



NEWSLETTER UPDATE 2016

Welcome to the Frailomic Newsletter Update for 2016!

In this edition we report on news from partners of the Frailomic Initiative. This newsletter also provides a project status update, consortium publications and a list of upcoming conferences. We are entering an exciting phase for the Frailomic Initiative! We hope you enjoy hearing about the recent events and news from the Frailomic Initiative consortium. As always, please let us know if you would like to share any news in our next edition!



Partner News

The Frailomic Validation Phase Begins

By Laila Guzadhur on behalf of Niche Science & Technology
(with thanks to Betty Davies Urizar)

The first half of 2016 marks an exciting, operational period involving the transportation of biobank samples from the cohorts. The study management team have invested a lot of work into preparing sample labels for coordination of such a large scale task. Furthermore the Frailomic Initiative have been busy organising the logistics for sample shipment. Samples from the SARDINIA, Toledo (ETES) and ENRICA cohorts have either been shipped or are in preparation for shipment. We are looking forward to the results of the validation phase!



Frailomic Meetings

The next general Frailomic meeting will be in Mallorca on the 3–4 November 2016.

The Frailomic Initiative will be participating at the 21st International Association of Gerontology and Geriatrics (IAGG) World Congress of Gerontology and Geriatrics, which will be taking place in July 2017, in San Francisco, California. The consortium have been invited to take part in a workshop led by Dr Jeremy Walston of the Johns Hopkins University School of Medicine, clinical specialist in geriatric medicine. Dr Walston's research is focused on aging and frailty and his leadership and participation in committees of the American Geriatrics Society and review panels for the National Institute on Aging helps set the national aging research agenda. We are very excited to for the 21st IAGG congress. Please look up the website for further information. <https://www.iagg2017.org>

Publications

It's been an extremely productive and an exciting time for partners of the Frailomic Initiative – with progress having been achieved with several publications in development. Furthermore, four applications for approval have been submitted to the Frailomic Intellectual Property Committee (IPC) and all have obtained approval for development from the consortium IPC. Good luck to the respective lead authors; Stefan Walter, David Gomez-Cabrero, Mariam El Assar and Imad Abugessaisa.

Published Works

Congratulations to the Evercyte team on publishing their work in *Aging Cell*. The manuscript 'Secreted microvesicular miR-31 inhibits osteogenic differentiation of mesenchymal stem cells' was accepted for publication in March 2016. Weilner et al., 2016 report elevated levels of the microvesicle – miR-31 in the plasma of elderly and osteoporosis patients and identify senescent endothelial cells as a potential source of secretion. To enjoy reading more, please find the article here: <http://www.ncbi.nlm.nih.gov/pubmed/27146333>

Catherine Feart and her team have published the paper 'Higher Protein but Not Energy Intake Is Associated With a Lower Prevalence of Frailty Among Community-Dwelling Older Adults in the French Three-City Cohort'. The study by Rahi et al., 2016 assessed the protein intake of older adults in the 3C cohort and found that high protein intake was associated with lower frailty prevalence. The original study was published on 01 July 2016 by the *Journal of Post-Acute and Long-Term Care Medicine (JAMDA)*; volume 17, issue 7, 672e.7–e11) and can be obtained at the journal website ([http://www.jamda.com/article/S1525-8610\(16\)30127-X/abstract](http://www.jamda.com/article/S1525-8610(16)30127-X/abstract)). Congratulations to the authors: Berna Rahi, Zoé Colombet, Magali Gonzalez-Colaço Harmand, Jean-François Dartigues, Yves Boirie, Luc Letenneur and Catherine Feart. According to Altmetric, the original article has been tweeted and read several times on Mendeley!

