fifty-three (57) participants completed the EBG Feedback Questionnaire. The response rate was 85%. Eighty-nine (89) percent of the respondents were third year clerks and 11% were residents or fellows. Ninety percent (90) of the participants somewhat or strongly agreed that the

sessions were useful. Eighty-nine percent considered the selected articles as useful for their learning. Interestingly, there was not a significant difference between the number of students (47%) and residents (53%) that agreed with changing their practice after this session. General comments referred to the helpfulness of the session, declaring it a "very good refresher" about the learning of evidence-based medicine in general and EBG in particular. . Conclusions: This experience of teaching EBG showed a high level of acceptance among medical trainees. Additionally, the use of interactive materials was widely accepted and recognized by the participants. In summary, small group EBG sessions may be a useful tool to introduce EBG teaching at both undergraduate and postgraduate levels.

P6
RESTRICTION D'ACTIVITÉS EN RAISON DE LA PEUR DE TOMBER CHEZ LES PERSONNES ÂGÉES DE LA RÉGION CAFÉIÈRE COLOMBIENNE

Curcio CL, Gómez JF
*Universit*é *de Sherbrooke*

Introduction: Bien qu'il soit connu que la peur de tomber peut être à l'origine de conséquences physiques, psychiques et sociales, et que cette peur va conduire la personne âgée à réduire ses activités et à limiter progressivement ses capacités fonctionnelles, peu de travaux se sont intéressés à la restriction d'activités dérivée de la peur de tomber. Méthode: Dans cette étude descriptive et transversale, l'échantillon est composé de 1900 personnes âgées de 60 ans et plus, vivant à domicile dans la région caféière colombienne. Les données furent recueillies par entrevue individuelle. Pour être incluses dans l'étude, les personnes devaient présenter un fonctionnement cognitif et une autonomie suffisante pour subir les tests. Nos données couvrent des aspects: démographiques, fonctionnels, psychologiques, de santé et de participation sociale. Résultats: Nos répondants sont majoritairement des femmes (52.5%) ayant un âge moyen de 70.9 ans (ET 7.4). La peur de tomber est rapportée par 83.5% d'entre eux. 52% des aînés ayant peur de tomber mentionnent une restriction d'activités reliée à cette peur. Une analyse bivariée permet d'identifier plusieurs facteurs significativement associés à cette restriction. Le modèle de régression logistique montre que le fait de ne pas être autonome pour le transfert d'une chaise au lit (OR 4.84), la

dépression (OR 3.16) et les troubles de vision (OR 1.63) prédisent la restriction d'activités reliée à la peur de tomber. Discussion: Il est difficile de savoir si la peur de tomber est la conséquence de ne pas être autonome pour le transfert ou d'une fragilité préexistante. Puisque le terme « peur de tomber » implique un phénomène affectif, il n'est pas surprenant que la dépression soit un facteur prédictif. Ou encore, la dépression n'est-elle pas une conséquence de la restriction d'activités, de la dépendance ou de l'isolement social qu'elle produit ? Conclusion: Les résultats ne permettent pas de dire si c'est la restriction d'activités qui entraîne les symptômes de dépression et les altérations de mobilité ou si c'est l'inverse qui se produit. Le fait d'avoir pu identifier trois facteurs prédictifs de la restriction d'activités reliée à la peur de tomber ouvre de nombreuses pistes de recherche et d'intervention. 1 Étudiante Doctorat en Gérontologie. Centre de Recherche sur le Vieillissement. Université de Sherbrooke. Sherbrooke. Québec. Canada. 2 Professeur(e) Faculté des Sciences de la Santé. Université de Caldas. Colombie ANALISIS DE VARIANZA ANOVA Fisher's least significant difference (LSD).

P7
A CAST OF « CROSSED » SEMANTIC DEMENTIA WITH EVIDENCE FROM VBM AND SPECT

Anh Duong (1) , John Chen (2) , Christian Bocti (3) , Nora Kelner (3), & Howard Chertkow (1,3)
(1) Bloomfield Centre for Research in Aging, Lady Davis Institute for Medical Research, Department of Neurology and Neurosurgery, McGill University (2) McConnell Brain Imaging Center, Montreal Neurological Institute, McGill University (3) Jewish General Hospital/McGill University Memory Clinic, Sir Mortimer B. Davis Jewish General Hospital.

We describe a case of crossed semantic dementia (SD) using clinical, neuropsychological and neuroimaging methods. The patient is a previously well, right-handed, 67 year-old woman who was assessed for a 3-year history of progressive word-finding difficulty. She was living independently, recently retired from a bookkeeping position because of her cognitive symptoms. There was no suggestion of episodic memory impairment or disorientation to time and place. Elemental neurological examination was unremarkable. Cognitive assessment revealed anomia and semantic paraphasias with fluent and well structured conversational speech. There was

marked anomia on confrontational naming tasks for both living and non-living exemplars. There was also marked single-word comprehension deficits with verbal input, with preserved comprehension of grammatically complex sentences. Orientation and day-to-day autobiographical memory were preserved. Delayed recall was impaired for auditory verbal memory and for visual memory. Non-verbal reasoning as assessed with the matrices from the WAIS-III was high average, and visual reproduction was superior. A voxel based morphometry (VBM) analysis revealed atrophy restricted to the right anterior temporal area, the right temporal pole, and the right insula. A SPECT scan showed unilateral hypoperfusion limited to the right anterior temporal lobe and orbitofrontal regions. Although bilateral involvement of the anterior temporal lobe has been reported in SD, unilateral right anterior temporal atrophy constitutes the first reported case of "crossed" semantic dementia to the authors' knowledge.

P8
DOES GETTING UP LATE CAUSE CANCER FATIGUE?

Henry Olders, psychiatrist
Ste. Anne's Hospital.

Introduction: Fatigue is the most common cancer symptom. Fatigue is often the most distressing symptom. Closely linked: fatigue and insomnia, fatigue and depression. Goal of study: examine connections between sleep patterns, fatigue, and depression. Method: Convenience sample of cancer outpatients. Self-response questionnaire about: sleep habits; insomnia; attitudes about sleep; fatigue; depression; cancer type; current treatment; psychotropic medication. Results 125 useable questionnaires returned, higher fatigue in patients getting cancer treatment. High fatigue group vs low fatigue group: younger, more depressed, more insomnia, used sleeping pills more, spent more time in bed after 6 am, endorsed more: "Sometimes it's necessary to miss work or school because of lack of sleep or really poor sleep".Discussion: Hypothesis: fatigue and other depressive symptoms are adaptive mechanisms to promote healing after injury. Putative mechanism: 1. Injury causes inflammation 2. Inflammatory cytokines promote sleep 3. More REM sleep causes fatigue and other depressive symptoms. Excessive REM sleep can cause fatigue even in

the absence of injury and inflammation. Getting up later increases REM sleep much more than simply sleeping longer. Cancer patients may sleep longer because of increased opportunity, as a defence against psychological pain, or as a result of inflammation caused by cancer or by cancer treatment.

P9
USE IT OR LOSE IT: THE EFFECTS OF CESSATION OF EXERCISE ON PHYSICAL AND PSYCHOSOCIAL FACTORS IN AN ELDERLY INSITUTIONALIZED POPULATION

Sarah C. Marshall, pht, Physiotherapist
Ste. Anne's Hospital

Objective**:** To measure the effects of a 12 week on-off exercise program on physical and psychosocial well-being in elderly institutionalized men and women (Canadian Veterans of World War II and the Korean Conflict). Participants**:** Thirty participants in a scheduled, physiotherapy-led exercise program. Method**:** Prospective case-study using A-B-A-B behavioural design. Each participant was measured on 1) physical performance using standardized tests, and 2) psychosocial performance using individualized measures from the Minimum Data Set (MDS) at baseline, at completion of training (12 weeks), at the end of a detraining period (12 weeks), and completion of retraining (12 weeks). Results: The associations were the strongest within physical performance measures and between physical performance measures and mood indicators. Conclusions: These findings support the need to modify common practices in exercise programming for older, institutionalized people to increase alignment with recommended best practices based on research with other populations of older adults.

