Personal information

Name and surname: **APRODU IULIANA**

Present academic position: Associate Professor, Faculty of Food Science and Engineering, „Dunarea de Jos" University of Galati, Romania

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Education

2012: Postdoctoral associate, "Dunarea de Jos" University of Galati, Romania POSDRU/89/1.5/ S/52432 project, *Organizing the national interest postdoctoral school of applied biotechnologies with impact on Romanian bioeconomy*, a project co-financed by the European Social Fund through the Sectoral Operational Programme Human Resources Development 2007−2013

2005-2008: **PhD** in Bioengineering/Biotechnology, Department of Bioengineering, Politecnico di Milano, Italy

2002-2004: **MS,** Food Control and Expertise, Faculty of Food Science and Engineering, "Dunarea de Jos "University of Galati, Romania

1997-2002: **BS,** Food Biotechnology, Faculty of Food Science and Engineering, "Dunarea de Jos" University of Galati, Romania

Professional experience

2013, January-July - Fulbright Postdoctoral Associate - Visiting Scholar, Department of Food Science, College of Agriculture and Life Sciences, Cornell University, Ithaca, New York, U.S.A

Since 2012: Associate Professor, - Faculty of Food Science and Engineering, „Dunarea de Jos" University of Galati

2008-2012: Lecturer – Faculty of Food Science and Engineering, "Dunarea de Jos" University of Galati, Romania

2005 -2008: Researcher – Department of Bioengineering, Politecnico di Milano, Italy

2002-2005: Teaching assistant - Faculty of Food Science and Engineering, "Dunarea de Jos" University of Galati, Romania

Research interests

Increasing quality of proteins and sustainability of their processing; Intermolecular interactions in food systems; Develoment of new functional foods; Combining experimental and molecular modelling approach for investigating proteins' structure-function relationships

Selected publications

Dumitraşcu L., Stănciuc N., Bahrim G.E., Ciumac A., Aprodu I. 2015. *pH and heat-dependent behaviour of glucose oxidase down to single molecule level by combined fluorescence spectroscopy and molecular modeling*. Journal of the Science of Food and Agriculture, DOI: 10.1002/jsfa.7296.

Dumitraşcu L., Stănciuc N., Aprodu I., Ciuciu A.M., Alexe P., Bahrim G.E., 2015. *Monitoring the heat induced structural changes of alkaline phosphatase by molecular modeling, fluorescence*

spectroscopy and inactivation kinetics investigations. Journal of Food Science and Technology, DOI 10.1007/s13197-015-1719-1.

\Stănciuc N., Aprodu I., Ioniță E., Bahrim G., Râpeanu G. 2015. *Exploring the process–structure–function relationship of horseradish peroxidase through investigation of pH- and heat induced conformational changes*. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 147, 43-50.

Banu I., Aprodu I. 2015. *Association of physicochemical with technological properties of wheat*. International Journal of Food Science & Technology, 50(7), 1644-1650.

Simion (Ciuciu) A.M., Aprodu I., Dumitraşcu L., Bahrim G.E., Alexe P., Stănciuc N. 2015. *Probing thermal stability of the β-lactoglobulin–oleic acid complex by fluorescence spectroscopy and molecular modeling*. Journal of Molecular Structure, 1095, 26-33.

Aprodu I., Banu I. 2015. *Co-occurrence of fumonisins and T-2 toxins in milling maize fractions under industrial conditions*. CyTA – Journal of food, 13(1), 102-106.

Aprodu I., Banu I. 2015. *Rheological, thermo-mechanical, and baking properties of wheat-millet flour blends*. Food Science and Technology International, 21(5), 342-353.

Aprodu I., Banu I. 2015. *Influence of dietary fiber, water, and glucose oxidase on rheological and baking properties of maize based gluten-free bread*. Food Science and Biotechnology, 24(4), 1301-1307.

Aprodu I., Stănciuc N., Dumitraşcu L., Râpeanu G., Stanciu S. 2014. *Investigations towards understanding the thermal denaturation of lactoperoxidase*. International Dairy Journal, 38(1), 47-54.

Nistor O.E., Stănciuc N., Aprodu I., Botez E. 2014. *New insights into heat induced structural changes of pectin methylesterase on fluorescence spectroscopy and molecular modeling basis*. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 128, 15–21.

