

Dr. Oleksandr Zhurakovskiy
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Synthetic organic chemist with 3 years of postdoctoral experience in reaction methodology, total synthesis, and drug R&D. Experienced in programming.

Education

DPhil, Organic Chemistry University of Oxford, Oxford, UK	Feb 2014
MS, Chemistry University of Arizona, Tucson, AZ, USA	May 2010
MS, Chemistry (cum laude) Dnipropetrovsk National University, Dnipropetrovsk, Ukraine	Jun 2008
BS, Chemistry (cum laude) Dnipropetrovsk National University, Dnipropetrovsk, Ukraine	Jun 2007

Experience

Organic synthesis: sub-mg to decagrams of substrate. Oxygen- and water-free chemistry, including work in glove box. Experienced in multistep syntheses (up to 15 linear steps), flow- and microwave reactions, preparative HPLC, and academic drug discovery (payloads for antibody-drug conjugates).

2015–present	Postdoctoral research assistant, Aggarwal lab, University of Bristol: total synthesis of α -cyclopiazonic acid. Designed and executed multiple synthetic strategies, balancing the reactivity and instability of various intermediates. Developed a route to the natural product that has challenged the lab for the past 13 years.
2014–2015	Postdoctoral researcher, Myers lab, Harvard University: anticancer drug development, synthesis of fully synthetic trioxacarcin analogs and their antibody-drug conjugates (in collaboration with Pfizer and Genentech). Synthesized over 25 trioxacarcin analogs, some of which had $IC_{50} < 10$ nM in vitro. Developed drug conjugates with greatly improved stability.
2010–2014	Doctoral student, Robertson lab, University of Oxford: single-handedly synthesized a series of elaborated allene azides and studied cascade rearrangements thereof, prepared radianspene J model system to test the newly developed methodology
2009–2010	Master's student, Christie lab, University of Arizona: studied chemistry of boron-nitrogen compounds, synthesized dual Lewis acid – Lewis base bifunctional compounds
2007–2008	Master's student, Tarabara lab, Dnipropetrovsk National University: synthesis of polycyclic compounds from easily available amino acids
2004–2007	Undergraduate research student, Kasyan lab, Dnipropetrovsk National University: synthesis of amino acids derivatives containing a bicyclic subunit

Skills

Chemistry	Total synthesis, organic methodology, multistep synthesis, microscale synthesis and purification (<2 mg), flash chromatography (manual, Biotage, Teledyne Isco), prep-HPLC (Agilent, Waters), recrystallization, distillation
Analysis	NMR, qNMR, IR, HPLC (reverse phase, normal phase, chiral), LCMS, SFC, fluorescence microscopy
Biology	Cell culturing
Other	Data analysis, mentoring, teaching, collaborative work, leadership, public speaking

Languages	English – fluent, Russian – native, Ukrainian – native, German – basic
Computer	Programming and web-development (PHP, HTML, MySQL, Python), data analysis, Microsoft Office, Tableau, Adobe Photoshop, ChemOffice

Projects

- Chemistry Reference Resolver, <http://chemsearch.kovsky.net>: a tool for quick reference retrieval (highlighted in *Nat. Chem.* **2011**, 3, 655; highlighted in the NOS-2013 book of abstracts)
- Robertson Lab Inventory, online resource, 2010–2016

Awards

2011	OxTALENT award
2010–2013	Clarendon Scholarship
2008–2010	Fulbright Graduate Student Exchange Program scholarship
2008	Best Report, First All-Ukrainian Conference for Undergraduate and Postgraduate Students <i>Modern Technologies in Chemical and Food Industries</i>
2007	Victor Pinchuk Foundation scholarship ZAVTRA.UA
2007	1 st place, All-Ukrainian undergraduate scientific works contest
2006–2007	Ukrainian Government Scholarship
2006	President of Ukraine Scholarship for outstanding students

Certificates

2017	Mastering Data Analysis in Excel, Coursera
2017	Business Metrics for Data-Driven Companies, Coursera
2016	Data Analysis with Python & Pandas, Udemy

