
Elena Gronskaya

(née Andreeva)

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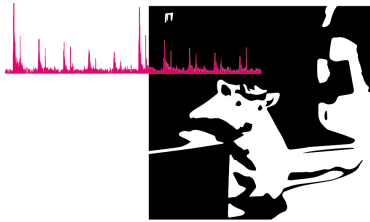
DATE OF BIRTH: 8 Feb. 1989 NATIONALITY: Russian

RESIDENCE PERMIT: B CIVIL STATUS: married, one child



Introduction

As a biochemist-turned-neuroscientist, I get to work with and marvel at living things: the strings of nucleic and amino acids weaving into a fabric that can move, feel, and contemplate its own existence.



During my PhD, I studied the way attention and intrinsic stimulus saliency are intertwined in rats' auditory cortex. It was incredible to see the animals' behaviour paralleled by changes in the brain – another creature's perception becoming tangible. That's the unique and lucky spot in which neuroscientists have landed, with tools to tackle concepts previously restricted to the philosophers' realm: awareness, sensation, choice, and will.

My current aim is to get my hands on more datasets and keep converting philosophy to Python.

Core Competencies

Independent Research

Given full autonomy in my previous research position, became an expert at taking a brand new idea through all the steps needed to reach a finished product.

- assessed state of the field through published literature
- wrote project proposal: hypothesis, methods, materials, possible pitfalls and contingency plans, timeline; applied for experimental licence
- identified research groups with expertise in methodologies that own lab lacked; established collaboration with an expert
- consolidated project plan through iterative discussions with collaborators
- carried out pilot project in expert lab to test initial hypotheses
- modified experimental protocol according to primary findings
- translated project into full scale in own lab
- carried out experiments; gathered and analysed data
- presented results to colleagues and wrote manuscripts for publication

Leadership & Teamwork

Led a team of volunteers to establish the Zurich chapter of an international charity, Giving What We Can (www.givingwhatwecan.org)

- contacted head office to express interest in launching a local branch
- using contacts from head office, set up meeting with three other interested persons in Zurich; used joint network to expand team
- discussed and agreed on agenda for the year
- wrote foundation document to register new society in University of Zurich
- contacted potential high-profile speakers for launch event
- advertised launch event through city (flyers, posters, press announcements)
- following launch event, carried out full year's program of information evenings, discussion nights, and initiatives

Ethical Awareness

Modified the established lab protocol to improve animal welfare.

- identified part of experimental protocol that brought unnecessary stress to animals undergoing behavioral training (water restriction for motivation)
- performed literature research to identify alternative methodologies
- negotiated with lab head a pilot experiment to test an alternative method
- wrote experimental license amendment; applied for grant to test new method
- ran pilot experiments and gathered a dataset that showed proof-of-concept of new method's feasibility (motivation using palatable reward)

Languages & IT Skills

- Languages: Russian (native), English (like native), French (intermediate), German (B1), Swahili (beginner)
- Programming for data analysis: Matlab, Python, SQL

Professional Experience

Data Scientist Researcher, Carlyon AG

Jul 2018-present

- Analysing financial data via web scraping and natural language processing in the Python environment.

Intern, ASIMOV Medical

Jan 2018-Feb 2018

- Compiled an HPO database of disease names and their symptoms and synonyms for a hospital search engine enabling rapid diagnosis of patients with rare diseases. Acquired skills in Python and SQL, and data formats such as XML, JSON, xlsx, tab, and obo.

Assistant Researcher, Institute of Neuroinformatics, University of Zurich

Oct 2011-Jun 2017

- Investigated stimulus processing in the auditory cortex of rats. Trained animals in an auditory discrimination task, performed surgery to implant electrode arrays, carried out electrophysiological recordings and histology, analyzed data (Matlab), wrote papers, presented data to colleagues. Built and wired experimental set-up.
- Assisted with teaching a Masters' course, 'Foundational Literature in Neuroinformatics'. Taught students how to read scientific literature and write abstracts. Graded exams.

Intern, CRUK/MRC Oxford Institute for Radiation Oncology, Oxford, UK

Jun-Jul 2009

- Worked in the Biochemistry and Regulation of DNA Repair Group to isolate and characterize antibodies for ubiquitinated Polymerase β . Purified polyclonal antibodies from crude rabbit serum via affinity HPLC, detected specific binding via Western blotting and immunostaining, confirmed band identity through RNAi knockdown.

