

# CURRICULUM VITAE

**Andrey Vishnyakov**

**Date of birth:** 29 October 1959

**Present post and grade:**

Associated Professor  
Department of Invertebrate Zoology,  
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**Qualifications:**

1989 Doctor of Philosophy (Zoology) St.-Petersburg State University, Saint-Petersburg, Russia.

1985 Master of Science, Biology, St.-Petersburg State University, Saint-Petersburg, Russia.

1976 Secondary Education completed: 10 years.

**Grants:**

1996-1998 Russian Fund of Basic Researches grant

1998-2000 Russian Fund of Basic Researches grant

2001-2003 Russian Fund of Basic Researches grant

2001 Special American Business Internship Training Program grant

2002 Deutscher Akademischer Austausch Dienst grant

2003 Deutscher Akademischer Austausch Dienst grant

2004-2006 Russian Fund of Basic Researches grant

2005 Deutscher Akademischer Austausch Dienst grant

2007-2009 Russian Fund of Basic Researches grant

**Participation in conferences:**

1995 Second European Congress of Protistology and Eighth European Conference on Ciliate Biology. Clermont-Ferrand, France

1996 I<sup>th</sup> European Phycological Congress, Cologne

1997 VI Int. Phycol. Congress, Leiden, The Netherlands

1998 VII<sup>th</sup> International Conference on Symbiosis and Carcinogenesis, Freiburg, Germany

1998 International Conference "The problems of biodiversity conservation of the Middle and Low flows of the Dniester river". Chisinau, Republic of Moldova

1999 International Conference "Biodiversity conservation of Dniester basin". Chisinau, Republic of Moldova.

1999 III<sup>rd</sup> Europ. Congr. Protistol., 9<sup>th</sup> Europ. Conf. Ciliate Biol. Helsingor, Denmark

2002 XIV Russian Symposium "Structure and functions of cell nucleus", Saint-Petersburg, Russia.

2002 XXI Workshop of German Protozoology Society. Konstanz, Germany.  
2003 Jahrestagung der Deutschen Pharmazeutischen Gesellschaft, Wuerzburg, Germany  
2004 VIth International Larval Biology Conference, Hong Kong.  
2006 7th International Sponge Symposium. Biodiversity, Innovation, Sustainability, Brasil  
2008 IV Congress of Russian Society of Parasitologists, St.-Petersburg, Russia

**Work abroad:**

1994, 1995 University Paris VI, Paris, France: research and training in microdessection of lampbrush chromosome of amphibians.  
2001 Training at New Marine Harbor Institute and Seacamp Association Inc. on topic "Environmental education for children".  
2002 Tuebingen University, Tuebingen, Germany: Transformation of generative nucleus of Paramecium caudatum  
2003 Tuebingen University, Tuebingen, Germany: Transformation of vegetative nucleus of Paramecium aurelia and P.caudatum by adenylatcyclase gene  
2005 Tuebingen University, Tuebingen, Germany: Identification of GAF domains in Paramecium by bioinformatics tools  
2006 Tuebingen University, Tuebingen, Germany: Identification of HAMP domain structure from Mycobacterium tuberculosis

**Appointments:**

2004-present Associated Professor, Department of Invertebrate Zoology, Biological and Soil Sciences Faculty, Saint-Petersburg State University. Study of symbiosis in system sponges-bacteria.  
1994-2004 Researcher on Staff, Laboratory of Protozoan Caryology, Biological Research Institute of St.-Petersburg State University. Study of symbiosis in system ciliates-bacteria.  
1989-1993 Scientist, Laboratory of Ontogenesis, Biological Research Institute of Saint-Petersburg State University. Study of gametogenesis and embryogenesis of sedentary polychaetes.  
1985-1988 Post-Graduate Student, Zoological Institute of Russian Academy of Science. Study of bioluminescent system of hydrozoan polyps.

**Teaching:**

1985-present Supervision of summer field for undergraduate courses on Invertebrate Zoology  
1985-1988 Preparation and teaching of special course on zoology at the Biological Faculty of the University of St.Petersburg for high school students  
1989-1993 Preparation and teaching of the advanced course on electron microscopy for undergraduate students in Department of Embryology  
1994-present Preparation and teaching of the advanced course "The Ciliates" for undergraduate students in Department of Invertebrate Zoology  
1999-2000 Preparation and teaching of the advanced course "Bioluminescence in Nature" for undergraduate students of Biological Faculty of the University of St. Petersburg  
2000-present Preparation and teaching of advanced course "Modern Methods of the Light Microscopy" for undergraduate students of Biological Faculty of the University of St. Petersburg  
2003-present Preparation and teaching of the advanced course "Invertebrate zoology" for undergraduate students of Biological Faculty of the University of St. Petersburg

- 2007 Preparation and teaching of the advanced course “Invertebrate zoology” for undergraduate students of Medical Faculty of the University of St. Petersburg
- 2007 Preparation and teaching of the advanced course “Soil Biology” for undergraduate students of Biological Faculty of the University of St. Petersburg