P10
EVALUATION OF SATISFACTION WITHIN DYSPHAGIC AND NON DYSPHAGIC POPULATIONS AT STE. ANNE'S HOSPITAL

I. Germain, J. Gadoury, C. Marin
Ste. Anne's Hospital

Purpose: Following recommendations of the Canadian Council on Health Services Accreditation (CCHSA), several quality insurance indicators were developed at Ste-Anne's Hospital Dietary Services (SAH,

Veterans Affairs Canada). Evaluation of clientele satisfaction is a valuable one. Furthermore, in anticipation of the renovation and construction of new wards and changes in the food distribution system and working techniques, documentation of the level of satisfaction of the clientele was required. Method: In total, 104 questionnaires were completed (Psychiatric and medical wards: n_{PM}=91; Psycho-geriatric wards: n_{PG}=13; Dysphagic: n=36). The surveys included questions on overall satisfaction regarding the food and services offered, hours of delivery, food selection, portion sizes and presentation, and questions detailing the temperature and taste of foods, the courtesy and accessibility to the dietary information and personnel. Information on environment, noise, help at mealtime and cleanliness was gathered. Results: As SAH offers an extensive Dysphagia Program, the results obtained were compiled to provide a more detailed evaluation of the satisfaction of the dysphagic versus non dysphagic populations. The overall satisfaction rate (Mean ± SD) within the PM group was of 73,1 ± 11,5% whereas it was of 74,9 ± 14,5% for the PG group. Food satisfaction received an average level of 77,8 ± 26,9% in the dysphagic population whereas the non dysphagic population rated food at a satisfaction level of 71,0 ± 27,2%. The overall quality of the service, very similar in both groups, received a level of satisfaction of 80,1 ± 22,9%. Recommendations & Conclusions: The positive results obtained for the dysphagic population are encouraging given the effort provided to maintain the appearance and flavour of the modified textured foods at SAH. A second study will be necessary to compare the satisfaction levels when the investments are completed.

P11
THE EVALUATION OF THE NUTRITIONAL OUTCOME OF SAINTE-ANNE'S HOSPITAL ADVANCED NUTRITIONAL CARE FOR THE TREATMENT OF DYSPHAGIA IN THE INSTITUTIONALIZED ELDERLY

I. Germain, K. Gray-Donald, T Dufresne et al.
Hôpital Sainte-Anne et Université McGill, Montreal, Quebec

Objectives : Dysphagia affects 35% to 60% of the institutionalized elderly population. The objectives of this study were to evaluate the nutritional intake of frail institutionalized dysphagic elderly and to assess the impact

Sainte-Anne's Hospital (SAH) Advanced Nutritional Care on their nutritional status and their weight. Method : 93 individuals aged of at least 65 y.o. of a Montreal long-term care facility were eligible for this 12-week randomized clinical trial if they were frail and dysphagic (BMI<24 or weight loss > 7,5% within 3 months). Seventeen subjects were selected. The treated group (n_t = 8 ; 82,5 ± 4,41 y.o.; Weight : 55,9 ± 12,1 kg; BMI : 21,2 ± 2,31 kg/m^2) received SAH reshaped minced or puréed texture foods accompanied, when required, of thickened beverages SAH. The control group (n_c = 9 : 84,6 ± 3,81 y.o.; Weight : 54,3 ± 7,49 kg; BMI : 22,4 ± 3,93 kg/m^2) maintain the traditional nourishment. Results : The augmentation of 3,9 ± 2,3 kg of the average weight and the 1,63 ± 1,01 kg/m^2 of the average body mass index for the treated group was superior to the changes observed in the control group (Weight : -0,79 ± 4,18 kg; BMI : -0,27 ± 1,46 kg/m^2) (p<0.05). The increase in energy, proteins, lipids, calcium and vitamin D of the treated group was significantly more important (p<0,05). Conclusion : These results suggest that frail dysphagic elderly could reach a healthy weight via a diversified, modified in texture, appealing oral diet that meets their nutritional needs.

P12
EVALUATION OF NURSES' LEARNING NEEDS, VALUES AND BELIEFS REGARDING PAIN MANAGEMENT OF THE ELDERLY

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Ste. Anne's Hospital, Université de Montreal

Pain management in the elderly is a commonly neglected phenomenon. Factors identified as obstacles to adequate pain management by caregivers were : lack of knowledge, false beliefs, personal and professional experiences and nursing unit culture. The purpose of this exploratory and descriptive study is to evaluate nurses' learning needs, values and beliefs regarding pain management of the elderly in order to develop a customized training program. The study took place in a Veterans' hospital. We use focus groups to interview 8 groups of nurses with varied experience and educational background (31/45) and one group of doctors (6/10). Subjects were selected randomly in the hospital. Subjects were asked 10 open-ended questions related to their values (2), beliefs (4) and learning needs (4) regarding pain management. Subjects were also asked to answer two questionnaires : Pain Management Questions (PMQ), McCaffrey & Passero (1999), Pain Beleifs Questionnaire (PBQ), Edwards (1992). Content of interviews were transcribed to verbatims and analysed with the N'VIVO and PMQ-PBQ with SAS softwares. The results showed a strong need for nurses to acquire new knowledge on pharmacological issues such as : use of narcotics, use of PRN and analgesics prescribed to the elderly. Results are corroborated by the global score of the PMQ which shows poor knowledge of nurses on pharmacology (mean : 9,3/20, SD : 1,7). Learning needs identified are corroborated by the misbeliefs reported by nurses regarding the same issues and their fear of giving the last dose of narcotic, of precipitating death and disbelief of patient's evocation of pain. Nurses reported sound values like caring for comfort, quality of life and respect of patients' wishes. Analyses also revealed that these values seemed to be challenged in daily practice.

P13
LAMIN A/C ACTIVATION PLAYS A ROLE IN THE PATHOGENESIS OF BONE MARROW ADIPOGENESIS IN AGING BONE

Gustavo Duque, MD, PhD, Daniel Rivas, MsSc
Division of Geriatric Medicine, McGill University, Lady Davis Institute for Medical Research, Jewish General Hospital, Montreal, Canada.

In recent years, mutations in nuclear-envelope proteins (mostly lamin A/C) have been associated with lipodystrophies and accelerated aging. Lipodystrophies are a heterogeneous group of human disorders characterized by the anomalous distribution of body fat to non-adipose tissues. Since bone marrow infiltration by fat is one of the mechanisms of senile osteoporosis, we are interested in the role that lamin A/C activation may play in the induction and/or regulation of bone marrow adipogenesis. Hypothesis: Lamin A/C activation is required for the adipogenic differentiation of mesenchymal stem cells (MSC). Methods: Human MSC (Poietics) were plated and induced to differentiate into adipocytes after three weeks of exposure to specific differentiation induction media. Cells were treated with M) or vehicle alone.μeither an inhibitor of lamin A/C activation (FTI-277 5,10 Non-differentiating MSC were used as a control. Nuclear extracts were obtained after timed periods (week 1, 2 and

3) in FTI-277-treated vs. non-treated cells. Expression of prelamin A and lamin A/C were determined by western blot. Adipogenesis was identified and quantified by Oil-red O staining. Nuclear changes were identified by Hoechst stain. Finally, cell proliferation (MTS) and survival (trypan blue) were quantified in treated and non-treated cells. Lamin B1 was used as control. Results: There was a significant and dose dependant inhibition of lamin A/C activation in FTI-277 treated cells (p<0.001). Additionally, adipogenesis was affected by treatment with FTI-277 as demonstrated by a lower number of differentiated adipocytes in treated (32% ± 5 SD) vs non-treated (85% ± 6 SD) cells (p<0.001). A significant higher number of nuclear changes (blebbing and vacuolization) in treated cells was found (p<0.01). Finally, no differences in cell survival, proliferation or lamin B1 expression were found. Conclusion: Lamin A/C activation is required for the normal adipogenic differentiation of MSC. This evidence suggests that the regulation of bone marrow adipogenesis through the lamin A/C pathway may provide a new therapeutic approach for the treatment of senile osteoporosis.

