Yasamin Soleimanian
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RESEARCH EXPEIREINCE

Postdoctoral Fellow (July 2022-present): Department of Food science, Guelph University- Professor Alejandro G. Marangoni Lab.

Projects:

-Enzymatic glycereloysis of different plant-based oils to produce solid fats with healthier and more sustainable profile

-Development of animal adipose tissue mimetics based on ethylcellulose oleogels of oil glycerolysis products

-Prefabricated plant scaffolds filled with oil to mimic adipose tissue

-Development of a Plant-Based Cheese with Reduced Saturated Fat Content

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Postdoctoral Fellow (June 2021-June 2022): Department of Soils and Agri-Food Engineering, Laval University-Professor Seddik Khalloufi Lab

Projects:

-Setting up and optimization of experimental protocols for measuring physicochemical and functional properties of dietary fibers as powder and as suspension

-Tailoring structure and functional properties of dietary fibers using mechanical treatments

-Creation of synergy between food residues for development of high added value products.

Ph.D. research position (Feb. 2017–Nov. 2017), Department of Pharmaceutical Chemistry; University of Florence, Italy-Professor Francesca Maestrelli Lab.

EDUCATION

Ph.D.

Food Science and Technology (Sep. 2013-Dec. 2018)

Isfahan University of Technology, Isfahan (Iran) in conjunction with Florence University (Italy), Entrance rank: 2 (out of 600), GPA: 18.55/20

Title of thesis: Production and characterization of novel bioactive lipid nanocarriers containing pomegranate seed oil and β-sitosterol

Master

Food Science and Technology (Sep. 2009-Feb. 2012)

Tarbiat Modares University, Tehran (Iran), Entrance rank: 10 (out of 100,000) GPA: 18.77/20 (First ranked student)

Title of thesis: Optimization of Fish Oil Extraction and its Low-Temperature Crystallization for Concentration of PUFAs

Bachelor

Food Science and Technology (Sep 2004-Sep 2008)

Isfahan University of Technology, Isfahan (Iran), GPA: 17.19 (out of 20)

AWARDS AND SCHOLARSHIPS

-Best Student Entrance Scholarship, Tarbiat Modares University (2009)
-First rank student award among all MSc. students of Food Science and Technology, Tarbiat Modares University (2012)
-Research grant of Iran's National Elites Foundation; 2017

PUBLICATIONS

Y. Soleimanian, E. Czapalay, J. Stobbs, A. G. Marangoni (2025), Plant tissue-based scaffolds filled with oil function as adipose tissue mimetics. *Current Research in Food Science.*

Y. Soleimanian, S. Mirzaee Ghazani, A. G. Marangoni (2024), Ethylcellulose oleogels of oil glycerolysis products as functional adipose tissue mimetics. *Food Hydrocolloid*.

Y. Soleimanian, S. Mirzaee Ghazani, A. G. Marangoni (2024), Rheological properties of ethylcellulose oleogels of oil glycerolysis products as functional adipose tissue mimetics. *Food Hydrocolloid*.

E. R. Werner-Cárcamo, **Y. Soleimaniam**, B. A. Macias-Rodriguez, M. Rubilar, A. G. Marangoni (2024), Mechanical properties of wax-oleogels: Assessing their potential to mimic commercial margarine functionality under small and large deformations, *Food Research International*.

Y. Soleimanian, R. Tanti, N., Shaw, A. G. Marangoni (2024), Novel Strategies for Structuring Liquid Oils, Their Applications, and Health Implications. In Advances in Oleogel Development, Characterization, and Nutritional Aspects (pp. 39-76). Springer, Cham.

S. Mirzaee Ghazani, **Y. Soleimanian**, N. Shaw, A. G. Marangoni (2024), Scientific issues and challenges with production and refining edible oils and fats. In Cellular Agriculture: 215-232.

Y. Soleimanian, S. Mirzaee Ghazani, A. G. Marangoni (2023), Enzymatic glycerolysis for the conversion of plant oils into animal fat mimetics. *Food Research International*.

Y. Soleimanian, C, Ratti, A. Karim, D. Rodrigue, S. Khalloufi (2023), Simultaneous valorization of discarded tomato and whey through osmotic dehydration: Development of high value-added products, rheological characterizations, and mass transfer. *Journal of Food Engineering*.