Banu I., Dragoi L., Aprodu I. 2014. *From wheat to sourdough bread: a laboratory scale study on the fate of deoxynivalenol content*, Quality Assurance and Safety of Crops & Foods, 6(1), 53-60.

Ionţă E., Aprodu I., Stănciuc N., Râpeanu G., Bahrim G. 2014. *Advances in structure–function relationshipsof tyrosinase from Agaricus bisporus – Investigation on heat-induced conformational changes*. Food Chemistry, 156, 129–136.

Aprodu I., Stănciuc N., Banu I., Bahrim G. 2013. *Probing thermal behaviour of microbial transglutaminase with fluorescence and* in silico *methods*. Journal of the Science of Food and Agriculture, 93(4), 794–802.

Stănciuc N., Aprodu I., Râpeanu G., van der Plancken I., Bahrim G, Hendrickx M. 2013. *Analysis of the thermally induced structural changes of bovine lactoferrin*. Journal of Agricultural and Food Chemistry, *61* (9), 2234–2243.

Aprodu I., Banu I. 2012. *Antioxidant properties of wheat mill streams*. Journal of Cereal Science, 56(2), 189-195

Stănciuc N., Râpeanu G., Bahrim G., Aprodu I. 2012. *pH and heat-induced structural changes of bovine apo-α-lactalbumin*. Food Chemistry, 131(3), 956-963

Banu I., Aprodu I. 2012. *Studies concerning the use of Lactobacillus helveticus and Kluyveromyces marxianus for rye sourdough fermentation*. European Food Research Technology, 234(5), 769-777.

Aprodu I., Walcher G., Schelin J., Hein I., Norling B., Rådström P., Nicolau A., Wagner M. 2011. *Advanced sample preparation for the molecular quantification of Staphylococcus aureus in artificially and naturally contaminated milk*. International Journal of Food Microbiology, 145(1), S61-S65.

Banu I., Stoenescu G., Ionescu V., Aprodu I. 2010. *Physico-Chemical and Rheological Analysis of Flour Mill Streams*. Cereal Chemistry, 87(2), 112-117.

Aprodu I., Soncini M., Redaelli A. 2008. *Interaction forces and interface properties of kinesin-αβ tubulin complex assessed by molecular dynamics*. Journal of Biomechanics, 41(15), 3196 – 3201.

Aprodu I., Redaelli A., Soncini M. 2008. *Mechanical characterization of the motor proteins –a molecular dynamics approach*. Macromolecular Theory and Simulations, 17(7-8), 376 – 384.

Aprodu I., Redaelli A., Soncini M. 2008. *Actomyosin interaction: mechanical and energetic properties in different nucleotide binding states*. International Journal of Molecular Sciences, 9(10), 1927-1943.

Ionescu A., Aprodu I., Daraba A., Porneala L. 2008. *The effects of transglutaminase on the functional properties of the myofibrillar protein concentrate obtained from beef heart*. Meat Science, 79(2), 278-284.

Selected research grants

2015 - *A bottom-up approach on the effects of food processing on the allergenic potential of food proteins* (ALLERGENFREE) - PN-II-RU-TE-2014-4-0618

2013 - Fulbright Senior postdoctoral grant - *Structural and functional investigations of non-traditional, emerging food proteins* – Cornell University, Ithaca, NY, U.S.A.

2012-2015 - Contract 140/2012**,** PN-II-PT-PCCA-2011-3.1-1538 **-** *Developing new graphene-polymer composites biomaterials for scaffold fabrication with applicability in bone repair by coupling multiscale molecular modelling and experiments* (POLYGRAPH).

2008 – 2011 - *Improved bio-traceability of unintended micro-organisms and their substances in food and feed chains* (BIOTRACER), Contract FP6-2006-FOOD-036272

2005-2008 – Early Stage Research Training - Marie Curie Program, within FP6 Biomimetic Systems, cod MEST-CT-2004-504465; research fellow at Department of Bioengineering, Politecnico di Milano, Italy. Project title: *Analysis of the motor proteins by molecular modelling*

Other academic activities

Editor in Chief, *The Annals of University Dunarea de Jos of Galati*, Fascicle VI, *Food Technology* (http://www.ann.ugal.ro/tpa/)