P14
USE OF ENERGY SUBSTRATES DURING HEALTHY AGING
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Introduction: It is now recognized that with aging there is a decline in the body's ability to use glucose, the energy substrate derived from carbohydrates. Evidence shows that this decline extends to the brain and may contribute to a reduction in cognitive function. What is not known is at what age this decline in energy metabolism occurs, and whether it extends to ketone bodies, a form of energy derived from fatty acids. This project aims to evaluate the differences in how the body uses glucose and ketone bodies during healthy aging. The intention is to provide a basis for future studies to elucidate the contribution of energy substrate use to pathological states and to determe if alternate energy sources, such as those from fatty acids, may alleviate some symptoms of aging, including declining cognitive function. Objective: To compare the metabolism of two energy substrates, glucose and ketone bodies, between healthy subjects of 3 age groups.

Methods: Subjects were selected using standard blood screening and an interview with a nurse, to determine their health status. 30 subjects were recruited into 3 age groups (18-25, 40-55 and 70+). Using Carbon-13 stable isotope tracers for the two energy substrates, subjects were given a specially formulated meal and were evaluated over a 6 hour period; taking breath samples every half hour and blood samples every hour. The energy metabolism profiles obtained from the isotopic tracer were analysed by isotope ratio mass spectrometry, and will be further substantiated by measuring related analytes in blood and breath. Results: Results indicate no difference in the energy metabolism profiles with age. Cumulative 13C-glucose oxidation, over 24 hours, was 40.6±0.8, 28.2±0.7, and 38.7±1.1 % for young, middle aged and elderly subjects respectively. Cumulative 13C-ketone body oxidation, over 24 hours, was 35.4±0.9, 42.4±1.7, and 37.6±1.1 % for young, middle aged and elderly subjects respectively. Over a 6 hour period, there was a significant decrease in blood glucose concentrations (slope= -0.105, p=0.0002), a significant increase in blood ketone body concentrations (slope= +0.132, p<0.0001) and a significant increase in breath acetone concentrations (slope =12.32, p<0.0001) for all subjects, however no significant difference was seen with age. Conclusion: These results indicate that there is no significant impact of aging alone on energy metabolism or the bodies' ability to use either glucose or ketones as energy substrates in a healthy state. Funding for this study was provided by the Natural Sciences and Engineering Research Council of Canada, Canada Research Chairs, and the Centre for Research into Aging.

P15
TELOMERASE'S ROLE IN TUMORIGENESIS
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In the elderly, cancer incidence and mortality increases dramatically with age. Many of the anticancer agents used to treat these patients target malignant cells based on features that are also present in normal cells, causing severe side effects. Telomerase, the holoenzyme that maintains the ends of linear eukaryotic chromosomes, has emerged as a promising target for the treatment of cancers because it is expressed in over 85% of human neoplasms, but

not in adjacent normal tissues. When expressed, telomerase adds hexanucleotide repeats (T2AG3) to the ends of chromosomes to counteract the loss of DNA that occurs during each round of replication. In the absence of a telomere maintenance mechanism, telomeres progressively shorten and reach a critical length at which growth arrest or cell death is triggered. In fact, several drugs have been developed to inhibit telomerase activity, but their clinical use is limited due to the lag time required for telomere shortening to occur before growth inhibition is observed. Recently, however, several studies have suggested that telomerase may contribute to tumorigenesis via an additional mechanism that is independent of its role in telomere lengthening. Elucidating the mechanism by which telomerase exerts this role may pinpoint targets for novel anticancer therapeutics selective for cancer cells. To initialize this investigation we will determine which region(s) of telomerase are required for this effect. To do this, we will take advantage of well defined cell lines that do not express telomerase but are able to maintain their telomeres via another mechanism: ALT (alternative lengthening of telomeres). It has been previously established that ALT cells require both oncogenic Ras and telomerase to form tumours in nude mice. We plan to stably express different regions of the telomerase enzyme in ALT cells with activated Ras and assay for the ability of these cells to form tumours. We hypothesize that ALT cell lines containing oncogenic Ras and expressing region(s) of telomerase responsible for tumorigenicity will form tumours, while cells expressing regions of telomerase not required for this non-classical telomerase function will not. Such regions will be identified by their ability to induce colony formation in an in vitro agarose assay as well as their ability to induce tumours in vivo in a mouse model.

P16
TECHNOLOGIES HOLD PROMISING BENEFITS TO SUPPORT AND CARE FOR OLDER ADULTS AT HOME
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Technologies hold promising benefits to support and care for older adults at home; however attitudes are for some still a hindrance in the acceptance and use of new technologies. Attitudes are a critical component of usability.

With the implementation of home telecare trials for the elderly, attitudes toward preventive and health care technologies must be explored as they may influence usage behaviour. Hence, the purpose of this study was to explore the attitudes of community-dwelling elderly people with depression using videophones. A qualitative pretest-posttest design was used. Subjects received six weekly problem-solving therapy sessions via videophones from a trained clinical psychologist. Data analysis from semi-structured interviews with five participants revealed that their pre-attitudes toward videophones were dependent on their Active or Passive role in the learning process toward new technology. Their post-attitudes were classified in two groups: Ambivalent and Positive, with the two participants having a positive attitude toward the videophone expressing a positive behaviour use. The technical barriers seemed to have influenced the post-attitudes of those older adults with ambivalence towards videophones as they saw no health benefits for themselves. As the main aim of healthcare technology is to improve elderly people's quality of life, knowledge of their attitudes toward videophones is crucial for mutual understanding between technicians and social scientists, which in turn has direct impact on the innovation of technology produced to deliver tailored home telecare interventions for the elderly.

P17
EVALUATING THE TTAG PROJECT: THREE YEARS OF LONGITUDINAL EXPOSURE TO GERIATRIC MEDICINE AT MCGILL UNIVERSITY
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Introduction: Although there is consensus about the importance of including the teaching of aging and geriatrics in the curriculum, the most effective ways to implement this is unclear. At McGill University several changes in the curriculum involving Aging and Geriatric Medicine have occurred including the implementation of the Trans-curricular Teaching of Aging and Geriatrics (TTAG) project was designed to provide medical students with a progressive exposure to the areas of aging and

geriatrics throughout their four years of medical school. Methods: The project includes an introductory lecture for first year medical students. These lectures consist of one-hour sessions complemented by web-based self-study modules. For second year medical students were exposed to two lectures followed by a web-based interactive case construct and hospital forms. Finally, the third year includes a mandatory clerkship rotation complemented with self-learning modules and evaluation by an electronic portfolio. Students progress in knowledge and change in attitudes were measured as well as their perceptions about the program. Groups with different levels of exposure were compared. Results and conclusion: In the group with a longitudinal exposure to all the elements of the TTAG project a more significant advance in knowledge and a change in attitudes was obtained. A higher number of students expressed interest in Geriatric Medicine as career choice in this group. In summary, using a system of progressive building of knowledge, effective use of technology, and effective feedback we improved students' knowledge and attitudes toward Aging and Geriatric Medicine. We expect that this type of exposure will prepare them for a more successful experience during their medical practice with the growing older population.

P18
MENTAL INCAPACITY AND PARTICIPATION IN THE CANADIAN LONGITUDINAL STUDY ON AGING

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The Canadian Longitudinal Study on Health and Aging (CLSA) is a longitudinal observational study (LOR) whose purpose is to better understand the aging process and find ways to encourage successful aging. A group of 50,000 Canadians, over the age of 40, will be followed for a period of at least 20 years. Although the CLSA involves LOR, and not treatment or experimentation, participants in most types of human research, according to Canadian law, must provide voluntary informed consent (IC). The CLSA will face particular challenges in ensuring that participants, from mid life to old age, provide ongoing IC for a period of at least twenty years. Some may lose their mental capacity to provide ongoing IC due to conditions or diseases, such as dementia whose incidence increases with age. This inability to provide ongoing IC raises important questions: 1) Will researchers be able to retain participants? 2) What are the risks of participation? 3) Will researchers be permitted to continue to use data that they have already collected? 4) Can they use data and/or stored samples for purposes that were unforeseen at the time participants provided IC? 5) Can substitute decision-makers be appointed? and 6) Who will they be, and what will be their roles and responsibilities? The proposed study is designed to obtain an in-depth understanding about Canadians' attitudes on these questions. The overarching question that will guide the research is: How do potential CLSA participants perceive ongoing IC if mental incapacity develops in LOR? A qualitative approach, using focus groups and interviews, is best suited for the purposes of this research. Interpretive strategies will encompass categorization (constant comparative method), and contextualization. It is anticipated that the results of this proposed study will help researchers highlight barriers and identify solutions to lower attrition rates and preserve data. It will help them avoid skewed and likely misleading results, affording Canadians much needed and beneficial information about the aging process. The information will also be used to promote better medical research and develop responsive social and health policies. This study engages Canadians early in the protocol development of the CLSA. As a result, it is anticipated that confusion about important ethical issues will be diffused and confidence and trust in the CLSA will be enhanced.