S. Aghajanzadeh, G. Fayaz, **Y. Soleimanian**, A. Mohammad Ziaiifar, S. L. Turgeon, and S. Khalloufi (2023). Hornification: Lessons Learned from the Wood Industry for Attenuating this Phenomenon in Plant-Based Dietary Fibers from Food Waste, *Comprehensive Reviews in Food Science and Food Safety*.

G. Fayaz, **Y. Soleimanian**, M. Mhamadi, S. L. Turgeon, and S. Khalloufi (2022), The Applications of Conventional and Innovative Mechanical Technologies to Tailor Structural and Functional Features of Dietary Fibers from Plant Wastes: A Review, *Comprehensive Reviews in Food Science and Food Safety*.

Y. Soleimanian, I. Sanou, S. L. Turgeon, D. Canizaresd, and S. Khalloufi (2021), Natural Plant Fibers Obtained from Agricultural Residue Used as an Ingredient in Food Matrixes or Packaging Materials: A Review, *Comprehensive Reviews in Food Science and Food Safety*.

Y. Soleimanian, S. A. H. Goli, A Shirvani, A Elmizadeh, and A. G. Marangoni (2020). Wax-based Delivery Systems: Preparation, Characterization and Food Applications, *Comprehensive Reviews in Food Science and Food Safety*.

Y. Soleimanian, S. A. H. Goli, J. Varshosaz, L. Mannelli, C. Ghelardini, M. Cirri, and F. Maestrelli (2020). β sitosterol loaded nanostructured lipid carriers: in Vitro simulated digestion and hypocholesterolemic activity. *Pharmaceutics*, 12, 386.

Y. Soleimanian, S. A. H. Goli, J. Varshosaz and F. Maestrelli (2018). β-sitosterol Lipid Nano Carrier Based on Propolis Wax and Pomegranate Seed Oil: Effect of Thermal Processing, pH, and Ionic Strength on Stability and Structure. *European Journal of Lipid Science and Technology*.

Y. Soleimanian, S. A. H. Goli, J. Varshosaz and F. Maestrelli (2018). Propolis Wax Nanostructured Lipid Carrier for Delivery of β sitosterol: Effect of Formulation Variables on Physicochemical Properties. *Food Chemistry*, 260:97-105.

Y. Soleimanian, S. A. H. Goli, J. Varshosaz and S. M. Sahafi (2018). Formulation and Characterization of Novel Nanostructured Lipid Carriers Made from Beeswax, Propolis Wax and Pomegranate Seed Oil. *Food Chemistry*, 244:83-92.

Y. Soleimanian, M.A. Sahari and M. Barzegar (2015). Influence of Processing Parameters on Physicochemical Properties of Fractionated Fish Oil at Low-Temperature Crystallization. *Nutrition and Food Science*, 45(1):2-19.

M. A. Sahari, F. Farahani, **Y. Soleimanian** and A. Javadi. (2013). Effect of Frozen Storage on Fatty Acid Composition of the Different Tissues of Four Scombrid and One Dussumeriid species. *Journal of Applied Ichthyology*, 30: 381–391.

M. A. Sahari, F. Farahani, **Y. Soleimanian** and A. Mokhlesi. (2013). n-3 Fatty Acid Distribution of Commercial Fish Species Components. *Journal of American Oil Chemist Society*, 90:1167–1178.

PATENT

S. Khalloufi, E. F. Osse, A. Karim, **Y. Soleimanian** (2024). Valorization of whey and soy-based food products. Patent filed.

CONFERENCE PARTICIPATION

Y. Soleimanian, J. Stobbs, A. G. Marangoni, "Manufacturing adipose tissue mimetics: from enzymatic glycerolysis of oils to oil-filled plant-based scaffolds" AOCS Annual Meeting & Expo, Montreal, Quebec (2024), Canada.

Y. Soleimanian, S. M. Ghazani, A. G. Marangoni, "A rheological, mechanical, and microstructural characterization of oleogels of oil glycerolysis products: the suitability as fat replacers in plant-based meat analogs". International Symposium on Food Structure and Rheology (ISFRS), Wageningen (2023), Netherlands.

Y. Soleimanian, S. M. Ghazani, A. G. Marangoni, "The future of enzymatic glycerolysis: scale-up and adipose tissue mimetics". AOCS Annual Meeting & Expo, Denver, Colorado (2023), USA.

