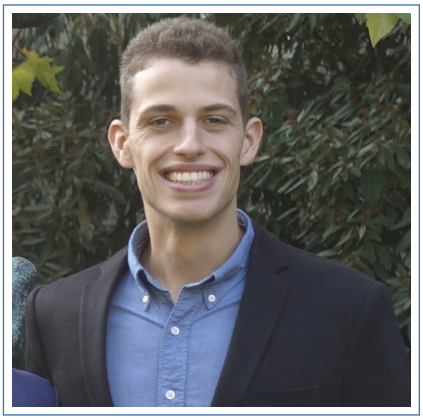

Kenneth Atz

Curriculum Vitae

I am a PhD student at ETH Zürich and I am strongly interested in the fields of machine learning applied to drug discovery, 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: Revealing structural insights of proteins *via* NMR spectroscopy.
Acquired skills: Multidimensional NMR experiments for backbone assignment of small proteins (100-120 kDa), recombinant protein expression and purification, PCR, plasmid design, cysteine selective labelling, *in vivo* assays with macrophages, biophysical binding assays to measure bioaffinity. [7 m.]

2018 **Master's student**, *Supervisor: Prof. Anatole von Lilienfeld*, University of Basel.
Content: Machine learning reaction yields. *via* NMR spectroscopy.
Acquired skills: Python, git, *ab initio* first principle calculations, molecular representation and Kernel-based machine learning methods. [4 m.]

2017 - 2018 **Master's thesis**, *Supervisor: Dr. Uwe Grether*, Pharma Research and Early Development (pRED), F. Hoffmann-La Roche Ltd, Basel.
Title: *Design synthesis and evaluation of novel ligands and chemical probes targeting the endocannaboid system*
Content: Development of novel ligands, fluorescent probes and PET tracers optimized for their bioactivity, selectivity and physicochemical properties.
Acquired skills: Extensive scope of organic chemical reactions. [9 m.]

Programming and Software Skills

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

Further Experiences and Education

2016 - 2017 Tutor for Organic Chemistry I and II, University of Basel

2015 Civil Service, Felix Platter-Spital, next to a full-time semester [7 m.]

Genossenschaftsstrasse 18, 8050 Zürich
+41 78 679 62 42 • *kenneth.atz@gmail.com*

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

Genossenschaftsstrasse 18, 8050 Zürich

+41 78 679 62 42 • *kenneth.atz@gmail.com*