

# **Arina Maltseva, PhD**

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## **Education:**

Saint-Petersburg State University, faculty of Biology and Soil Science, Department of Invertebrate Zoology:

- Bachelor's thesis: "Defensive function of the inner environment of Echinoderms" (graduated 2000);
- Master's thesis: "Antibacterial peptides from the sea star *Asterias rubens*" (graduated 2003 with honors (diploma *Cum laude*))
- PhD thesis: "The molecular mechanisms of antibacterial defense of the starfish *Asterias rubens*" (graduated 2008).

## **Scientific interest and skills:**

Evolutionary Biology, Molecular Biology, Zoology, Proteomics, Antimicrobial Agents,.

## **Current position:**

Senior lecturer at the Dept. of Invertebrate Zoology, St. Petersburg State University.

## **Current courses:**

"Parasitism: the other reality" for the 2<sup>nd</sup> year undergraduate students

"Basics of parasitology" for the 4<sup>th</sup> year undergraduate students;

"Invertebrate immunity" for 2<sup>nd</sup> year master's students;

"Proteomics: applications, methods, data analysis" for 1<sup>st</sup> year master's student.

## **Current grants:**

"Phylum Bryozoa as a model for studies on the origin and evolution of placentation in Animalia", grant St. Petersburg State University #1.38.233.2015;

"Molecular evolution of a cryptic species complex of intertidal marine gastropods", grant RFBR #15-04-08210a;

"Coevolution and integration of skeletal structures in marine bryozoans (*Gymnolaemata*, *Cheilostomata*)", grant RFBR #13-04-00758a.

## **Fellowships and other recognitions received:**

Leonard Euler fellowship from DAAD (years 2004/2005, diploma).

St.-Petersburg Branch of Russian Biochemical Society (FEBS Constituent Society) member (since 2006).

Russian Association of Allergology and Clinical Immunology (RAACI) (Constituent of European Federation of Immunological Societies (EFIS) member (since 2006).

## **Selected conferences:**

Maltseva A.L., Kotenko O.N., Shavarda A.L., Ostrovsky A.N. "Antimicrobial activity in a marine bryozoan", 16th International Bryozoology Association (IBA) meeting, Catania, Italy, 2013.

Maltseva A.L., Lobov A.A., Mikhailova N.A., Granovitch A.I. "What proteomics can say about periwinkles' species interrelations?", XI<sup>th</sup> International Symposium on Littorinid Biology and Evolution, Hong Kong, China, 2014.

A.L. Maltseva, Mikhailova N.A.; Renaud P.; Varfolomeeva M.A.; Volovik K.; Granovitch A.I. "Proteomic Studies: A Prospective Tool For Estimation Of Environmental Stressor Impact And Ecosystem Biodiversity" ArcticFrontiers, Tromso, Norway, 2016

A.L. Maltseva, M.A. Varfolomeeva, A.A. Lobov, N.A. Mikhailova, A.I. Granovitch. Do proteins "know" anything about speciation? A lesson from littorinids (Mollusca: Caenogastropoda)? *Molluscan Forum*. London, UK, 2016.

