

## Ageing and Aged Care publication list August 2020

(MACH Care of the Ageing Subcommittee members' **bolded**)

### **1. Volunteer-led behavioural activation to reduce depression in residential care: A feasibility study.** *Pilot and Feasibility Studies, Volume 6, Issue 1, 7 July 2020, Article number 95*

Bryant C., Brown L., Polacsek M., **Batchelor F.**, Capon H., Dow B.

**About the Research:** Symptoms of depression are highly prevalent and under-treated in residential aged care facilities. Behavioural activation is a simple, cost-effective psychosocial intervention that might be appropriate to help reduce depression and improve well-being in this setting. The purpose of this study was to investigate the feasibility and efficacy of an 8-week, volunteer-led behavioural activation intervention designed for depressed aged care residents.

[Link to Publication](#)

### **2. Rethink: Interdisciplinary evaluation of academic workspaces** *Proceedings of the International Conference of Architectural Science Association, Volume 2019-November, 2019, Pages 87-96. 53rd International Conference of the Architectural Science Association, ANZAScA 2019; Indian Institute of Technology in Roorkee Roorkee; India; 28 November 2019 through 30 November 2019; Code 161715*

Backhouse S., Newton C., Fisher K., Cleveland B., **Naccarella L.**

**About the Research:** Academic workspace remains an emotive topic. It is bound tightly with each academic's identity, purpose and status. As universities increasingly focus on cross-disciplinary collaboration to produce new knowledge, the sanctuary of the individual office is under challenge. Inspired by precedents in the commercial world, universities are experimenting with more open workspace environments with a desire to promote collaboration and increase space utilisation. However, there is resistance within the academic community. Given this context, there is a surprising paucity of research into the design and occupation of academic workspaces. This research begins to fill that gap through a scoping literature review specific to the academic workspace and a new approach to academic workspace evaluation (AWE).

### **3. Restricted Effect of Cerebral Microbleeds on Regional Magnetic Susceptibility.** *Journal of Alzheimer's Disease, Volume 76, Issue 2, 2020, Pages 571-577*

Fazlollahi A., Raniga P., Bourgeat P., **Yates P.**, **Bush A.I.**, Salvado O., Ayton S.

**About the Research:** Cortical iron accumulation has been reported as a pathological feature of Alzheimer's disease (AD). The cause of cortical iron elevation in AD is unknown but may be contributed by hemosiderin deposits in cerebral microbleeds that frequently occur in this disease. Objective: To investigate the impact of cerebral microbleeds (which are more frequent in AD) on the magnetic susceptibility of the surrounding brain tissue.

[Link to Publication](#)

**4. Home First! Identification of Hospitalized Patients for Home-Based Models of Care**

*Journal of the American Medical Directors Association, 2020, published online August 2020*

Lim S.M., Island L., Horsburgh A., **Maier A.B.**

**About the Research:** Objectives: To determine the proportion of hospitalized inpatients suitable for an acute and subacute home-based inpatient bed substitutive service, to examine the ability of treating teams to identify suitable patients for this service, and to examine potential barriers toward inpatients receiving home-based care. Design: Prospective point prevalence study over 2 days in April 2019; analysis of responses to survey questionnaires regarding the suitability for home-based care among inpatients with multiday admissions to acute and subacute wards in the Royal Melbourne Hospital (RMH), an Australian metropolitan tertiary referral center.

[Link to Publication](#)

**5. Physical activity, a modulator of aging through effects on telomere biology. *Aging, Volume 12, Issue 13, 2020, Pages 13803-13823.***

Semeraro M.D., Smith C., Kaiser M., Levinger I., **Duque G.**, Gruber H.-J., Herrmann M.

**About the Research:** Aging is a complex process that is not well understood but involves finite changes at the genetic and epigenetic level. Physical activity is a well-documented modulator of the physiological process of aging. It has been suggested that the beneficial health effects of regular exercise are at least partly mediated through its effects on telomeres and associated regulatory pathways. Telomeres, the region of repetitive nucleotide sequences functioning as a "cap" at the chromosomal ends, play an important role to protect genomic DNA from degradation.

[Link to Publication](#)

**6. Improvement in inner retinal function in glaucoma with nicotinamide (vitamin B3)**

**supplementation: A crossover randomized clinical trial. *Clinical and Experimental Ophthalmology, 2020, published online August 2020***

Hui F., Tang J., Williams P.A., McGuinness M.B., Hadoux X., Casson R.J., Coote M., Trounce I.A., Martin K.R., **van Wijngaarden P.**, Crowston J.G.

**About the Research:** Importance: Retinal ganglion cells endure significant metabolic stress in glaucoma but maintain capacity to recover function. Nicotinamide, a precursor of NAD<sup>+</sup>, is low in serum of glaucoma patients and its supplementation provides robust protection of retinal ganglion cells in preclinical models. However, the potential of nicotinamide in human glaucoma is unknown. Background: To examine the effects of nicotinamide on inner retinal function in glaucoma, in participants receiving concurrent glaucoma therapy.