### **Skills**

- different methods of electron and light microscopy
- methods of micrurgy: microdessection and microinjection
- cytochemical methods (FISH etc.)
- molecular biological methods with DNA
- cultivation of different groups of invertebrate animals
- open water diver (No 0101U95956)– PADI certificate

### **Languages:**

*Spoken:* Russian; English

*Reading knowledge:* French

### **Publications:**

1. Vishnyakov A.E. Tanning cells and their distribution during hydrant formation in *Obelia loveni*. *Tsitologiya*. 1986, 28:1128 (in Russian).
2. Letunov V.N., Vishnyakov A.E. Marine hydroids as a resource of photoproteins. In: Problems of examination, rational use and protection of natural resources of the White Sea. Kandalaksha: Nauka. 1987. P.185-187 (in Russian).
3. Vishnyakov A.E. Ultrastructure of the photocytes in a hydropolyp *Obelia longissima*. In: Fundamental Researches of the Present-day Spongy and Coelenterates. Leningrad: Nauka. 1989. P.35-36 (in Russian).
4. Vishnyakov A.E. Photocyte distributions within colonies of the hydropolyp *Obelia geniculata*. In: Fundamental Researches of the Present-day Spongy and Coelenterates. Leningrad: Nauka. 1989. P. 36-38 (in Russian).
5. Vishnyakov A.E. Morphofunctional study of photocytes in *Obelia longissima*. *Tsitologiya*. 1990, 32: 203-208 (in Russian).
6. Pylilo I.V., Vishnyakov A.E. Spermatogenesis in *Manayunkia baicalensis* (Polychaeta, Annelida). In: Marine Fauna: Polychaeta and their ecology. St.Petersburg: Zool.Inst. RAS. 1991, Vol.43(51), p. 39-42 (in Russian).
7. Vishniakov A., Rautian M., Lebedeva N., Makarov S. The genetic transformation of the clone of *Paramecium caudatum* resistant for infection by intranuclear symbionts *Holospora undulata*. Abstracts of the Second European Congress of Protistology and Eighth European Conference on Ciliate Biology. Clermont-Ferrand, France, 1995, p.94.
8. Rautian M., Vishniakov A., Makarov S., Ossipov D. Transformation of a *Paramecium caudatum* clone resistant to infection by intranuclear symbiotic bacteria of the Genus *Holospora*. *Eur. J. Protistol.* 1996, 32 (Suppl I): 135-140.
9. Karajan B., Vishniakov A., Raikov I. Infection of alga-free *Climacostomum virens* with *Chlorella* sp. isolated from green *Climacostomum*. Abstr. Ith European Phycological Congress, Cologne, 1996, p.35.
10. Karajan B., Vishniakov A. Intercellular digestion and symbiosis in the ciliate *Climacostomum virens*. Abstr. VI Int. Phycol. Congress, Leiden, The Netherlands. 1997. *Phycologia*, Vol. 36, #4, Suppl. P. 46.