**Journal publications:**

- A.L. Maltseva, O.N. Kotenko, V.A. Kutyumov, D.A. Matvienko, A.L. Shavarda, M.K. Winson, A.N. Ostrovsky. 2016. Novel brominated metabolites from Bryozoa: a functional analysis. *Natural Product Research*, 1-9. PMID: 27897055. <http://dx.doi.org/10.1080/14786419.2016.1261344>
- M.N. Berlov, A.L. Maltseva. 2016. Immunity of the lugworm *Arenicola marina*: cells and molecules. *ISJ-Invertebrate Survival Journal* 13: 247-256.
- A.L Maltseva, V.V. Starunov, P.A. Zykin. 2016. Application of MALDI-MSI for detection of antimicrobial peptides in tissues of the marine invertebrate *Arenicola marina*. *ISJ-Invertebrate Survival Journal* 13: 205-209.
- A.L. Maltseva, M.A. Varfolomeeva, A.A. Lobov, N.A. Mikhailova, P.E. Renaud, A.V. Grishankov, K.Y. Volovik, A.I. Granovitch. 2016. Measuring physiological similarity of closely related littorinid species: a proteomic insight. *Marine Ecology Progress Series* 552: 177-193.
- V.A. Kutyumov, A.L. Maltseva, O.N. Kotenko, A.N. Ostrovsky. 2016. Functional differentiation of a bryozoan colony: a proteomic analysis. *Cell and Tissue. Biology* 10(2):152-159. PMID: 27220253.
- K. S. Antonets, K.V. Volkov, A.L. Maltseva, L.M. Arshakian, A. A. Nizhnikov. 2016. Proteomic analysis of *Escherichia coli* protein fractions resistant to solubilization by ionic detergents. *Biochemistry (Moscow)* 81(1): 34-46. PMID: 26885581.
- O.A. Muraeva, A.L. Maltseva, N.A. Mikhailova, A.I. Granovitch. 2016. Mechanisms of Adaption to Salinity Stress in Marine Gastropods *Littorina saxatilis*: a Proteomic Analysis. *Cell and Tissue. Biology* 10(2): 160-169. PMID: 26995971.
- A.A. Lobov, A.L. Maltseva, N.A. Mikhailova, A.I. Granovitch. 2015. LOSP: a newly identified sperm protein from *Littorina obtusata*. *Journal of Molluscan Studies* 81(4): 512-515.
- A.L. Maltseva, O.N. Kotenko, V.N. Kokryakov, V.V. Starunov, A.D. Krasnodembskaya. Expression pattern of arenicins-the antimicrobial peptides of polychaete *Arenicola marina*. *Frontiers in Physiology* 12/2014; 5. DOI:10.3389/fphys.2014.00497.
- A.L. Maltseva, O.N. Kotenko, K.A. Shabalin, A.L. Shavarda, M.K. Winson, A.N. Ostrovsky. Novel brominated fungicidal alkaloid isolated from the marine bryozoan *Chartella membranacea truncata*. *Studi Trentini di Scienze Naturali*. 2014; 94: 163-168.
- A.L. Maltseva, I.N. Urakova, O.N. Pozharitskaya, V.G Makarov. Preliminar analysis of the composition and action mechanism of the complex preparation of codfish liver. *Obz. Klin. Farmakol. Lek. Ter.* 2012; 10(2): 112-113.
- A.L. Maltseva, G.M. Aleshina, V.N. Kokryakov, E.G. Krasnodembsky. The mechanism of the antimicrobial action of the peptide from starfish *Asterias rubens* coelomocytes. *Russian Journal of Immunology*. 2008. 2(11): 150.
- A.D. Krasnodembskaya, G.M. Aleshina, A.L. Maltseva, V.N. Kokryakov, E.G. Krasnodembsky. Analysis of gene expression of the polychaete *Arenicola marina* antibiotic peptides – arenicins. *Russian Journal of Immunology*. 2008. 2(11): 160.

A.L. Maltseva, G.M. Aleshina, V.N. Kokryakov, E.G. Krasnodembsky. Diversity of antimicrobial peptides in acidic extracts from coelomocytes of starfish *Asterias rubens* L. *Vestnik Sankt-Peterburgskogo Universiteta* Ser.3. 2007; 3(1): 85-94.

G.M. Aleshina, A.L. Maltseva, E.G. Krasnodembsky, T.V. Ovchinnikova, V.N. Kokryakov. Antibiotic factors from starfish *Asterias rubens*. *Russian Journal of Immunology* 2004; 9(1): 71.

A.L. Maltseva, G.M. Aleshina, V.N. Kokryakov, T.V. Ovchinnikova, E.G. Krasnodembsky. New antimicrobial peptides from coelomocytes of sea star *Asterias rubens*. *Vestnik Sankt-Peterburgskogo Universiteta* Ser.3. 2004; 4: 101-108.

G.M. Aleshina, E.V. Mironchik, A.L. Maltseva, E.S. Klushevskaya, E.G. Krasnodembsky, V.N. Kokryakov, Antimicrobial peptides from starfish *Asterias rubens*. *Vestnik Sankt-Peterburgskogo Universiteta* 2002; 4(27): 135-137.