P19
IS UNMET NEED ASSOCIATED WITH THE DEVELOPMENT OF PSYCHOLOGICAL DISTRESS IN THE COMMUNITY DWELLING ELDERLY?

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OBJECTIVE: As people age, they are increasingly likely to develop health problems that can lead to an impaired ability to perform essential activities of daily living. This decrease

in functional ability may result in an increased need for physical assistance that, in turn, may not be met. Unmet need is associated with falls and increased use of health care services. A potentially important consequence of unmet need that has not yet been investigated is psychological distress. Exploring this relationship will help to identify psychological consequences of living with unmet needs and give insight into factors that exacerbate or alleviate psychological distress in the presence of unmet need. METHODS: We conducted a secondary analysis of the Montréal Unmet Needs Study database, a longitudinal prospective study of 839 non-institutionalized seniors living in Montréal. Data were collected through 2 annual in-person interviews with seniors aged 75+ who had no more than mild cognitive impairment. Subjects with no or low psychological distress at baseline were identified (n = 457) and within this sub-cohort, two analyses were conducted investigating (i) the effect of unmet need at the baseline interview and the development of elevated psychological distress 1 year later; and (ii) the association between change in unmet need between baseline and 12 months and the development of elevated psychological distress at the 12 month interview. Multiple linear regressions were used to analyze the relationship of these variables to the continuous dependent variable, psychological distress. PRELIMINARY RESULTS: The presence of unmet need at the baseline interview did not predict the development of elevated psychological distress 1 year later, whereas change in unmet need did. Compared to seniors with no unmet need at both the baseline and 12 month interviews, seniors who developed unmet need in the year between the baseline and 12 month interview were more likely to have elevated psychological distress scores (β=1.83, p=0.01) while those with persistent unmet need (i.e. present at both the baseline and 12 month interviews) were likely to have even higher psychological distress scores (β=2.38, p = 0.01). Other factors associated with elevated psychological distress include baseline psychological distress scores, female sex, older age and poorer psychological mastery. CONCLUSIONS: Psychological distress is a negative consequence of unmet need and the degree of distress increases the longer a person has been living with unmet need.

P20
FRAILTY DATA (FRDATA): EXAMINING CANDIDATE DOMAINS OF FRAILTY IN THE ELDERLY

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PURPOSE: Several definitions of frailty have been proposed in the literature yet a lack of consensus still remains. The absence of a generally accepted definition has resulted in inconsistency in the reported prevalence, risk factors and outcomes of frailty and a limited understanding of the potential for prevention and management. The purpose of FrData is to select candidate components of frailty through a systematic approach and to explore how they cluster and predict adverse outcomes using existing databases from longitudinal studies of elderly populations. METHODS: The systematic approach utilized to select the domains consisted of 1) generating an inclusive list of potential components of frailty through an extensive review of the literature and 2) grouping the components into domains based on expert opinion. Multiple Correspondence Analysis (MCA) was used to examine the relationships between these domains in 3 Canadian databases of elderly populations: Services Intégrés pour Personnes Âgées, the Montreal Unmet Needs Study, and the Canadian Study on Health and Aging. Results: Seven candidate domains of frailty were retained: Nutrition, Physical Activity, Mobility, Strength, Endurance/Energy, Mood and Cognition. MCA revealed that domains clustered into 3 groups in each of the 3 databases. Moreover, positive scores for the presence of a deficit in the 7 domains consistently separated to a same side of the graphs, clearly distinguished from the negative scores. CONCLUSIONS: Despite differences in design and study population, there was relative consistency in the clustering of the domains in the 3 databases. The candidate domains also appear to distinguish between "frail" and "non-frail" individuals. This suggests the possibility that these domains measure a common underlying construct. As a next step, we will test the ability of the candidate domains, individually and in various combinations, to predict adverse

outcomes. The robustness of these findings will be verified by applying this methodology to the data from 11 international longitudinal studies of aging.

P21
FRIED'S FRAILTY DATA (FRFRDATA): PREVALENCE OF FRAILTY AND THE ASSOCIATION WITH SOCIOECONOMIC STATUS, DISABILITY AND COMORBIDITY FROM A DATABASE IN MONTREAL

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Introduction: Frailty has emerged to be an increasingly important concept in both clinical care and research related to aging. In 2001, Fried et al proposed 5 characteristics to identify frailty. Based on these characteristics, they estimated the prevalence of frailty in a large sample of older Americans, and examined the relationship between frailty, disability and comorbidity. The objective of FrFrData is to replicate this work by estimating the prevalence of frailty in a sample of elderly in Montreal and examining the association of frailty with sociodemographic variables, disability and comorbidity. Methods: A total of 740 elderly aged > 74 years with baseline data from the Montreal Unmet Needs Study were included. The 5 hypothesized characteristics were operationalized using self-reported measures. Individuals were classified as frail (> 3 characteristics), prefrail (1 or 2 characteristics) or non-frail (no characteristics). Associations of frailty with sociodemographic, disability and comorbidity variables were examined using the Cochran-Mantel-Haenszel test adjusted for age. Results: The mean age of the sample was 79.6 years (SD 4.0), 67.8% were female, 4.9% had ADL disability, 59.5% had IADL disability and 66.1% had 2 or more comorbidities. Overall, 7.4% were classified as frail, 49.7% prefrail and 42.8% non-frail. For those classified as frail, 29.1% had ADL disability, 92.7% IADL disability and 81.8% had 2 or more comorbidities. Frailty was associated with being older, female, with lower reported income, lower education, more comorbidities, and ADL and IADL disability. Comorbidities associated with frailty included arthritis, cardiovascular risk factors, pulmonary problems and diabetes. Conclusions: The prevalence of frailty was comparable to the initial work by Fried (7.4% vs 6.9%). There was also consistency in the associations found which may offer insight into the possible etiologies of frailty. Frailty appears to overlap to a greater extent with IADL disability and comorbidity than with ADL disability.

P22
TYPOLOGIE DES RÉSEAUX D'AIDE POUR LES PERSONNES ÂGÉES

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LDI-Solidage.