Publications

1. Zhurakovskiy, O., Ellis, S., Thompson, A., Robertson, J. Access to a guanacastepene and cortistatin-related skeleton via ethynyl lactone Ireland–Claisen rearrangement and transannular (4+3)-cycloaddition of an azatrimethylenemethane diyl, *Org. Lett.*, **2017**, *Accepted*.
2. Okovytyy, S. I., Zhurakovskiy, O. Stereochemistry of the epoxidation of bicycle[2.2.1]hept-2-ene and its 7-*syn*-substituted derivatives. A DFT study, *Bull. Dnipropetrovsk Univ. Chem.*, **2014**, 22, 52.
3. Zhurakovskiy, O, Robertson, J. Versatile Chemistry of Tethered Allene Azides. *Abstracts of the RSC Organic Division Poster Symposium*, **2012**
4. Zhurakovskiy, O, Robertson, J. Pericyclic rearrangements of tethered allene azides. *Abstracts of Papers, 243rd ACS National Meeting & Exposition*, **2012**
5. Zhurakovskiy, O. Chemistry Reference Resolver: A tool to simplify reference retrieval. *Abstracts of Papers, 243rd ACS National Meeting & Exposition*, **2012**
6. [Book translation: ch. 2–4] Korobov V. I., Ochkov V. F. Chemical Kinetics with Mathcad and Maple, Springer-Verlag: Wien, **2011**.
7. Zhurakovskiy, O.A.; Tarabara, I.N. New epoxide derivatives of endic anhydride and its condensation products with amino acids. *Dnipropetrovsk National University bulletin*, **2008**
8. Zhurakovskiy, O.A.; Tarabara, I.N. Reduction of amides of caged imidocarboxylic acids with NaBH₄/MeOH – THF system. *Abstracts of the Sixth All-Ukrainian Young Scientists and Students Conference on Current Problems in Chemistry*, Kharkiv, Ukraine, June 3–6, **2008**; p. 102.
9. Tarabara, I.N.; Bondarenko, Ya.S.; Zhurakovskii, A.A.; Kasyan, L.I. New derivatives of 2-(3,5-Dioxo-4-azatricyclo[5.2.1.0[2,6-endo]]dec-8-en-4-yl)acetic Acid. Synthesis and reactivity. *Russian Journal of Organic Chemistry*, **2007**, 9, 1297.

10. Tarabara, I.N.; Bondarenko, Ya.S.; Zhurakovskiy, O.A.; Bondarenko, A.V.; Kasyan, L.I. Synthesis and transformations of new derivatives of 2-(3,5-dioxo-4-azatricyclo[5.2.1.0^{2,6endo}]dec-8-ene-4-yl)pentanedioic acid. *Voprosy khimii i khimicheskoy tekhnologii (Problems of Chemistry and Chemical Technology)*, **2006**, 4, 42-46.
11. Zhurakovskiy, O.; Bondarenko, Ya.; Tarabara, I.; Kasyan, L. Unusual epoxidation reaction of norbornene-derived amino acids. *Abstracts of the International Symposium on Advanced Science in Organic Chemistry*, Sudak, Ukraine, June 26-30, **2006**; p. C-057.
12. Zhurakovskiy, O.; Makarov, A.; Shevchenko, L.; Tsokur, N. Development of sodium ethylenediaminetetraacetatoferrate(III) synthesis. *Abstracts of the Second All-Ukrainian Young Scientists and Students Conference on Current Trends in Chemistry*, Dnipropetrovsk, Ukraine, May 7-12, **2004**; p. 106

Commitments

- 2016–present Web Officer, Oxford University Society Bristol&Bath
- 2013–present Editor, Bulletin of Dnipropetrovsk National University, Series Chemistry
- 2011–2015 Reviewer, Fulbright Ukraine

Mentoring and Teaching

- 2016 Supervised a visiting undergraduate student for 6 months, giving him theoretical and practical knowledge of total synthesis
- 2013 Demonstrator, 2nd–3rd year undergraduate organic chemistry lab, University of Oxford: co-supervising 10–25 students per session, marking lab reports
- 2010 TA, University of Arizona: supervising 24 undergraduate students, developing pre-lab lectures, grading reports and exams
- 2009–present Delivered various presentations and webinars as listed on <http://kovsky.net/presentations.php>

References

- Prof. Varinder K. Aggarwal, University of Bristol, v.aggarwal@bristol.ac.uk, +44-117-954-6315
- Prof. Andrew Myers, Harvard University, myers@chemistry.harvard.edu, +1-617-495-5718
- Prof. Jeremy Robertson, University of Oxford, jeremy.robertson@chem.ox.ac.uk, +44-1865-275660