Y. Soleimanian, S. M. Ghazani, A. G. Marangoni, "Lipase-catalyzed glycerolysis, a viable solution to develop fat alternatives". Guelph Food Engineering Conference (GFEC), Guelph (2023), Canada.

Y. Soleimanian, S. M. Ghazani, A. G. Marangoni, "Adipose tissue mimetics based on thixotropic ethylcellulose oleogels of oil glycerolysis products". 16th International Hydrocolloids Conference, Guelph (2022), Canada.

Y. Soleimanian, E. Osse , Seddik Khalloufi, "Valorisation des rejets des industries agroalimentaires pour la production des biocomposés requis pour les emballages alimentaires". 89e Congrès de l'Acfas, Quebec (2022), Canada.

H. D. Jougbou Nkala, S. Aghajanzadeh, G. Fayaz , **Y. Soleimanian**, Seddik Khalloufi, "La prévention de l'hornification des fibres alimentaires: Une approche novatrice pour valoriser les rejets alimentaires et contribuer à l'économie circulaire", 89e Congrès de l'Acfas, Quebec (2022), Canada.

Y. Soleimanian, I. Sanou, S. L. Turgeon, D. Canizaresd, and S. Khalloufi, "Food wastes as a source of dietary Fibers and their potential utilizations". 5th International Conference of the International Commission of Agricultural & Biosystems Engineering (CIGR2021), Quebec (2021), Canada.

Y. Soleimanian, S. A. H. Goli, J. Varshosaz, L. D. C. Mannelli, F. Maestrelli, "β sitosterol Loaded Nanostructured Lipid carriers based on propolis wax and pomegranate seed oil: the strategy to overcome oral delivery drawbacks ". 3rd European Conference on Pharmaceutics, Bologna (2019), Italy.

Y. Soleimanian, S. A. H. Goli, F. Maestrelli, L. D. C. Mannelli, "Propolis wax-nanostructuredlipid carriers for improving oral delivery and cholesterol-lowering activity of β-sitosterol". Nanomedicine, Rome (2018). Italy

Y. Soleimanian, "Innovations in Food Packaging" (In Persian). National conference on new technologies in processing, packaging, and storage of food, Islamic Azad University, (2015).

SUPERVISORY EXPERIENCE

Supervised master's and Ph.D. students (2021-present), Laval University (Dr. Seddik Khalloufi Lab)
Supervised undergraduate students (2017), Florence University (Dr. Francesca Maestrelli Lab)
Supervised master students (2015-2016), Isfahan University of Technology (Dr. Amir Hossein Goli Lab)

TEACHING EXPERIENCE

Lecturer (Sep. 2023-Nov. 2023): Department of food science, Guelph University (Food Chemistry Course)

University instructor (Feb. 2020-June 2021): Department of food science, Science and Arts University, Yazd, Iran (Waste treatment, post-harvest technology, and Food preservation Courses).

	University instructor (Sep. 2019- Sep. 2020): Department of food science, Nourdanesh Institute of Higher Education, Isfahan, Iran (Oil and lipid technology, functional foods, food preservation Courses). University instructor (Sep. 2014-June 2015): Department of food science, Azad University, Shahreza Branch, Isfahan, Iran (Meat and fishery science)
OTHER EMPLOYMENT EXPERIENCE	R&D Consultant (Dec 2019-Jun 2021): Kavosh Zist Shayan Company, Iran
LANGUAGE SKILLS	English: IELTS (General Training): Overall 7.5 (2024) Italian: Level A2
ADDITIONAL SKILLS	Microsoft Office package, Microsoft Prism, Microsoft Origin, Microsoft Design Expert
WORKSHOPS	-Book editorial workshop, Isfahan University of Medical Science (2019) -ENEX workshop on Nano Technology, Florence University (2017) -Gas Chromatography, Isfahan University of Technology (2014) -High-Pressure liquid chromatography, Isfahan University of Technology (2014) -Article Writing, Tarbiat Modares University (2009) -Advanced SPSS and Data Analyzing, Tarbiat Modares University (2009) -Lab safety training, Tarbiat Modares University (2008) -Scientific Writing, Isfahan University of Technology (2007)