Dr. Oleksandr Zhurakovskyi

Associate Principal Scientist, Pharmaron UK

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Synthetic organic chemist with experience in reaction methodology and synthesis of complex molecules.

Experience

04/2018–present **Associate Principal Scientist, Pharmaron UK Ltd.**

10/2015–03/2018 **Postdoctoral Research Associate, Varinder K. Aggarwal Group, University of Bristol**: Total synthesis of α-cyclopiazonic acid; synthesis of vinyl boronates from alkynes. Designed and executed multiple synthetic strategies, balancing the reactivity and stability of various intermediates. Developed an enantioselective route to the natural product that has challenged the lab for the past 17 years.

03/2014–10/2015 **Postdoctoral Researcher, Andrew Myers Group, 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-linker conjugates with greatly improved stability.

10/2010–02/2014 **Doctoral student, Jeremy Robertson Group, 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

Education

University of Oxford, Oxford, UK — 10/2010–02/2014
DPhil, Organic Chemistry

University of Arizona, Tucson, AZ, USA — 08/2008–05/2010
MS, Chemistry

Dnipropetrovsk National University, Dnipropetrovsk, Ukraine — 09/2007–06/2008
MS, Chemistry (cum laude)

Dnipropetrovsk National University, Dnipropetrovsk, Ukraine — 09/2003–06/2007
BS, Chemistry (cum laude)

Skills

Chemistry	Total synthesis, organic methodology, multistep synthesis (1 mg to 20 g), 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, GCMS, SFC, fluorescence microscopy
Biology	Cell culturing
Languages	English – fluent, Russian – native, Ukrainian – native, German – basic
Computer	Programming and data analysis (Python, R), web development (PHP, MySQL, HTML), Microsoft Office, Adobe Photoshop, ChemOffice, Tableau
Other	Mentoring, teaching, collaborative work, leadership, public speaking.

Personal 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, University of Oxford, 2010–2015

Peer Review

2013–present Editor, Bulletin of Dnipropetrovsk National University, Series Chemistry

2011–present Reviewer, Fulbright Ukraine

Mentoring and Teaching

06/2016–12/2016	Supervised a visiting undergraduate student, giving him theoretical and practical knowledge of total synthesis
10/2013–12/2013	Demonstrator, University of Oxford, Department of Chemistry, 2nd and 3rd year undergraduate organic chemistry lab: co-supervising 10–25 students per session, marking lab reports
01/2010–05/2010	Teaching Assistant, University of Arizona, Department of Chemistry: 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

Publications

1. O. Zhurakovskyi, V. Palchykov, Synthesis of N,O,S-Heterocycles by One-Pot Reactions of Epoxides, Aziridines and Oxaziridines, in *Advances in Organic Synthesis*, Vol. 9, **2018**, 147-248.
2. O. Zhurakovskyi, R. M. P. Dias, A. Noble, V. K. Aggarwal, Stereo- and Regiocontrolled Methylboration of Terminal Alkynes, *Org. Lett.*, **2018**, *20*, 3136–3139 *[Highlighted in SYNFACTS][Highlighted in OPRD]*
3. O. Zhurakovskyi, Y. E. Türkmen, L. E. Löffler, V. A. Moorthie, C. C. Chen, M. A. Shaw, M. R. Crimmin, M. Ferrara, M. Ahmad, M. Ostovar, J. V. Matlock, V. K. Aggarwal, Enantioselective Synthesis of the Cyclopiazonic Acid Family Using Sulfur Ylides, *Angew. Chem. Int. Ed.*, **2018**, *57*, 1346–1350 *[Hot Paper][Featured in Chemistry By Design][Highlighted in SYNFACTS]*
4. O. Zhurakovskyi, L. E. Löffler, V. K. Aggarwal, Enantioselective Total Synthesis of α-Cyclopiazonic Acid, Abstracts of the 32nd Postgraduate Symposium, RSC Heterocyclic and Synthesis Group, **2017**
5. O.Zhurakovskyi, S. R. Ellis, A. L. Thompson, J. Robertson, 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**, *19*, 2174–2177.
6. S. I. Okovytyy, O. Zhurakovskyi, 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.
7. O. Zhurakovskyi, J. Robertson, Versatile Chemistry of Tethered Allene Azides. *Abstracts of the RSC Organic Division Poster Symposium*, **2012**
8. O. Zhurakovskyi, J. Robertson, Pericyclic rearrangements of tethered allene azides. *Abstracts of Papers, 243rd ACS National Meeting & Exposition,* **2012**
9. O. Zhurakovskyi, Chemistry Reference Resolver: A tool to simplify reference retrieval. *Abstracts of Papers, 243rd ACS National Meeting & Exposition,* **2012**
10. [Book translation: ch. 2–4] Korobov V. I., Ochkov V. F. Chemical Kinetics with Mathcad and Maple, Springer-Verlag: Wien, **2011**.
11. I. N. Tarabara, Y. S. Bondarenko, A. A. Zhurakovskii, L. I. Kasyan, 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*, 1297–1304.