L'objectif de la présentation est de mettre en évidence la typologie des réseaux résultant de la combinaison de l'aide reçue et des ressources utilisées par les personnes âgées fragiles pour réaliser leurs activités de vie domestiques et quotidiennes. C'est une étude secondaire sur deux populations francophones de personnes âgées vivant en ménages privés dans Hochelaga Maisonneuve et dans Moncton. Les échantillons respectifs sont composés de 1514 et 1500 personnes âgées de 65 ans et plus. Nos données proviennent des réponses à un questionnaire administré par entrevue face à face. La typologie des réseaux est établie au moyen d'analyses de correspondances par l'intermédiaire d'un tableau de contingence mettant en relation nos deux critères de distinction : les ressources utilisées et l'aide reçue. Quinze types de ressources (formelles, informelles) et dix-sept types de tâches liées aux incapacités (8 AVD et 9 AVQ) des personnes âgées sont considérés. Les résultats font ressortir quatre classes de réseaux utilisés par les personnes âgées selon la complexité de leurs incapacités. Nous distinguons les réseaux 1- à ressource unique informelle ou formelle, 2- ceux composés de ressources multiples informelles ou formelles, 3- ceux ayant une ressource principale informelle supportée par d'autres ressources formelles et 4- ceux dont la ressource principale informelle est accompagnée par des ressources de type mixte (formelles et informelles). Les résultats suggèrent des modifications potentielles à l'organisation des services aux aînés dans la communauté, de nouvelles avenues pour les politiques et programmes de soutien à domicile et la redéfinition des pratiques des agences pour le maintien des personnes âgées en ménage privé. Auteurs : Claude Galand, MSc, PhD

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P23
EPIDEMIOLOGY OF CANCER CACHEXIA: DOES AGE MATTER?
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Objective: To explore any associations between aging and potential correlates of cancer cachexia (CC) in an inception cohort of advanced cancer patients, evaluated through multidimensional and interdisciplinary assessments. Methods: The computerized records of 196 newly diagnosed patients with unresectable, metastatic or recurrent non-small cell lung and gastro-intestinal cancers were reviewed. The following correlates of CC were examined: ECOG performance status (PS), hand-grip strength, resting heart rate, C-reactive protein, albumin, free-testosterone, hemoglobin, % weight loss/1 month, % weight loss/6 months, Patient Generated Subjective Global Assessment (PG-SGA) total score, overall quality of life, sleep disturbance, anorexia, nausea, vomiting, constipation, sleepiness, dyspnea, and depression, as measured by the Edmonton Symptom Assessment System (ESAS). Bivariate and multivariate regression coefficients were calculated to compare <65(n=87), 65-74 (n=58) and ³75 (n=51) year-old age groups. Results: There were 108 (55.1%) male patients, 159 subjects (81.1%) with NSCLC, over 2/3 of the sample had ECOG PS £1. When compared to younger patients, patients 65-74 years old showed trends towards lower upper limb muscle strength, had lower resting heart rates, and had worse PG-SGA scores, whereas 75+ year-old patients covered less distance, had lower upper limb strength, were less nauseated and lost more weight one month prior to their assessment. Decreasing PS was almost always independently correlated with worse nutritional and symptom measures. Conclusions: These results suggest that aging has a limited effect on CC correlates, seen primarily in the 75+ year-old age group. The ECOG PS, generally good in our sample, appeared to be a major predictor of nutritional and symptom characteristics. Further investigations of the above associations,

particularly in patients more debilitated and in larger samples, are warranted. Table 1: Effect of aging on CC correlates (adjusted for gender, diagnosis of lung vs. gastro-intestinal cancer and ECOG PS) CC Correlates N Estimates for Age Groups <65 65-74 >=75 %Weightloss/1mo 137 1.00 1.75 3.07 (-0.44:3.95) (0.76:5.38) PG-SGA Score 193 1.00 1.79 1.06 (0.13:3.45) (-0.65:2.76) Handgrip (lb) 96 1.00 -8.96 -20.99 (-18.54:0.61) (-30.42:-11.58) 2 Minute Walk(m) 42 1.00 -17.09 -31.87 (-44.36:10.19)(-57.76:-5.99) Resting HR 68 1.00 -11.07 -3.90 (-18.62:-3.52)(-11.67:3.86)

P24
FUNCTIONAL CAPACITY, DEPRESSIVE SYMPTOMS AND NUTRITIONAL RISK IN THE ELDERLY: THE QUEBEC LONGITUDINAL STUDY NuAge
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BACKGROUND: Adequate nutritional status and mental health are essential for maintaining independence in the elderly. Depressive symptoms have been associated with decline in functional capacities. In addition, nutritional risk appears to affect functional capacities. However, interactions between these variables has not been studied although both have been identified as symptoms in the phenotype of frailty. OBJECTIVE: To determine the effect of nutritional risk (NR) on the relationship between depressive symptoms (DS) and functional capacity (FC). DESIGN: Cross-sectional study. STUDY POPULATION: The baseline data (T1) of 1793 men (48%) and women (52%) (74.4 ± 4.1 years) of NuAge study were used for the analyses. FC was measured by a summarized score of 4 tests of functional capacity according to method proposed by Guralnik et al. [standing balance test, walking speed (4 m), chair stands test (5x), and timed "Up &Go"]. A result ≥ 11 in Geriatric depression scale (GDS) indicated presence of DS, and a score ≥ 3 in Elderly nutrition screening (ENS®) indicated a nutritional risk. Analyses of variance were made to compare the following groups: without NR and without DS, with NR and without DS,

without NR and with DS, and with NR and DS. Multivariate linear regression analysis allowed proving the modifying effect of NR (interaction ENS*GDS). RESULTS: NR was present in 51% of subjects and increased with age in both sexes (p<0.001). The prevalence of DS was more elevated in women (12.7%) those in men (7.7 %) (p= 0.001), but the score of FC was superior in men (M: 10.59±3,41 versus W: 9.25±3.40; p<0.001). In addition, the score was smaller (p= 0.001) in the group with NR and DS (8.86 ±3.42) in comparison with the group without NR and without DS (10.55 ±3.28). The inclusion of NR in a model that included age, sex and DS showed that NR has an effect independent and additive on FC (p<0.001). This model explained 22% of the variability in the result of the FC. Nevertheless, the interaction (NR*DS) was not significant. CONCLUSION: Nutritional risk and depressive symptoms both have independent effects on functional capacity. However, nutritional risk does not modify the impact of depressive symptoms on functional capacities.

Oral Presentation AM Session / Session de présentations orales AM
11:00 – 12:30

O1
AGE-RELATED EXPRESSION OF LAMIN A/C IN CARDIOMYOCYTES: THE INTEGRITY OF THE NUCLEAR ENVELOPE AS A NEW AGING MECHANISM.

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BACKGROUND: Mutations in lamin A/C have been associated with accelerated aging. In addition to the progeroid phenotype, mice lacking lamin A/C have severe changes in the heart including thinning of the ventricular wall and dilatation of the ventricular cavity. This suggests that lamin A/C may be required for normal function of cardiomyocytes throughout the aging process. OBJECTIVE: To evaluate the expression of lamin A/C in the heart of normally aged mice. HYPOTHESIS: Aging is associated with a significant reduction in lamin A/C expression within nuclei of cardiomyocytes. Methodology: Young (4 months old; n=5) and old (24 months old; n=5) C57BL/6 mice were sacrificed and their hearts were isolated for western blot and histopathological analysis. Lamin A/C expression in cardiomyocytes was detected by immunohistochemistry using a mouse monoclonal antibody IgG against lamin A/C (Santa-Cruz Biotechnology). The proportion of nuclei positive for lamin A/C was quantified by light microscopy. Additionally, nuclear extracts were obtained for western blot analysis of lamin A/C. Results: A significant reduction in lamin A/C expressing nuclei was found in the cardiomyocytes of old ($10\% \pm 1.9$ SD) vs. young mice ($62\% \pm 1.0$ SD) ($p<0.001$). Nuclear distribution of lamin A/C was different in old mice wherein most of the lamin A/C expression was irregularly dispersed in the nuclear periphery. Finally, western blot analysis showed a significantly higher expression of lamin A/C in

young hearts as compared to old hearts ($p<0.01$). Conclusion: Our study is the first assessment of the age-related changes in lamin A/C expression in the heart during normal aging. We have found that with aging, there is reduction in lamin A/C expression as well as a change in its distribution within the nuclear membrane. The effect of these findings on the structural and functional changes seen in the aging heart remains to be identified.