11. Vishnyakov A., Skoblo I., Rodionova G. New motile intranuclear symbionts of ciliate. *Endocyt. cell res.* 1998, 13 (Suppl): 142.
12. Vishnyakov A. Unusual motile intranuclear symbiotic bacteria of ciliate *Paramecium multimicronucleatum* collected in Dniester basin. The problems of biodiversity conservation of the Middle and Low flows of the Dniester river. Abstracts of International Conference. Chisinau, Republic of Moldova, 1998: 36.
13. Vishnyakov A. Photogenic cells of hydropolyps *Obelia longissima* (Pallas) and *Obelia geniculata* (L.). 1999. *Zoosyst. Rossica*, Suppl. 1. P. 155-159.
14. Vishnyakov A., Rodionova G. Motile intranuclear symbionts of ciliate *Paramecium multimicronucleatum*. In: *From Symbiosis to Eukaryotism - ENDOCYTOBIOLOGY VII*, (E. Wagner et al., eds.) Geneva University Press, 1999, P.169-177.
15. Vishnyakov A., Rautian M. Comparative analysis of systematic position of motile symbionts in *Paramecium multimicronucleatum* and other intranuclear symbiotic bacteria of ciliates. Abstr. of International Conference "Biodiversity conservation of Dniester basin". Chisinau, Republic of Moldova, 1999: P.35.
16. Rautian M., Timofeyeva A., Vishnyakov A. Alpha-Proteobacteria as intranuclear symbionts of Ciliates: Peculiarities of their genome organization. // Abstr. 3<sup>rd</sup> Europ. Congr. Protistol., 9<sup>th</sup> Europ. Conf. Ciliate Biol. Helsingor. Denmark, 1999. P.63.
17. Vishnyakov A., Rautian M. Systematic position of some intracellular bacteria of ciliates// Abstr. 3<sup>rd</sup> Europ. Congr. Protistol., 9<sup>th</sup> Europ. Conf. Ciliate Biol. Helsingor. Denmark, 1999. P. 79.
18. Vishnyakov A., Rautian M., Lebedeva N. Possibly new intranuclear symbionts of *Paramecium caudatum*. 2001. *Protistology*. 2, 2. P. 35-38.
19. Karajan B. P., Vishnyakov A. E. Comparison of two aposymbiotic ciliate subclones of *Climacostomum virens* according to their capacity to reinfection. 2001. *Tsitologia*. № 7. P. 714-720.
20. Karajan B.P., Vishnyakov A.E. Endosymbiotic bacteria and their interaction with chlorella in ciliate *Climacostomum virens*. 2002. *Tsitologia*. 44, 12: 17-22.
21. Nekrasova I.V., Potekhin A.A., Vishnyakov A.E., Rautian M.S. Search of challenger vector for symbiotic system *Paramecium – Holospora* transformation. Abstr. XIV Russian Symposium "Structure and functions of cell nucleus", Saint-Petersburg, Russia. 2002, *Tsitologia*, 44, 9: 895-896.
22. Fokin S., Zassoukhina I., Vishnyakov A., Skovorodkin I. Transformation of germline nucleus of *Paramecium caudatum*. 2002, Abstr. 21 Workshop of German Protozoology Society. Konstanz, Germany. 2002: 35.
23. Epifanova N., Vishnyakov A. Localization of tanning cells in three species of *Obelia* (Cnidaria, Leptolida). Abstr. III (XXVI) Int. Conf. "Biol.Res. of the White Sea and Inlets of Eur.North ". 2003. Syktyvkar, Komi Republik, Russia: 33.
24. Weber J.H., Vishnyakov A., Hambach K., Schultz A., Schultz J.E., Linder J.U. Ion channel adenylyl cyclase fusion proteins from Apicomplexa as potential drug targets. Jahrestagung der Deutschen Pharmazeutischen Gesellschaft, 08-11 October 2003, Wuerzburg, Germany: 27.
25. Ereskovsky A. V., Gonobobleva E., Vishnyakov A. Morphological evidence for vertical transmission of symbiotic bacteria in the ovoviviparous sponge *Halisarca dujardini* Johnston (Porifera, Demospongiae, Halisarcida). Abstr. 6th Int. Larval Biology Conference. 2004, Hong Kong. p. 117.
26. Weber J. H., Vishnyakov A., Hambach K., Schultz A., Schultz J.E., Linder J. U. Adenylyl cyclases from *Plasmodium*, *Paramecium* and *Tetrahymena* are novel ion channel/enzyme fusion proteins. 2004, *Cellular Signalling*, 16: 115–125.

27. Ereskovsky A. V., Gonobobleva E., Vishnyakov A. Morphological evidence for vertical transmission of symbiotic bacteria in the viviparous sponge *Halisarca dujardini* Johnston (Porifera, Demospongiae, Halisarcida). 2005, *Marine Biology*, 146: 869–875.
28. Vishnyakov A., A. Ereskovsky. Symbiotic bacteria of different species of *Oscarella* (Porifera, Homoscleromorpha, Plakinidae): comparative ultrastructural studies. 2006, 7th International Sponge Symposium. Biodiversity, Innovation, Sustainability. May 07-13, 2006, Buzios, Brazil. Book of abstracts. Ser. Livros 16. Rio de Janeiro, Brasil. P. 264.
29. Karajan B. P., Vishnyakov A. E., Tavrovskaya M. V., Vasyanin S. I. Infection of algae-free *Climacostomum virens* with symbiotic *Chlorella* sp. isolated from algae-containing *C. virens*. 2007, *Eur. J. Protistology*, 43: 41–146.
30. Kuternitskaya E.A., Vishnyakov A.E., Ereskovsky A.V. Structure of symbiotic bacteria of *Halisarca dujardini* Johnston (Porifera, Demospongiae, Halisarcida) and their influence on primmorph formation. 2008. *Vestnik SPbGU Ser. 3, V. 4*: 5-9.
31. Vishnyakov A.E., Ereskovsky A.V., Kuternitskaya E.A. Symbiotic bacteria of *Halisarca dujardini* and their participation in morphogenetic processes of this sponge. 2008, *Abstr. IX Workshop MBS SPbGU*: 42-43.
32. Vishnyakov A.E., Ereskovsky A.V. Association stability among sponges *Oscarella tuberculata* and *Halisarca dujardini* and their bacterial symbionts. 2008. *Proc. IV Congr. Russian Society of Parasitologists. Vol. 1*: 128-129.
33. Vishnyakov A.E., Ereskovsky A.V. Bacterial symbionts as an additional cytological marker for identification of sponges without a skeleton. 2009, *Mar.Biol.* 156:1625–1632. DOI 10.1007/s00227-009-1198-x.
34. Ereskovsky A.E., Sanamyan K., Vishnyakov A.E. A new species of the genus *Oscarella* (Porifera: Homosclerophorida: Plakinidae) from the North-West Pacific. 2009, *Cah.Biol.Mar.* 50: 369-381.