

Iuliana APRODU

Scientific
Activity

➤ Published papers

Books

1. **Aprodu I.**, 2008, *Analysis of the motor proteins by molecular modeling*, Politecnico di Milano, Italia, 127 p, (teza de doctorat)
2. Redaelli A., Soncini M., Vesentini S., Votta E., Deriu M.A., Gautieri A., Fiore G.B., Montevocchi F.M., Soren E., **Aprodu I.**, Ionita M., 2007, *Multiscale modelling in biomechanical applications*. In: *The Nanomechanics in Italy* (Editor: Nicola Pugno), Research Signpost, Kerala, India, ISBN 978-81-308-0237-4
3. Soncini M., Enemark S., **Aprodu I.**, Deriu M.A., Gautieri A. and Redaelli A., 2006, *Characterization of microtubules and motor proteins via molecular dynamics simulations*. In : *Research activities on High Performance Computing Clusters at CILEA - 2006*, ISSN 1120-2440
4. Ionescu A., Zara M., Gurau G., **Aprodu I.**, Vasile A., Păltănea E., 2006, *Procesarea industrială peștelui*, Editura Fundației Universitare „Dunărea de Jos” Galați, 334 p, ISBN (13) 973-627-321-6
5. Paltenea E., Ionescu A., Zara M., **Aprodu I.** ș.a., 2006, *Calitatea nutritională a sturionilor de cultură*, Editura Fundației Universitare „Dunărea de Jos” Galați, 28 p, ISBN (13) 987-973- 627-322-3

Papers

1. 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
2. **Aprodu I.**, Soncini M., Redaelli A., 2008, *Interaction forces and interface properties of kinesin- α tubulin complex assessed by molecular dynamics*, Journal of Biomechanics, 41(15), 3196 - 3201
3. **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
4. **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
5. **Aprodu I.**, Ionescu A., Banu I., Banu C., 2008, *Actin monomer-monomer interaction—a molecular mechanics study*, The Annals of the University Dunarea de Jos of Galati Fascicle VI – Food Technology, New Series Year II (XXXI), 44-50
6. Ionescu A., **Aprodu I.**, Pascaru G., 2008, *Effect of papain and bromelin on muscle and collagenous proteins of the beef meat*, The Annals of the University Dunarea de Jos of Galati Fascicle VI – Food Technology, New Series Year II (XXXI), 9-16
7. Banu I., **Aprodu I.**, Simitaru I., 2008, *Potential of maize cobs for removal Zn(II) and Ni(II) in aqueous systems*, Journal of Agroalimentary Processes and Technologies 14, 173-177
8. Ionescu A., Zara M., **Aprodu I.**, Vasile A., Gurău G., 2008, *La rhéologie des gels à base d'isolat de protéines de petits pois modifié enzymatiquement avec transglutaminase bactérienne*, Scientific Study & Research – Chemistry & Chemical Engineering, Botechnology, Food Industry, Volume IX, no. 3, 2008, 345-356.
9. **Aprodu I.**, Gautieri A., Montevocchi F.M., Redaelli A., Soncini M., 2007, *What molecular dynamics simulations can tell us about mechanical properties of kinesin*

and its interaction with tubulin, Proceedings of the ASME 2007 Summer Bioengineering Conference (SBC2007), 781-782, June 20-24, Keystone Resort & Conference Center, Keystone, Colorado, USA