O2
PREDICTORS OF NUTRITIONAL RISK IN COMMUNITY DWELLING SENIORS

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Jewish General Hospital, Centre for Clinical Epidemiology and Community Studies

OBJECTIVE: At any age, good nutrition is important for maintaining good health. Due to the physiological, psychological, economic and social changes that accompany aging seniors are at increased risk of declining nutritional status. Malnutrition in the elderly leads to poorer indicators of quality of life, decreased independence and increased use of health care resources. While the maintenance of proper nutrition by no means ensures the maintenance of good health, good nutrition at any age has the potential to prevent many negative health outcomes. We investigated the medical, psychological, social and environmental characteristics that could predict a need for assistance to meet nutritional needs in non-institutionalized seniors. METHODS: Data came from an 18-month prospective study of 839 non-institutionalized persons aged 75 and over, living on the island of Montreal. Data were collected through 2 independent face-to-face interviews and 2 brief telephone interviews. The Elderly Nutrition Screening (ENS©) tool was administered at baseline and 12-months. This validated tool assigned a level of "nutritional risk" (low, moderate, high) based on the degree of assistance suggested to ensure that nutritional needs are met. Using risk factors identified in the literature, both multiple logistic and ordinal logistic regression analyses were performed to characterize those factors most strongly associated with a) the level of risk at each time and b) a change in nutritional risk over 12 months. Preliminary Results: We found an alarmingly high 59% of subjects to be at moderate or high nutritional risk at baseline. After 12 months, 23% increased their level of risk while 18% decreased. When adjusted for

age, sex (OR=1.7 for being female, p<0.001), perceived inadequacy of income (OR=1.8, p<0.01), having fallen in the past year (OR=1.5) and the number of physical limitations (OR=1.6, p<0.0001) were associated with being at moderate or high nutritional risk. Future Research: Proper nutrition promotes healthy aging by preventing disease and disability, improving health outcomes and maintaining autonomy, resulting in decreased health care utilization and costs. Given our aging population, identifying persons at risk of becoming malnourished should be an essential part of primary prevention.

O3

CONTRIBUTORS OF FEAR OF FALLING IN COMMUNITY DWELLING ELDERLY: ARE WE MISSING ORTHOSTATIC HYPOTENSION?

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BACKGROUND : Fear of falling (FOF) is a serious health concern among the elderly living in our community. FOF may result in restriction of everyday activities with subsequent loss in muscle strength and postural control, which can lead to a hesitant and slow gait known as the cautious gait. Similarly, orthostatic hypotension is common in the elderly as a consequence of the aging process and comorbidities. However, its relation to fear of falling is unclear. The aim of the study is to examine the characteristics of community dwelling elderly with and without fear of falling and to determine whether there is an association between this fear of falling and the presence of orthostatic hypotension(OH). METHODS: Consecutive patients seen at a tertiary care geriatric out-patient referral clinic at the Jewish General Hospital from June to September 2005 were assessed. Data collected included: age, sex, living arrangement, number of medications and of chronic conditions, blood pressure measurements in sitting and standing, the Timed Up and Go (TUG), Mini-Mental Status Exam (MMSE), functional status as measured by the Barthel and OARS scales, and questions about fear of falling, perceived health status and emotional support. RESULTS: A total of 91 subjects were included; the mean age was 82.1 years old (range: 67 to 96). 46.2% of the participants expressed FOF. OH was only present in 12,1% of the participants and was not associated with FOF (14.3% vs 10.2%;p=0,55).

In the final logistic regression model, a history of falls (p=0.011), number of chronic conditions (p=0.0005), TUG score (p=0.0055), and OARS score (p=0.0011) were significantly associated with the risk of being afraid of falling. CONCLUSION: FOF was a prevalent but was not associated with OH in our sample of community dwelling elderly. Further studies with larger samples are needed to corroborate our findings.

O4

THE USE OF CHOLINESTERASE INHIBITORS IN THE LONG-TERM CARE SETTING

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Introduction: Little data has been published on the use of cholinesterase inhibitors (ChE-I) in the long-term care (LTC) setting. The only randomized controlled trial on donepezil use in patients with Alzheimer's disease in LTC yielded negative results. This descriptive study aimed to document the utilization of ChE-I through an observational cohort at Maimonides Geriatric Centre (MGC) in Montreal, where a review committee follows patients on ChE-I and makes recommendations to continue or discontinue the medication. Methods: Patients with dementia taking a ChE-I anytime between January and August 2005 were entered into the cohort. The proportion of patients prescribed a ChE-I and proportion of prescriptions initiated after admission was documented from pharmacy databases. The cohort was followed until 4 months after review to determine the proportion recommended for discontinuation, actually discontinued, and restarted. The reasons for these decisions were collected. Results: Fifty-eight (16.5%) of 352 patients with dementia were prescribed ChE-I, out of which 3 (5.2%) were initiated after admission. Seventeen (32.7%) of the 52 reviewed patients were recommended to discontinue the medication. After one was excluded due to death and one due to incomplete follow up, 12 (80%) of the remaining 15 were actually discontinued. Finally, 3 (25%) of the 12 were subsequently restarted. The most common

reasons for recommendation to discontinue as well as to continue ChE-I were the effect on cognition, activities of daily living (ADL), and behaviour. Two patients were restarted due to ADL deterioration; one due to family request. Conclusion**:** Through the review process, one-third of ChE-I users were recommended to be discontinued, of which 80% were actually discontinued. The results also suggest that discontinuation may not result in adverse outcomes in most patients. A ChE-I review committee may be an effective model for decision-making regarding ChE-I use in LTC.

O5

INHIBITION OF TNF ALPHA INDUCED APOPTOTIC SIGNALLING BY PARATHYROID HORMONE RELATED PROTEIN (PTHRP)

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Background Information: Osteoarthritis is an age-related disorder of articulating joints that affects more than 2M Canadians, most of whom are more than 60 years of age. It costs the taxpayer more than 2.5B in direct healthcare costs and greater than 17B in long term disability. Diagnosis is commonly made at presentation with severe pain and advanced cartilage degeneration, which requires joint arthroplasty. A critical need therefore exists for improved diagnostic tools and mechanisms for assisted cartilage repair. Objective of the Study Increased chondrocyte apoptosis occurs in the articular joints of patients with osteoarthritis, in association with Parathyroid hormone relatedαhigh levels of inflammatory cytokines such as TNF protein (PTHrP) acts as a survival factor for nutrient deprived chondrocytes by promoting proliferation and inhibiting apoptosis of replicating cells. The induced apoptosis$-\alpha$objective of this work is to determine if PTHrP inhibits TNF through a caspase-mediated pathway. Experimental Approach HEK 293 cells were αused as a model system to examine the mitochondrial pathway in response to TNF in the presence and absence of PTHrP or a non-nuclear form of the protein. A combination of biochemical and functional assays were used to examine expression and activity of caspases and mitochondrial associated

proteins up to 12h post stimulation. Results and Conclusion Activation of the TNF receptor in 293 cells resulted in an exchange of Bcl-2 for Bax at the mitochondrial membrane, leading to release of cytochrome c and activation of the "executioner" caspase 3. The presence of PTHrP inhibited activation of the caspase cascade at the cell membrane-proximal level, as well as preventing the exchange of Bcl-2 and Bax at the mitochondrial membrane. Primary PTHrP-deficient chondrogenic cells induced$-\alpha$demonstrated increased basal apoptosis and were more susceptible to TNF apoptotic damage. This work identifies PTHrP as an effective anti-apoptotic agent working at multiple levels of the caspase cascade. The peptide could therefore be exploited as a therapeutic agent for the prevention of cell death in articular chondrocytes exposed to damaging agents during the progression of osteoarthritis.

O6

IDENTIFICATION OF QUAKING PROTEIN COMPLEX

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The *quaking viable (qk^v)* mice represent an animal model for dysmyelination. These mice develop normally until about 10 days after birth at which time they develop a rapid tremor. The defect is localized in the central nervous system (CNS) whereas the peripheral nervous system (PNS) is only mildly affected. In damaged areas of the brain, lamellae display uncompacted myelin caused by defective meylination mechanisms underlined by either or both a defect myelin mRNA transport or immature oligodendrocytes. The *qk* gene expresses three major alternatively spliced mRNAs that encode QKI-5, QKI-6 and QKI-7. In the *qk^v* mice, a spontaneous recessive 1Mbp deletion is responsible for the loss of part of the *qk* promoter and as a result, QKI-6 and QKI-7 isoforms are not expressed in OLs. The QKI proteins contain a KH-type RNA binding domain. Through this RNA binding capacity, we showed that QKI binds to a sequence in the 3' UTR of MBP (Myelin Basic Protein) mRNA termed the Quaking Recognition Element (QRE). This mRNA is retained in the nucleus by QKI-5 when the other isoforms are absent. Moreover, the QKI isoforms induce cell cycle arrest of primary oligodendrocytes progenitor

cells and differentiation into mature oligodendrocytes by binding and stabilizing the cyclin-dependent kinase (CDK)-inhibitor p27[kip1] mRNA leading to an increased accumulation of p27[kip1] proteins in oligodendrocytes. These findings suggest that the QKI proteins are regulators of myelination and/or are required for the proper maturation of the myelin producing OLs.