The Frailomic Initiative has been featured in the EU science, research and innovation magazine –Horizon. Laila asked the editorial team at Horizon magazine, whether they would be interested in publishing a report about the study. After initial discussions the magazine identified an independent journalist who conducted an interview with Professor Leocadio Rodríguez Mañas. The magazine article also discusses the EU-funded Frailsafe project, which studies elderly people in their normal situation rather than in clinical settings. The study is led by Professor Vasileios Megalooikonomou at the University of Patras, Greece and intends to better understand frailty in relation to biological, environmental, and behavioural factors, by using wearable sensors and using a data mining approach.

The Horizon article featuring Frailomic and Failsafe has now been published in the magazine and we thought that you might like to read it. Please enjoy reading the article at:

http://horizon-magazine.eu/article/frailty-indicators-could-help-prevent-problems-ageing_en.html

Research at the Cardiovascular and Nutritional Epidemiology Group (CNEG) at the Universidad Autónoma de Madrid has focused on the impact of lifestyle (e.g., diet, physical activity, sedentary behaviour) and environmental factors (e.g., heavy metals, passive smoking) on the risk of frailty. This is directly relevant to the main goal of the Frailomic Initiative, which aims to establish if -omic biomarkers can improve the diagnosis, risk and prognosis assessment of frailty beyond current methods of lifestyle and clinical factors that are easily and routinely measured in older adults. To this end, the CNEG has used data from the Seniors-ENRICA cohort and has worked collaboratively with many partners of the Frailomic consortium that also lead several cohorts: the Toledo Study for Health Aging (Professor Rodriguez-Mañas, Dr. Francisco José García and colleagues), the Bordeaux 3-City cohort (Dr. Catherine Feart and colleagues), the AMI cohort (Dr. Berna Rahi and colleagues) and the InCHIANTI cohort (Dr. Stefania Bandinelli and colleagues).

Professor Fernando Rodriguea-Artalejo of the CNEG and colleagues have published 'Consumption of fruit and vegetables and risk of frailty: a dose-response analysis of 3 prospective cohorts of community-dwelling older adults'. The authors report an association of fruit and vegetable consumption with a lower short-term risk of

Publications continued...

frailty and stronger associations when intake equates to three portions of fruit and two portions of vegetables. The article can be found at Am J Clin Nutr 2016 104: 132–142 (<http://ajcn.nutrition.org/content/104/1/132.full.pdf+html>). In addition to this manuscript, research and collaborations at CNEG has resulted in the following publications:

- García-Esquinas E, et al (2015). Diabetes and Risk of Frailty and Its Potential Mechanisms: A Prospective Cohort Study of Older Adults. *Journal of the American Medical Directors Association*, 16 (9) 748–754
- García-Esquinas E, et al (2015). Obesity, fat distribution, and risk of frailty in two population-based cohorts of older adults in Spain. *Obesity*, 23(4) 847–855
- García-Esquinas E, et al (2015). Association of lead and cadmium exposure with frailty in US older adults. *Environmental Research*, 137, 424–431
- García-Esquinas E, et al (2015). Exposure to secondhand tobacco smoke and the frailty syndrome in US older adults. *Age*, 37(2)
- García-Esquinas E, et al (2016). Consumption of fruit and vegetables and risk of frailty: a dose-response analysis of 3 prospective cohorts of community-dwelling older adults. *American Journal of Clinical Nutrition*, 104(1) 132–142
- García-Esquinas E, et al (2016). Housing conditions and limitations in physical function among older adults. *Journal of Epidemiology and Community Health*, jech–2016–207183
- Graciani, A, et al., (2016). Ideal Cardiovascular Health and Risk of Frailty in Older Adults. *Circulation. Cardiovascular Quality and Outcomes*, 9(3) 239–45.
- Lana, A, et al, (2015). Dairy consumption and risk of frailty in older adults: A prospective cohort study. *Journal of the American Geriatrics Society*, 63(9) 1852–1860
- León-Muñoz LM, et al (2015). Patterns of alcohol consumption in the older population of Spain, 2008–2010. *Journal of the Academy of Nutrition and Dietetics*, 115(2) 213–224
- León-Muñoz LM, et al (2014). Mediterranean Diet and Risk of Frailty in Community-Dwelling Older Adults. *Journal of the American Medical Directors Association*, 15(12) 899–903