10. **Aprodu I.**, Gautieri A., Soncini M. and Redaelli A., 2007, *Molecular modeling of the interaction between kinesin motor domain and $\alpha\beta$ -tubulin*, February 26 – March 1, 2007, Proceedings of the Gromacs workshop, Espoo, Finlanda
11. Banu I., Lungu C., Constantin O., **Aprodu I.**, 2007, *The influence of the hydrothermic treatment on the soluble phosphorus contents in milling streams products*, Journal of Agroalimentary Processes and Technologies, 13(1), 7-12
12. Ionescu A., **Aprodu I.**, Zara M., Porneală L., 2007, *Estimation of some functional properties of the myofibrillar protein concentrate from beef heart*, Scientific study & research – Chemistry & Chemical Engineering, Biotechnology, Food Industry, Vol VII, 155-170
13. Ionescu A., Zara M., **Aprodu I.**, Istrate R., 2007, *The effect of starter cultures upon the physical and biochemical characteristics of raw dried sausages*, Scientific study & research – Chemistry & Chemical Engineering, Biotechnology, Food Industry, Vol VII, 10 p
14. Zara M., Ionescu A., Vasile A., **Aprodu I.**, Manoliu I., 2007, *How starter cultures affect the sensorial characteristics and the microbiota evolution of the dry sausages*, Scientific study & research – Chemistry & Chemical Engineering, Biotechnology, Food Industry, Vol VII, 8 p
15. Banu I., **Aprodu I.**, 2006, *Potential of maize cobs for removal Cu(II) in aqueous systems*, Analele Universității din Craiova, vol XI (XLVII), ISSN 1435-1275, pg. 115-120
16. **Aprodu I.**, Redaelli A., Montevecchi F.M., Soncini M., 2006, *Mechanical characterization of myosin II, actin and their complexes by molecular mechanics approach*, ESDA2006, 8th Biennial ASME Conference on Engineering Systems Design and Analysis, Turin, Italy, July 4-7, 2006, Proceedings of ESDA 2006, ISBN 0-7918-3779-3, 1-10
17. Ionescu A., Zara M., Vasile A., **Aprodu I.**, Paltenea E., 2006, *La stabilité physico-chimique de la viande d'esturgeon de Danube (Acipenser stellatus) au congélation*, Scientific Study & Research, Vol. VII (4), p. 805-811
18. Ionescu A., Zara M., **Aprodu I.**, Vasile A., G. Cârâc, 2006, *Monitoring des nitrites et nitrates résiduels des produits de viande salée avec le teste nitrite Merckoquant*, Scientific Study & Research, Vol. VII (4), p. 812-821
19. Banu I., Lungu C., Constantin O., **Aprodu I.**, Vîrlan L., 2006, *The influence of hydrothermal processing upon soluble phosphorus concentration from rye*, Bulletin of the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Buletinul 62/2006, Editura AcademicPres, p. 424 , ISSN 1454-2382.
20. Banu I., **Aprodu I.**, Barna O., 2006, *Competitive adsorption of Zn(II) and Ni(II) ions from aqueous systems by maize cobs*, Bulletin of the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Buletinul 62/2006, Editura AcademicPres, pg. 414, ISSN 1454-2382.
21. **Aprodu I.**, Soncini M., Montevecchi F.M., Redaelli A., 2006, *Molecular mechanics analysis of the actomyosin complex*, 1st European Chemistry Congress, Budapest, August 27-31, 2006, Proceedings of 1st European Chemistry Congress, ISBN 963 9319 61 9, p. 381
22. **Aprodu I.**, Gautieri A., Deriu M., Soncini M. and Redaelli A., 2006, *Mechanical characterization of the kinesin motor core using molecular dynamics approach*, Jülich Soft Matter Days 2006 14-17 November 2006 Bonn, Proceedings of JSMD2006, p. 114
23. Ionescu A., **Aprodu I.**, Cârâc G., Zara M., Vâta C., 2005, *The quality and safety of processed foods based on cured meats in Romania*, "Ovidius" University Annals of

Chemistry", Constanta, ISSN 1223-723X

24. Zara M., Ionescu A., Paltenea E., Vasile A., **Aprodu I.**, 2005, *Sensorial and microbiological quality evaluation of post-mortem Great Sturgeon*, The Annals of „Dunarea de Jos” Galati University, Fascicle VI - Food Technology, ISSN 1221-4574
25. Ionescu A., Zara M., Vasile A., **Aprodu I.**, Paltenea E., 2005, *Study of the post-mortem modification of the Great Sturgeon*, Papers of the International Symposium Euro-aliment 2005, Galati, pag. 52-60, ISBN 973-8316-87-1
26. Ionescu A., Vata C., Zara M., **Aprodu I.**, Vasile A., 2005, *Quality and collagen content evaluation of various types of salami*, Papers of the International Symposium Euro-aliment 2005, Galati, pag. 46-52, ISBN 973-8316-87-1
27. Ionescu A., **Aprodu I.**, Gurău G., 2005. *The effect of microbial transglutaminase on rheological behavior of the fish whet myofibrillar protein concentrate*. Volumul Lucrarilor celui de al X-lea simpozion de Microbiologie și Biotehnologie, Institutul de Cercetări Biologice Iași, 15-16 Octombrie 2004. Editura Corson, Iasi, pg 31-39, ISBN 973-8225-29-9.
28. Ionescu A., Zara M., Vasile A., **Aprodu I.**, 2004, *Studies concerning the perception and acceptance of food products based on fish surimi in Romania*, The Annals of University “Dunarea de Jos” of Galati, Fascicle IV-Food Technology, pg. 17-22, ISSN 1221-4574
29. Ionescu A., **Aprodu I.**, Vasile A., Ivanov M., 2004, *L'étude du comportement rhéologique de pâtes de la viande à la structure homogène*. Actes du seminaire d'animation regionale (Region Europe Centrale et Occidentale) SAR 2004 « Maîtrise et gestion de la qualite dans l'industrie alimentaire », Chisinau 2004, pg 88-94, ISBN 9975-62-233-5
30. Ionescu A., **Aprodu I.**, Zara M., Gurău G., 2004, *L'évaluation de la capacité d'émulsification du concentrat de protéines myofibrillaires obtenues sur la base de la viande de la volaille mécaniquement désossée*, Actes du seminaire d'animation regionale (Region Europe Centrale et Occidentale) SAR 2004 « Maîtrise et gestion de la qualite dans l'industrie alimentaire », Chisinau 2004, pg 178-185, ISBN 9975-62-233-5
31. **Aprodu I.**, Ionescu A., Resmerita D., 2003, *The optimisation of an enzymatic procedure for gluconic acid production*, Acta Universitatis Cibiniensis, seria F, Chemia, vol 6, nr. 1, Sibiu
32. Ionescu A., **Aprodu I.**, Zara M., Vasile A., Gurău G., 2003, *Researches concerning biochemical stability of mechanical deboned poultry meat during freezing*, The Annals of University “Dunarea de Jos” of Galati, Fascicle IV-Food Technology, pg. 38-44, ISSN 1221-4574
33. Ionescu A., **Aprodu I.**, Zara M., Vasile A., Gurău G., 2003, *The obtaining and characterization of mechanically deboned chicken meat myofibrillar protein concentrate*, The Annals of University “Dunarea de Jos” of Galati, Fascicle IV-Food Technology, Pag. 44-53, ISSN 1221-4574
34. Iordachescu G., **Aprodu I.**, 2003, *Sensory analysis of some aromatic plant mixtures*, The Annals of „Dunarea de Jos” Galati University, Fascicle VI - Food Technology, 57, ISSN 1221- 4574.