[Link to Publication](#)



**7. Alcohol use, mental health, and functional capacity as predictors of workplace disability in a cohort with Manifest Huntington's disease.** *Journal of Neuropsychiatry and Clinical Neurosciences*, Volume 32, Issue 3, Summer 2020, Pages 235-243

Goh A.M.Y., You E., Perin S., **Lautenschlager N.T.**, Clay F.J., Loi S.M., Chong T., Ames D., Chiu E., Ellis K.A.

**About the Research:** Huntington's disease (HD) is an inherited neurodegenerative disease involving motor, cognitive, psychiatric, and behavioral impairments that eventually affect work-role functioning. There is limited research regarding predictors of workplace disability in HD. The authors examined predictors of work impairment and disability in a cross-sectional cohort of employed persons with symptomatic HD participating in the worldwide Enroll-HD study.

[Link to Publication](#)

**8. Managing menopause: Nonhormonal treatment options.** *Medicine Today*, Volume 21, Issue 2, February 2020, Pages 50-51

Brennan A., **Hickey M.**

**About the Research:** When menopausal hormone therapy is not appropriate for or not desired by women who seek help with menopausal symptoms, a variety of nonhormonal pharmacotherapies and nonpharmacological treatments are available. Flexibility and shared decision making are key in finding effective, acceptable therapy for each woman.

[Link to Publication](#)

**9. Analytical reliability of four oral fluid point-of-collection testing devices for drug detection in drivers.** *Forensic Science International*, Volume 315, October 2020, Article number 110434

Scherer J.N., Schuch J.B., Rabelo-da-Ponte F.D., Silvestrin R., Ornell R., **Sousa T.**, Limberger R.P., Pechansky F.

**About the Research:** Point-of-collection testing (POCT) devices for psychoactive substance detection through oral fluid samples are used in several countries for traffic enforcement. However, the reported reliability of such devices is quite heterogeneous among studies, and evaluating and comparing their analytical performance is of paramount importance to guide enforcement policies. Aim: To evaluate the analytical reliability of four POCT devices for the detection of cocaine and cannabinoids using oral fluid samples of Brazilian drivers.

[Link to Publication](#)

**10. Perceived Need and Acceptability of an App to Support Activities of Daily Living in People With Cognitive Impairment and Their Carers: Pilot Survey Study.** *JMIR mHealth and uHealth, Volume 8, Issue 7, 31 July 2020, Page e16928*

Lai R., Tensil M., Kurz A., **Lautenschlager N.T.**, Diehl-Schmid J.

**About the Research:** Modern technologies, including smartphone apps, have the potential to assist people with cognitive impairment with activities of daily living, allowing them to maintain their independence and reduce carer burden. However, such tools have seen a slow rate of uptake in this population, and data on the acceptability of assistive technologies in this population are limited. **OBJECTIVE:** This pilot study included older adults with cognitive impairment and their carers, and explored the perceived needs for and acceptability of an app that was designed to be a simple assistive tool for activities of daily living. In particular, this study aimed to assess the acceptability of common app functions such as communication, reminder, navigation, and emergency tools in this population, and to compare patients' and carers' responses to them.

[Link to Publication](#)

**11. Sarcopenia Definitions and Outcomes Consortium (SDOC) Criteria Are Strongly Associated With Malnutrition, Depression, Falls, and Fractures in High-Risk Older Persons.** *Journal of the American Medical Directors Association, 2020. Article available online August 2020.*

Kirk B., Zanker J., Bani Hassan E., Bird S., Brennan-Olsen S., **Duque G.**

**About the Research:** Sarcopenia Definitions and Outcomes Consortium (SDOC) provides cut-points based on muscle weakness (low grip strength) and slowness (poor gait speed) for low-risk populations; however, it is unknown if these criteria apply to high-risk populations. We examined the association between SDOC criteria and important health status indicators in high-risk older persons.

[Link to Publication](#)

**12. Short-Term Changes in the Photopic Negative Response Following Intraocular Pressure Lowering in Glaucoma.** *Investigative ophthalmology & visual science. Volume 61, Issue 10, 3 August 2020, Page 16*

Tang J., Hui F., Hadoux X., Soares B., Jamieson M., **van Wijngaarden P.**, Coote M., Crowston J.G.

**About the Research:** To evaluate the short-term changes in inner retinal function using the photopic negative response (PhNR) after intraocular pressure (IOP) reduction in glaucoma.

[Link to Publication](#)

**13. Changes in ferrous iron and glutathione promote ferroptosis and frailty in aging *Caenorhabditis elegans*.** *eLife* Volume 9, 21 July 2020

Jenkins N.L., James S.A., Salim A., Sumardy F., Speed T.P., Conrad M., Richardson D.R., **Bush A.I.**, McColl G.

**About the Research:** All eukaryotes require iron. Replication, detoxification, and a cancer-protective form of regulated cell death termed ferroptosis, all depend on iron metabolism. Ferrous iron accumulates over adult lifetime in *Caenorhabditis elegans*. Here, we show that glutathione depletion is coupled to ferrous iron elevation in these animals, and that both occur in late life to prime cells for ferroptosis.