Although we showed that QKI exists as a homo and heterodimeric protein, the size of its cellular complex and its components remain largely unknown. The objective of my project is to define the QKI protein complex, to better understand its function and regulation in normal and diseased cells.

Oral Presentation PM Session / Session de présentations orales PM
14:00 – 16:00

O7
INSULIN SENSITIVITY LEVEL AMONG HEALTHY, NONOBESE OLDER POSTMENOPAUSAL NON-SARCOPENIC AND CLASS 1 AND CLASS 2 SARCOPENIC WOMEN

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Aging is associated with sarcopenia, a condition characterized by a progressive decline in muscle mass and strength. Sarcopenia imposes a substantial burden on the healthcare system, as reflected by the $18.5 billion spent for the treatment of this condition in the US in 2000. The aetiology of sarcopenia is still incompletely understood. Insulin plays a pivotal role in muscle protein metabolism and its action decreases with aging. It is possible that this decrease in insulin sensitivity (IS) may alter protein metabolism and, therefore, be implicated in the aetiology of sarcopenia. We are aware of no studies that attempted to determine whether the difference in muscle mass between older sarcopenics and non-

sarcopenics (NS) is associated with a difference in IS. To test this hypothesis, we compared, among healthy, nonobese postmenopausal older women, the IS of 20 class 1 sarcopenics, 8 class 2 sarcopenics and 16 NS using the quantitative IS check index (QUICKI). Fat-free mass (FFM), fat-mass (FM) and abdominal fat (AF) were measured by DXA. Muscle mass index (MMI) was calculated as follows: ((appendicular muscle mass x 1.19) - (1.01))/height2. Accelerometry was used to estimate daily (DEE) and physical activity (DPAEE) energy expenditure. A 3-day food record was used to determine total dietary and protein/carbohydrate intakes. MMI and FFM were significantly different among groups. There were no differences ($P > 0.05$) among groups for IS, AF, FM, total dietary and protein/carbohydrate intakes, DEE or DPAEE. Using QUICKI, we found no difference in IS among nonobese older sarcopenic and NS women, suggesting that the decrease in IS may not play a major role in the development of sarcopenia in this population. Studies using the hyperinsulinemic-euglycemic isoaminoacidemic clamp technique are needed to determine the relationship between the action of insulin and protein metabolism between nonobese older sarcopenics and NS.

O8
ALENDRONATE HAS AN ANABOLIC EFFECT ON BONE THROUGH THE DIFFERENTIATION OF MESENCHYMAL STEM CELLS

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Division of Geriatric Medicine and Bloomfield Centre for Research in Aging, McGill University

INTRODUCTION: Alendronate has demonstrated its effectiveness in preventing bone loss in post-menopausal patients through the regulation of osteoclastic activity. However, it has also proven to be effective in elderly populations where instead of high osteoclastic activity the predominant mechanism of bone loss is the ineffective differentiation of mesenchymal stem cells (MSC) with a subsequent deficit in osteoblastogenesis. The aim of this study is to determine the effect of alendronate on bone MSC differentiation which may suggest a potential anabolic effect of Alendronate in bone. HYPOTHESIS: The effect seen in the Alendronate treatment of senile osteoporosis is explained by its anabolic effect either by the inhibition of the adipogenic or the stimulation of osteogenic differentiation of MSCs.

METHODOLOGY: Human MSCs (BioWhittaker, Walkersville, MD, USA) were plated at a density of 5 x 105 cells per well in 150 cm2 dishes containing mesenchymal stem cell growth medium with 10% fetal calf serum. After the cells reached 60% confluence, medium was replaced with mesenchymal stem cell growth medium, adipogenic or osteogenic media with and without vitamin D (10-8 M) and supplemented with Alendronate at increasing concentrations (10-10M to 10-7M).Untreated differentiating MSCs were used as control. The drugs were present in the cultures for 21 days of both osteogenic and adipogenic stimulation. Alkaline phosphatase (ALP), oil red O and Alizarin red staining were performed at timed intervals (1, 2 and 3 week). Additionally, the 2 was also measured in protein extracts. RESULTS:γexpression of Cbfa1 and PPAR We found that Alendronate has a significant effect on ALP activity (p<0.01), on MSC proliferation (p<0.001), and on cell-mediated mineralization (p<0.01). This effect was highly significant at 10-8M of Alendronate and was potentiated by the presence of vitamin D in the medium (p<0.001). Additionally, the expression of Cbfa1 quantified by densitometry was significantly increased in MSC treated with both Alendronate alone (p<0.01) and Alendronate+vitamin D (p<0.001) as compared to vitamin D alone or 2 expression was only reduced in MSC inγnon-treated cells. Finally, PPAR adipogenic medium containing both Alendronate and vitamin D. This effect was associated with a lower number of lipid droplets. CONCLUSION: This study shows a potential anabolic effect of alendronate on bone through the stimulation of osteogenic differentiation of MSC. Additionally, this effect is also potentiated by the addition of vitamin D to the Alendronate-treated cells. Finally, a potential inhibitory effect of Alendronate in bone marrow adipogenesis was also seen when combined with vitamin D.

O9
SOCIO-ECONOMIC CIRCUMSTANCES AND PREVALENCE OF COGNITIVE IMPAIRMENT AMONG THE ELDERLY OF SEVEN CAPITALS IN LATIN AMERICA

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GRIS

OBJECTIVES: To examine the influence of childhood, adult and late life socio-economic circumstances on cognitive decline. METHODS: A multicentric survey that evaluates the health status and well-being of people aged 60 and over was conducted in seven Latin America and Caribbean cities in 2000. A modified MMSE score and the Pfeffer Scale were used to measure cognitive function (CF). Homogeneity tests were used to pool data from the seven cities. Associations between cognitive function and socio-economic position along the life course were evaluated by fitting logistic regressions. . RESULTS: Overall prevalence of cognitive impairment was 5.4%. Rural life and poor perception of childhood health were associated with poor cognitive function, but the strength of the association decreased when education and occupation were considered. Being illiterate (OR 2.75; 95% CI: 2.22-3.40), having a long-life occupation as housewife (OR 2.02; 95% CI: 1.48-2.74) or farmer (OR: 1.85; 95% CI: 1.24-2.75), and a current perception of insufficient income (OR: 1.42; 95% CI: 1.15-1.76) were associated with cognitive impairment, and their effect remained after controlling for other social circumstances. Exposure in four instances to socioeconomic disadvantage (rural life+ illiteracy+ farmer/housewife + insufficient income) was associated with greater odds of cognitive impairment 6.49 (95% CI: 4.02-10.49) as compared to not being exposed to any disadvantage. CONCLUSIONS: Both early and late indicators of socio-economic circumstances are related to cognitive function later in life.

O10

THE ASSOCIATION BETWEEN THE MUSCLE MASS INDEX AND FUNCTIONAL CAPACITY IN WELL-FUNCTIONING OLDER INDIVIDUALS : Results from the Study of Nutrition Age (NuAGE).

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The level of sarcopenia in older individual has been reported to be associated with physical impairments. However, the association between sarcopenia and physical impairments is mostly based on scientific observations obtained from self reported questionnaire used to assess functional capacities. Objectives: To examine the association between lower muscle mass levels, as assessed by the muscle mass index [MMI : total muscle mass/height 2], with direct measures of functional capacity in well functioning elders. METHODS: The study consisted of 468 women and 436 men (aged between 67-84 years old). Physical performance was assessed by the: 1) time up and go (TUG) test, 2) chair stands test, 3) walking speed test at normal and fastest pace, and 4) one leg stand test on both legs. Results: MMI was not correlated with the functional capacity in our cohort of older men and women. CONCLUSION: Taking together, the MMI do not seem to be a good clinical tool to help identify older individuals at higher risk for functional impairments.