Intern, Engelhardt Institute of Molecular Biology, Moscow, Russia

Jul-Aug 2008

- Worked on synthesis of recombinant antibacterial peptides. Learned basic molecular biology methods such as aseptic technique, competent cell preparation, cell plating and transformation, mRNA isolation, RT-PCR, plasmid extraction, and gel electrophoresis.

Project Assistant, Technical Division, Fermilab, USA

Jun-Jul 2006

- Put together eleven high-field magnet production reports from data provided. Organized and filed magnet parts and assembly drawings. Ordered supplies and maintained purchase record database.

Education & Qualifications

Doctor of Sciences of ETH Zürich

Oct 2011-Jun 2017

- Dissertation: 'Sound Processing in the Auditory Cortex of Rats During Sensory Decision-Making'
- Supervisor: Prof. Dr. Kevan A. C. Martin, Institute of Neuroinformatics, University/ETH Zurich
- Publications: Andreeva E. (2015) The Relationship of Tuning and Noise Correlations in Macaque Auditory Cortex. The Journal of Neuroscience, 35:(38) 12974-12976.

Gronskaya E. and Von der Behrens W. (Journal of Neuroscience, in revision) Evoked response strength in auditory cortex predicts performance in a spectro-spatial discrimination task in rats.

- Reviews published as F1000Prime Associate Faculty Member (Neuroscience faculty)

Andreeva E, Martin KAC (2014) F1000Prime Recommendation of [Walsh KP et al., Hear Res 2014,312:143-59]. DOI: 10.3410/f.718352657.793495001.

Andreeva E, Martin KAC (2015) F1000Prime Recommendation of [Gray MJ et al., J Neurosci 2015,35(14):5489-503]. DOI: 10.3410/f.725428545.793506452.

Master of Molecular & Cellular Biochemistry, University of Oxford

2007-2011

- Degree classification: First Class. Final class rank: 4th of 86

- Academic awards & scholarships:

- Hill Foundation Scholarship (full university tuition + maintenance (£22,000+£10,750/year)) 2007-2011
- Gibbs Prize in Biochemistry (£100) - for finishing degree as fourth in class July 2011
- Mary Somerville Prize (£100) - for achieving a First Class degree Aug 2011
- Distinction on examination in Chemical Pharmacology (supplementary subject) Mar 2009
- Scopes Scholarship in Biochemistry (£200) - for 3rd year final examination performance Nov 2010

Volunteer Work

Co-founder, Giving What We Can Switzerland

Oct 2012-2015

- Worked in a team to launch Zurich chapter of Giving What We Can, an Oxford-based organization within the larger movement of Effective Altruism, members of which donate 10% of their income to charities shown to be cost-effective at alleviating poverty in the developing world.

English Teacher, West University of Timisoara, Romania

Jul-Aug 2010

- Taught a summer course in English as a Second Language. Designed lesson plans, prepared course materials, ran daily 3-hour classes, corrected student work and exams. Organized social activities and student city outings.

President, Oxford Orthodox Student Society

Oct-May 2009

- Envisioned, organized, and ran a full term of events for the Oxford Orthodox Student Society, including several high-profile guest speaker nights, weekly dinners, and fortnightly Bible studies. Managed committee, set up mailing list, advertised events, collaborated with other societies, ran stall at the Oxford Freshers Fair.

Secretary, Oxford University Russian Society

2008-2009

- As secretary, was responsible for internal and outside communications of the Russian Society with over 800 society members and interested parties. Wrote weekly newsletter, arranged committee meetings, distributed information, organized, advertised, and ran events.

Photography Exhibition Team, Oxford Fashion Week

Jan-May 2009

- In a two-person team, envisioned, planned, and ran the Fashion Art & Photography Exhibition as part of Oxford's six-event Fashion Week. Modeled on runway for the Couture Show.

Leader, Girl Scouts

2003-2007

- Recipient of the Girl Scout Gold Award (2006) for creating and running a week-long music camp for twenty girls aged 8-10. Learned conducting; taught girls basic rhythm and vocal skills. Rehearsed ten songs, recruited a recording studio to produce recorded CDs, gave a performance at a local nursing home.

Interests & Hobbies

- I love growing things - be it geraniums on my balcony, orchids on my bookshelves, or fishes in my aquarium. Another favourite of mine is to make up a new recipe for apple-cinnamon pancakes or a pumpkin stew and invite friends over for a taste. A big part of my life is music: I sing soprano in my choir at church, and when my husband takes out the guitar, we sing through our long list of childhood favourites. On weekends we like to get out and explore Switzerland - hiking, cycling, swimming, and running.