➤ Oral presentations

1. **Aprodu I.**, Soncini M., Redaelli A., *Single molecule analysis of kinesin in different conformational states*, Marie Curie - Early Stage Training on Biomimetic Systems – Workshop, Toulouse, France, 19-21 September 2007
2. **Aprodu I.**, Soncini M., Redaelli A., *Analysis of the motor proteins by molecular modelling*, Journal Club, Niels Bohr Institute, Copenhagen, Denmark, 5 November

2007

3. **Aprodu I.**, Soncini M., Redaelli A., *Mechanical characterization of the acto-myosin complex*, Bio-Systems Conference, Berlin Germany, 26-29 June 2006
4. **Aprodu I.**, Soncini M., Redaelli A., *Mechanical characterization of myosin II, actin and their complexes by molecular mechanics approach*, ESDA 2006, 8th Biennial ASME Conference on Engineering Systems Design and Analysis, Turin, Italy, 4-7 July 2006
5. **Aprodu I.**, Soncini M., Redaelli A., *Mechanical characterization of kinesin by molecular dynamics simulations*, Marie Curie - Early Stage Training on Biomimetic Systems, Ischia, Italy, 18-19 September 2006
6. **Aprodu I.**, Soncini M., Redaelli A., *Analysis of the interaction between actin and myosin structures by molecular dynamics simulations*, Marie Curie - Early Stage Training on Biomimetic Systems – Workshop, Leoben Austria, 29-30 September 2005

➤ **Posters**

1. **Aprodu I.**, Soncini M., Redaelli A., *Mechanical characterization of the kinesin motor core using molecular dynamics approach*, JSMD2006 Bonn, Germany, 14 – 17 November 2006
2. **Aprodu I.**, Soncini M., Redaelli A., *Molecular mechanics analysis of the actomyosin complex*, 1st European Chemistry Congress, Budapest, Hungary, 27-31 August 2006
3. **Aprodu I.**, Soncini M., Gautieri A., Deriu M.A., Redaelli A., *Molecular modeling of the interaction between kinesin motor domain and $\alpha\beta$ -tubulin*, Gromacs workshop, Helsinki, Finland, 26 February – 1 March 2007
4. **Aprodu I.**, Soncini M., Redaelli A., *Molecular analysis of kinesin in different conformational states*, XXVI Scuola Annuale di Bioingegneria Bressanone - Genomica e proteomica computazionale, Brixen, Italy, 24-28 September 2007
5. **Aprodu I.**, Soncini M., Redaelli A., *What molecular dynamics simulations can tell us about mechanical properties of kinesin and its interaction with tubulin*, ASME 2007 Summer Bioengineering Conference (SBC2007), Keystone Resort & Conference Center, Keystone, Colorado, USA, 20-24 June 2007
6. **Aprodu I.**, Soncini M., Redaelli A., *Molecular dynamics analysis of the actomyosin complex*, Workshop nr 167 - Physics of Molecular Motors – Measurements at the single molecule level, Toulon France, 15-16 June 2006