- León-Muñoz, LM et al (2015). Major dietary patterns and risk of frailty in older adults: a prospective cohort study. *BMC Med*, 13(1), 11
- León-Muñoz, LM, et al (2016). Alcohol drinking patterns and risk of functional limitations in two cohorts of older adults. *Clinical Nutrition* (ahead of print)
- Martínez-Gómez D, et al (2015). Physical Activity, Sitting Time and Mortality in Older Adults with Diabetes. *International Journal of Sports Medicine*, 36(14) 1206-11
- Martínez-Gómez D, et al (2015). Nonexercise Cardiorespiratory Fitness and Mortality in Older Adults. *Med. Sci. Sports Exerc*, 47(3) 568–574
- Orozco-Arbeáez E, et al (2015). Habitual chocolate consumption and 24-hour blood pressure control in older adults with hypertension. *J Am Geriatr Soc*. 63(12) 2637–2639
- Ortolá, R, et al (2016). Patterns of alcohol consumption and health-related quality of life in older adults. *Drug and Alcohol Dependence*. 159, 166–173
- Ortolá, R, et al (2015). Patterns of alcohol consumption and risk of frailty in community-dwelling older adults. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*. 71(2) 251–258
- Rodríguez-Artalejo, F & Rodríguez-Mañas, L (2014). The frailty syndrome in the public health agenda. *Journal of Epidemiology and Community Health*. 68(8) 703–704
- Soler-Vila, H et al (2016). Contribution of health behaviours and clinical factors to socioeconomic differences in frailty among older adults. *Journal of Epidemiology & Community Health*. 70:354–360

Members of the Intellectual Property Committee



The Frailomic consortium welcomes Associate Professor Lino Sánchez Ibarzábal as a newly appointed IPC member. He is partner and technical director at iDeTra and consults in research and development and technology transfer. Professor Ibarzábal replaces Cristina Catalina as a representative iDeTra on the Frailomic IPC.



Professor Lino Sánchez Ibarzábal



MID-Frail also welcomes two additional members to the consortia IPC: Professor Mirko Petrovic from Ghent University and Professor Ivan Bautmans of Vrije Universiteit Brussel, whose research focuses on inflammatory processes involved in muscle weakness and sarcopenia.



Professor Mirko Petrovic



Professor Ivan Bautmans

Conference List

Please find a useful list of upcoming conferences that may be of interest to you. If there are any other conferences that are not on this list but you find relevant, please do let us know and we'd be happy to include this.

- **International Conference on Frailty and Sarcopenia Research (ICFSR)**
27–28 April 2017, Barcelona, Spain.
Abstract submission deadline 30 November 2016. <http://www.frailty-sarcopenia.com/>
- **International Association of Gerontology and Geriatrics (IAGG) World Congress**
July 2017, San Francisco, California.
Late breaker abstract submission opens 15 December 2016, deadline 15 February 2017
- **IANA (International Academy on Nutrition and Ageing)**
23 July 2017 at Moscone Center West in San Francisco, USA. Deadline for abstract submission passed
- **21st International Congress of Nutrition**
15–20 Oct 2017, Buenos Aires, Argentina. Abstract submission opens 03 October 2016
- **European and World Congresses of Geriatric Medicine and Gerontology (EUGMS)**
5–7 October 2016, Lisbon, Portugal.
Deadline for abstract submission passed. <http://www.eugms.org/2016.html>
- **Society for Free Radical Research Europe**
8–11 June 2016: Budapest (Hungary), at the Danubius Thermal Hotel Helia.
Deadline for abstract submission passed. <http://sfrr-e-2016.hu>

Future Newsletters

If you have any news that you would like to share with all in the next newsletter, please do get in touch – we'd be delighted to hear from you. Also if you would like to consider writing a short article for the newsletter please email us with details:

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