O11

GENERATION OF SUPER MOUSE: THAT IS PROTECTED FROM AGE RELATED OSTEOPOROSIS AND DIETARY OBESITY.

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Introduction: Bone Marrow Stem Cells (MSC) have the potential to differentiate to osteoblasts and adipocytes. Bone loss in the elderly has been attributed to alterations in the response of MSCs to their microenvironment that favors differentiation down the adipocyte lineage rather than the osteoblast lineage. This switch ultimately causes osteoporosis in these individuals that also have fatty bone marrow. The Src substrate associated in mitosis of 68kDa (Sam68) is a RNA binding protein. Our data define the first physiological role for Sam68 in bone metabolism and MSCs differentiation. The bone phenotype observed in Sam68-/- mice imply that inhibitors of Sam68 could prevent age-related bone loss. In addition, to bone defect phenotype, Sam68-/- mice are leaner than their littermate controls. In order to elucidate if the lower body weight is due to defect in adipogenesis, we have studied adipogenesis and metabolic defects associated with that in Sam68-/- mice. HYPOTHESIS: Sam68-/- mice are protected from diet induced obesity because adipogenesis is impaired in these mice. METHODS: We have monitored the body weight of mice on chow and High fat diet. Insulin tolerance test and glucose tolerance test was performed by insulin or glucose injection to the mice and monitoring the level of blood glucose at specific time point after injection. In vitro differentiation study was done using specific cocktail medium to induce adipocyte differentiation. RESULT: Sam68 null mice challenged with high fat diet are protected from obesity and they remain insulin sensitive. When mouse embryo fibroblasts (MEFs) generated from Sam68+/+ and Sam68-/- littermates were induced to differentiate into adipocytes, the Sam68-/- MEFs had impaired adipocyte differentiation. CONCLUSION: Sam68 is required to regulate proper osteoblasts and adipocytes differentiation. Over all, our results suggest that Sam68 mice are protected from age related osteoporosis and obesity. This work was funded by the Canadian Institutes of Health Research (CIHR) to S.R.

O12

EFFET DE L'AMPLITUDE DE LA PERTE DE POIDS SUR LA MASSE MUSCULAIRE DE FEMMES OBÉSES POST-MÉNOPAUSÉS.

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INTRODUCTION : Le vieillissement est associé à une perte de masse musculaire ainsi qu'à une augmentation de l'obésité et des complications associées. Bien que très efficaces pour perdre du tissu adipeux et améliorer le profil de santé, les programmes de perte de poids conventionnels sont cependant associés à une diminution moyenne de 25% de la masse musculaire. OBJECTIF : Vérifier l'association entre l'amplitude de la perte de poids hebdomadaire, suite à une restriction calorique, sur la masse musculaire et le profil de santé. MÉTHODOLOGIE : 20 femmes obèses, post-ménopausées (50-75 ans), sédentaires et en bonne santé ont participé à un programme de perte de poids de 5 semaines, à raison de 1% du poids initial par semaine. Mesures avant et après la perte de poids : composition corporelle (DXA), métabolisme de repos et quotient respiratoire (calorimétrie indirecte), tension artérielle de repos et lipides sanguins à jeun. RÉSULTATS : Il existe une corrélation positive significative entre l'amplitude de la perte de poids (kg/semaine) et la perte de masse musculaire totale après correction pour l'âge, la masse grasse et la masse maigre initiales (r = 0,75; P< 0,0001). Nos données semblent indiquer qu'une perte de poids maximale d'environ 0,6 à 0,7 kg/semaine serait associée à une meilleure préservation de la masse musculaire comparativement à une perte supérieure à 0,7 kg/semaine. Nos résultats ne rapportent aucune association entre l'amplitude de la perte de poids hebdomadaire et les autres paramètres étudiés suite à une diminution du poids corporel de 5%. CONCLUSION: Nos résultats proposent qu'une perte de poids de 5% (de l'ordre de 0,6 kg/semaine), serait associée à une meilleure préservation de la masse musculaire comparativement à une perte > 0,7 kg/semaine. De plus, une perte de poids au-delà du seuil de 0,7 kg/semaine n'a pas plus d'avantages sur le plan métabolique qu'une perte moins importante.

O13

THE DISCRIMINATIVE VALIDITY OF THE MCGILL INGESTIVE SKILLS ASSESSMENT

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INTRODUCTION: Stroke is associated with a high prevalence of dysphagia in the elderly population. The McGill Ingestive Skills Assessment is a recently developed mealtime observational tool aimed at evaluating the functional aspects of the oral phase of ingestion. The reliability and some aspects of the validity of the MISA have been established (Lambert, Gisel, Groher, Abrahamowicz, & Wood-Dauphinee, 2005). However, it remains to be determined whether or not the MISA is responsive to change in individuals at different phases of their recovery from dysphagia. The first step towards ascertaining the responsiveness of a tool is to determine its discriminative validity. OBJECTIVE: To determine the discriminative validity of the MISA by assessing known/extreme groups of elderly individuals aged 65 years or older presenting with stroke, who have been admitted to an acute-care-hospital or a rehabilitation center. METHOD: The recruitment of 60 individuals, who meet the inclusion criteria, is currently in progress. Participants are allocated to one of four groups (n=15): 1i) individuals with stroke and no dysphagia, who are on a regular diet and 1ii) those with stroke and dysphagia, who are on a pureed diet, 2i) individuals with stroke and no dysphagia, who drink regular liquids and 2ii) those with stroke and dysphagia who drink only honey-viscosity liquids. PROCEDURES: All participants are evaluated with the MISA at a regular meal. Averages of the scale scores (positioning, self-feeding, food texture management, solid ingestion and liquid ingestion) are computed for each of the four groups. ANALYSES: Groups are compared on socio-demographic and clinical characteristics. Univariate tests are performed to test the significance of between-group differences. CONCLUSIONS: Once the discriminative validity of the MISA has been determined, studies addressing the responsiveness of the

MISA may be conducted. The discriminative validity will enhance the clinical usefulness of the tool for dysphagia assessment and management. Lambert, H. C., Gisel, E. G., Groher, M., Abrahamowicz, M., & Wood-Dauphinee, S. (2005). Psychometric testing of the McGill Ingestive Skills Assessment. American Journal of Occupational Therapy, accepted for publication.

O14
QUAKING: TUMOR SUPPRESSOR AND REGULATOR OF CELL FATE.
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The quaking (QKI) locus expresses a family of RNA binding proteins whose alternatively spliced members are highly expressed in myelinating cells of the central and peripheral nervous system. Studies from our lab have shown that QKI proteins are key regulators of glial cell differentiation and that the balance of QKI isoforms can determine cell fate specification. This has important implications in the remyelination process where glial progenitor cells could be forced to become mature myelinating cells in diseases such as multiple sclerosis, or other non-myelinating cells such as neurons in diseases such as Parkinson's disease. Glioblastoma multiforme (GBM) is the most common primary malignant type of brain tumor in adults. Despite current therapies, which include the combination of surgery, radiation and chemotherapy, the average survival time of a patient with GBM is less than one year. Recently, it has been demonstrated that there are alterations in quaking expression in approximately 30% of human glioblastomas. Our aim is to determine the role of QKI proteins in glioblastoma development. In order to achieve this, we performed en masse characterization of mRNAs that are bound by QKI proteins in human brain cancer cells. Interestingly, we identified VEGF mRNA as an interesting target that has important implications in cancer development and has very limited expression post-natally. Further characterization showed that QKI does bind VEGF mRNA both in vitro and in vivo. Subsequently, by modifying the levels of QKI, either by stable knockdown or over-expression in these cancer cells and implantation into immunodeficient mice, we determined that QKI acts as a tumor suppressor in vivo. These data assign a new role to the QKI proteins and suggest that modifications in their expression level could lead to the development of aggressive cancers by affecting cell fate decisions as well as the angiogenic process.

Notes