

I Enrique Almanza Aguilera

Research interests

My long-term research interests involve the analysis and integration of omics data to develop of a comprehensive understanding of how lifestyle and non-modifiable factors influence human health and disease status. During my PhD formation I actively worked in the study of NMR-based non-targeted metabolomic biomarkers related to disease, dietary intake and lifestyle interventions. Today, as postdoctoral researcher, I am focused on the exploration of the effect of a lifestyle intervention on transcriptome and metabolome profiles related to cardiovascular and Alzheimer diseases. Derived from my research activities I am author of 12 articles and have presented in more than 20 conferences. My academic training and research experience have provided me with a background in multiple disciplines including engineering and food science, biochemistry, nutrition, biostatistics and the use of computational tools for the analysis and visualization of omics data. Regarding this last I have experience using several statistical software and R programming language to conduct processing and statistical analyses with large datasets, as well as using several web-based databases to conduct functional metabolome and transcriptome enrichment analyses. In addition I have experience with wet-lab working including phenolic compounds profiling in foods and bio-fluids by NMR and HPLC-MS.

Education

PhD in **Food and Nutrition** (01/10/2013- 27/09/2017). University of Barcelona (Spain).

Master's Degree in **Food Science and Technology**: (01/08/2009- 17/12/2011). Universidad Autónoma de Querétaro (Mexico).

Undergraduate Degree **Food Engineering**: (01/08/2001- 07/06/2008). Universidad Interactiva y a Distancia del estado de Guanajuato (Mexico).

Experience

WORK EXPERIENCE

Postdoctoral researcher at the Institut Hospital del Mar d'Investigacions Mèdiques (Barcelona). Oct-2018 to Present (24 months). Duties: Processing and analysis of metabolomics and transcriptomics data/Writing scientific articles and reports/Writing of research projects.

Professor at the Universidad del Valle de México (Mexico). Jul-Aug-2018 (1 month). Duties: Online teaching on food and human nutrition.

Professor at the Sistema Avanzado de Bachillerato y Educación Superior (Mexico). Mar-2007 to Sep-2013 (76 months). Duties: Teaching in subjects of Experimental Sciences and Food Technology/Academic planning and school control/Supervision of science projects.

Laboratory Technician at the Instituto Nacional de Investigaciones Forestales Agrícolas y Pecuarias (Mexico). Sep-2004-Aug-2009 (60 months). Duties: Bromatological analysis of foods/Antioxidant capacity and Polyphenols assays in foods/Reports writing.

PUBLICATIONS

Enrique Almanza Aguilera et al. Cancer signalling transcriptome is upregulated in type 2 diabetes mellitus. Free Radical Biology & Medicine [Under review].

Vanessa Bullón-Vela et al. Urinary resveratrol metabolites output: differential associations with metabolic markers and liver status in house-dwelling subjects featuring metabolic syndrome. *Molecules*; 2020.

Enrique Almanza-Aguilera et al. Transcriptional response to a Mediterranean diet intervention exerts a modulatory effect on neuroinflammation signaling pathway. *Nutr Neurosci*; 2020 15;1-10

Mireia Urpí-Sardà et al. Non-targeted metabolomics biomarkers and metabolotypes of type 2 diabetes: A cross-sectional study in the Predimed trial. *Diabetes Metab*; 2019, 45(2):167-174.

Enrique Almanza-Aguilera et al. Impact in plasma metabolome as effect of a lifestyle intervention for weight-loss reveal metabolic benefits in metabolically healthy obese women. *J Proteome Res*; 2018, 17(8):2600-2610.

Michielsen CCJR et al. Biomarkers of food intake for cocoa and liquorice (products): a systematic review. *Genes Nutr*. 2018, 13:22.

Enrique Almanza-Aguilera et al. Microbial metabolites are associated with a high adherence to a Mediterranean dietary pattern using a 1H-NMR-based untargeted metabolomics approach. *J Nutr Biochem*. 2017, 48:36-43.

Mariel Colmán-Martínez et al. trans-Lycopene from tomato juice attenuates inflammatory biomarkers in human plasma samples: An intervention trial. *Mol Nutr Food Res*; 2017, 61(11).

Francisco Madrid-Gambin et al. Urinary 1H Nuclear Magnetic Resonance Metabolomic Fingerprinting Reveals Biomarkers of Pulse Consumption Related to Energy-Metabolism Modulation in a Subcohort from the PREDIMED study. *J Proteome Res*; 2017. 16(4):1483-1491.

Mireia Urpí-Sardà et al. Metabolomics for Biomarkers of Type 2 Diabetes Mellitus: Advances and Nutritional Intervention Trends. *Current Cardiovascular Risk Reports*; 2015, 9:12.

Enrique Almanza-Aguilera et al. Caracterización fisicoquímica de vinos tinto Malbec con diferente tiempo de añejamiento. *Revista Mexicana de Ciencias Agrícolas*; 2012, 3(7), 1347-1360.

Israel Guzmán-Tovar et al. Estudio comparativo de características de calidad entre genotipos de frijol de grano negro. *Agricultura técnica en México*; 2009, 35(4), 449-457.

RESEARCH STAYS

Research and **Innovation Center of the Edmund Mach Foundation**. Metabolomic Unit of the Food Quality and Nutrition Department. San Michele All'adige, Italy. 6 months (01/07/2019-31/12/2019). Supervised by Dr. Urska Vrhovsek.

National **Institute of Forestry, Agricultural and Livestock Research**. Biotechnology Unit. Celaya, Guanajuato, México. 3 months (01/01/2018-31/03/2018). Supervised by Dr. Salvador Horacio Guzmán Maldonado.

Swedish **University of Agricultural Sciences**. Department of Food Science. Uppsala, Sweden. 3 months (01/09/2016-31/11/2016). Supervised by Dr. Rikard Landberg.

University of Salamanca. Faculty of Pharmacy, Polyphenol research group. Salamanca, Spain. 3 months (01/03/2011-31/05/2011). Supervised by Dr. Julián C. Rivas Gonzalo.

Contact information

Contact Person: Av. Carrilet 222 Esc. B 7-2a L'Hospitalet de Llobregat 08901 (Spain).

Email address: ealmanzaa@outlook.com

 ealmanzaa |  0000-0002-4805-0774