Kenneth Atz

Curriculum Vitae

I am a PhD student at ETH Zürich and I am strongly interested in the fields of machine learning applied to drug science, chemistry and biomedicine. During my studies I was able to gain valuable insights into a variety of interdisciplinary academic research groups and I was given the opportunity to complete an internship at Roche. I am critically thinking, open-minded, resilient, and strive to challenge the status quo.

Education

2019 - present	**PhD Student**, Machine learning for drug discovery. Research Group of Prof. Gisbert Schneider, ETH Zürich
2017 - 2019	**Master of Science in Chemistry**, *5.8/6*. Faculty of Science, University of Basel
2014 - 2017	**Bachelor of Science in Chemistry**, *5.3/6*. Faculty of Science, University of Basel

Relevant Experience

Sept. 2019 - present	**Doctoral Candidate**, *Research Group of Prof. Gisbert Schneider*, ETH Zürich. Machine learning for drug discovery
2019	**Research Assistant**, *Supervisor: Prof. Sebastian Hiller*, Biozentrum, University of Basel. **Content:** Structural biology of pro-inflammatory cytokines and chaperones. **Acquired skills:** Multidimensional NMR experiments for backbone assignment of proteins, PCR, western-blots plasmid design *in vivo* migration assays with macrophages. [7 m.]
2018-2019	**Master's student**, *Supervisor: Prof. Anatole von Lilienfeld*, University of Basel. **Content:** Machine learning reaction yields with Kernel-based methods. **Acquired skills:** Python, git, *ab initio* first principle calculations, molecular representation and Kernel-based machine learning methods. [4 m.]
2017 - 2018	**Internship**, *Supervisor: Dr. Uwe Grether*, Pharma Research and Early Development (pRED), F. Hoffmann-La Roche Ltd, Basel. **Content:** Design, synthesis and evaluation of novel ligands, fluorescent probes and PET tracers optimized for their bioactivity, selectivity and physicochemical properties targeting the endocannaboid system. **Acquired skills:** Drug design and development, extensive scope of organic chemical reactions. [9 m.]

Programming and Software Skills

Programming Languages: Fluency in Python; Intermediate C++, Swift; Java, HTML | **Machine/Deep Learning Frameworks:** PyTorch, Tensorflow | **Databases:** SQL | **QM:** Psi4 **Software:** PyMol, ChemDraw, Topspin, MOE

Further Experiences and Education

2016 - 2017	Tutor for Organic Chemistry and Mathematics, University of Basel
2015	Civil Service, Felix Platter-Spital, next to a full-time semester [7 m.]

Language Skills

German	Native
English	Fluent in spoken and written

Hobbies

Photography, surfing, running and German and English literature.

Publications

2019   T. Gazzi *et. al.* Drug Derived Fluorescent Probes for the Specific Visualization of Cannabinoid Type 2 Receptor-A Toolbox Approach ChemRxiv10283027, **2019**, submitted

R. Sarott *et. al.* Highly Specific, Fluorescent Cannabinoid Type 2 Receptor Probes Enable Applications in Microscopy, Flow Cytometry and FRET-based Binding Assays ChemRxiv10288547 **2019**, submitted

A. Haider *et. al.* Structure–Activity Relationship Studies of Pyridine-Based Ligands and Identification of a Fluorinated Derivative for Positron Emission Tomography Imaging of Cannabinoid Type 2 Receptors *J. Med. Chem.* **2019**, accepted

K. Weiland *et. al.* Mechanical Stabilization of Helical Chirality in a Macrocyclic Oligothiophene *J. Am. Chem. Soc.* **2019**, 141, 5, 2104

Conference Contributions

2018   International Cannabinoid Research Society (ICRS), Leiden, Netherlands

Awards

2013   Gold Medallist, Swiss Chemistry Olympiad, ETH Zürich