

# **Tatiana Kuzmenko**

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## **Education:**

### **Master's degree in Biology**

**University of Southern California, Los Angeles, CA** **2009 – 2012**  
Department of Molecular and Computational biology  
Thesis project: Molecular mechanisms of recognition behavior in social insects.  
Advisor: Professor Sergey Nuzhdin

### **Bachelor and Master's degree in Zoology**

**Lomonosov Moscow State University, Moscow, Russia** **2001 – 2006**  
Department of Evolution  
Thesis project: Individual preferences of worker ants in the colony.  
Advisor: Gennady Dlussky

## **Experience:**

### **Laboratory Associate**

**Biology Department** **February 2012 - present**  
**Loyola Marymount University, Los Angeles, CA**

- Course development work: in collaboration with the leading instructor, Develop and Improve General Biology Lab course (200+ students, 15 Undergraduate Teaching Assistants, TAs); Design and Optimize experiments to be performed by students; write manuals, instructions, PowerPoint slides and other supporting materials; work on Web course enrichment: developing instructional videos, interactive materials and online quizzes.
- Educational research: looking into the different approaches of engaging students into the course, experimenting with various educational resources available online, implementing students' feedback into future class development.
- Student supervisor: 1) Instruct and train TAs (meetings twice a week, social activities such as lunch or camping), providing regular written feedback on their performance, maintaining a culture of professional excellence and mutual respect. 2) Work closely with and train a team of laboratory support student technicians (8-10 people) helping them set up the experiments in the

labs. 3) Supervise and help research students on various projects throughout the school year and especially during the Summer.

- Research: the best student engagement with the knowledge happened when students can apply what they learn to create something new like collecting data and drawing the conclusion for the real publishable research study. Hence, I work towards organizing the whole course experimental data into one multiple-year dataset that will be used in publications.

### **Research Assistant:**

**University of Southern California, Los Angeles, CA**      **11/2008 – 12/2011,  
1/2008 - 5/2008**

Conducted independent research project, read and evaluate research literature on the similar subject, presented the results at the lab meeting, supervised and trained undergraduate students.

Techniques utilized: DNA and RNA extraction, purification and quantification;

Primers design, PCR conditions optimization; PCR based methods: RAPD, RACE, step out;

Western blot, Immunohistochemistry: preparation of tissue slices using paraffin and antibody staining;

Electroporation of chicken embryo nervous system with transgenic vectors, confocal imaging;

Data analysis using Internet resources and computer software: Vector NTI, NCBI database, BLAST, ClustalW, Oligo, Primer3 etc.; Statistical analyses: R statistics, SPSS

Fly work: maintaining life stocks of Drosophila lines, collecting virgins, setting up crosses.

Supervisor: Sergey Nuzhdin, snuzhdin@usc.edu

**Research Center for Medical Genetics, Moscow, Russia**      **11/2006 – 12/2007**

DNA and RNA extraction, purification and quantification;

Primers design, PCR conditions optimization;

Supervisor: Michael Skoblov, mskoblov@gmail.com

**University of California in Davis, Davis, CA**      **8/2006 - 10/2006**

Additional techniques: Cloning of a PCR product into a plasmid vector

Keeping laboratory colonies of ants

Field research, collecting insects

**Teaching Assistant in Molecular biology laboratory**

**8/2011-12/2011**

**University of Southern California, CA**

Preparing presentations, quizzes, supervising students during laboratory experiments, grading port-lab reports, quizzes and exams, holding office hours, maintaining BlackBoard (informational student web-portal).

Supervisor: Angel Tabancay, tabancay@usc.edu

**Teaching assistant in the course of Genetics**

**8/2010-12/2010**

**University of Southern California, CA**

Preparing presentations, leading the discussion group, making quizzes, grading quizzes and exams, holding office hours, supervising students, maintaining BlackBoard (informational student web-portal)

Supervisor: Linda Bazilian, bazilian@college.usc.edu

**Chemistry laboratory technician**

**8/2000 - 7/2001**

**High school #5, Troitsk, Russia**

Setting up demonstration experiments, prepare equipment and materials for students practice experiments, maintaining stocks of the reagents in the school laboratory.

**Community public Speaker and Leader**

**8/2012-Present**

**Del Rey Toastmasters Club, CA**

Presenting motivational and educational speeches on various topics, mentor new club members, serving as VP Education Club Officer for two years (2013-2014), attending trainings and keeping club members on top of their educational programs; participating in Speech contest competitions, mentor a new Club.

**Other work experience**

Emergency Response Team Captain	<b>2016 – present</b>
Emergency Response Team Member	<b>2012- 2016</b>
Staff Engagement Committee Member	<b>2015- 2017</b>
Tutor Chemistry, Biology and Math for high school student, Russia	<b>2000-2008</b>
Riding treatment instructor for children with disabilities, Russia	<b>2004-2005</b>
Personal instructor in the horseback riding sport school, Russia	<b>1998-2005</b>

## **Workshops attended**

- Summer School and Workshop Course: **May 16 - June 3, 2011**  
**Linkage and Recombination in Genome Sequences**  
Okinawa Institute of Science and Technology, Japan
- Online/Hybrid Course Development Workshop** **May 31 – June 3, 2016**  
Loyola Marymount University, CA
- Amplicon sequencing workshop** **August 11-15, 2017**  
Wrigley Marine Science Center, Catalina Island, CA

## **Talks**

- “Memory-Enhancing Effect of Emotions and How Stress, Drugs and Exercise Alter Mood”** Loyola Marymount University, CA **March 17, 2017**
- “Emotions Are Essential for Long-term Memory Formation, Demonstrated by Ants”**  
Loyola Marymount University, CA **October 29, 2013**
- “Neurogenetics of Friendship and What Ants Have to Do with It”**  
Loyola Marymount University, CA **November 1, 2012**

## **Skills**

- Lifelong learner (professional development)
- Communication and public speaking, scientific presentations
- Detail-oriented, comfortable following complex instructions and procedures
- New ideas generation, implementation and improvement
- Self-motivation based on natural curiosity and enthusiasm
- Time management and efficiency of work processes
- Planning and organizing complex workplace process or group activities
- Laboratory safety and operation
- Molecular Biology various range of laboratory techniques (see details above)
- Adult and Pediatric First Aid/CPR/AED (most recent training on 07/28/2017)
- Disaster and emergency preparedness and response
- Computer skills: Mac, PC, Office, Photoshop, various video editing software, various data analysis software (see details above), web administration
- Programming languages: basic Java, R, HTML
- Equipment setup, software installation and optimization, troubleshooting

- Plant and animal identification
- Maintenance and care for life plants, insects, freshwater and marine animals
- Languages spoken: Russian, English

## **Interests**

- Educational research on active learning
- Other current research projects: Slime mold network analysis, Plant /bacteria interactions
- Development of Interdisciplinary collaborations and bringing people with different backgrounds together
- Traditional herbal medicine
- Favorite readings: Psychology, Neurobiology and Philosophy
- Outdoor activities: surf, snowboard, salsa, yoga, camping, spending time with my family