[Link to Publication](#)

**14. Pathophysiological mechanisms explaining poor clinical outcome of older cancer patients with low skeletal muscle mass.** *Acta Physiologica*, 2020. Publish Online August 2020.

Looijaard S.M.L.M., te Lintel Hekkert M.L., Wüst R.C.I., Otten R.H.J., Meskers C.G.M., **Maier A.B.**

**About the Research:** Low skeletal muscle mass is highly prevalent in older cancer patients and affects 5% to 89% depending on the type and stage of cancer. Low skeletal muscle mass is associated with poor clinical outcomes such as post-operative complications, chemotherapy toxicity and mortality in older cancer patients. Little is known about the mediating pathophysiological mechanisms. In this review, we summarize proposed pathophysiological mechanisms underlying the association between low skeletal muscle mass and poor clinical outcomes in older cancer patients including a) systemic inflammation; b) insulin-dependent glucose handling; c) mitochondrial function; d) protein status and; e) pharmacokinetics of anticancer drugs.

[Link to Publication](#)

**15. Picolinic Acid, a Catabolite of Tryptophan, Has an Anabolic Effect on Bone In Vivo.** *Journal of Bone and Mineral Research*, 2020. Published Online August 2020.

**Duque G.**, Vidal C., Li W., Al Saedi A., Khalil M., Lim C.K., Myers D.E., Guillemin G.J.

**About the Research:** Fractures attributable to osteoporosis have a severe impact on our older population. Reports of side effects with commonly prescribed osteoporosis drugs have led to the investigation of new and safer treatments with novel mechanisms of action. Picolinic acid (PIC), a catabolite of tryptophan, induces in vitro osteogenic differentiation of mesenchymal stem cells. Here we demonstrate that PIC has an anabolic effect on bone in vivo by increasing bone formation, bone mass, and bone strength in normal and ovariectomized C57BL/6 mice.

[Link to Publication](#)

**16. Marked Increase in Incident Gynecomastia: A 20-Year National Registry Study, 1998 to 2017.**  
*The Journal of clinical endocrinology and metabolism. Volume 105, Issue 10, 1 October 2020.*  
*Published online August 2020.*

Koch T., Bräuner E.V., Busch A.S., **Hickey M.**, Juul A.

**About the Research:** CONTEXT: Gynecomastia, the proliferation of mammary glandular tissue in the male, is a frequent but little-studied condition. Available prevalence data are based on selected patient populations or autopsy cases with their inherent bias. OBJECTIVE: The objective of this work is to evaluate the age-related incidence and secular trends in gynecomastia in the general population.

[Link to Publication](#)

**17. Lung and Eye Disease Develop Concurrently in Supplemental Oxygen–Exposed Neonatal Mice.**  
*American Journal of Pathology. Volume 190, Issue 9, September 2020, Pages 1801-1812. Published online August 2020.*

Wickramasinghe L.C., Lau M., Deliyanti D., Gottschalk T.A., **van Wijngaarden P.**, Talia D., Johnson C., Wilkinson-Berka J.L., Tsantikos E., Hibbs M.L.

**About the Research:** Bronchopulmonary dysplasia (BPD) and retinopathy of prematurity (ROP) are two debilitating disorders that develop in preterm infants exposed to supplemental oxygen to prevent respiratory failure. Both can lead to lifelong disabilities, such as chronic obstructive pulmonary disease and vision loss.

[Link to Publication](#)

**18. Metabolic pathways in context: mTOR signalling in the retina and optic nerve - A review.**  
*Clinical and Experimental Ophthalmology, 2020. Published online August 2020.*

Yao A., **van Wijngaarden P.**

**About the Research:** The mechanistic target of rapamycin (mTOR) signalling network plays a key role in growth and development, autophagy, metabolism, inflammation as well as ageing, and it is therefore important in ocular health and disease. mTOR dysregulation has been identified in a range of conditions, including age-related macular degeneration, diabetic retinopathy, retinitis pigmentosa, traumatic optic neuropathy and glaucoma.

[Link to Publication](#)



**19. Mental health of older adults during the COVID-19 pandemic: lessons from history to guide our future.** *International Psychogeriatrics*, 2020. Published online August 2020.

About the article: Letter to the Editor

[Link to Publication](#)

**20. Exploring Australian regional cancer patients' experiences of clinical trial participation via telemedicine technology.** *Journal of Telemedicine and Telecare*, 2020. Published online August 2020.

Lee J.J., Burbury K., Underhill C., Harris S., Shackleton K., McBurnie J., McPhee N., Osmond F., Wilkins K., Baden P., **Krishnasamy M.**

**About the Research:** Regional cancer patients face various barriers in accessing specialist cancer services. Teletrials are a new model of care that utilise telemedicine technology to enable access to and participation in clinical trials close to home. The present study aimed to explore the experiences of regional cancer patients and their carers while participating in a teletrial, and those of regional patients who travelled to a metropolitan centre for trial participation

[Link to Publication](#)