

# Heiner Atze

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## EDUCATION

### **Postgraduate diploma – Biostatistics and Methods in Public Health**

Paris Saclay University, Paris, France

Oct 2023 — Sep 2024

Master level courses in :

- Probability and Statistics
- Clinical Research
- Quantitative Epidemiology

### **Doctor of Philosophy – Biochemistry, Microbiology**

Sorbonne University, Paris, France

Nov 2018 — Sep 2021

### **Master of Science(\*) - Medicinal Chemistry**

Friedrich-Schiller-University, Jena, Germany

Sep 2014 — Sep 2016

(\*)German Diplom, degree awarded after 5 years of study and submission of a research thesis

### **State examination - Pharmacy**

Friedrich-Schiller-University, Jena, Germany

Sep 2010 — Sep 2014

## RESEARCH EXPERIENCE

### **Doctoral Researcher – Biochemistry, Microbiology**

INSERM, Paris, France

Jun 2018 — Sep 2021

Researcher in Team 12 “Bacterial structures implicated in antibiotic resistance” at the Centre de Recherche des Cordeliers, Paris

Two main axes of research:

#### **1. Biological characterization of new generation $\beta$ -lactamase inhibitors**

in vitro and in vivo characterization of inhibitors, data analysis and interpretation, feedback into the consult-design-test-repeat cycle in collaboration with the team of organic chemists

#### **2. Fundamental research on cell wall metabolism in gram-negative bacteria**

De novo method development: isotopic labeling of cell cultures, sample preparation, analysis by mass spectrometry, custom data analysis tools and pipelines

Key achievements and skills:

- Exploration of the chemical space around the core inhibitor and identification of crucial ligand-target-interactions
- Handling and managing a large amount of results and data from biological experiments
- Development and maintenance of custom data analysis tools available at [Gitlab](#)

**Research assistant – Medicinal and Pharmaceutical Chemistry**

Friedrich-Schiller-University, Jena, Germany

Nov 2014 – Apr 2015

Biological characterization of putative anti-inflammatory substances, fundamental research on signaling cascades in inflammation using biochemical methods and imaging techniques

# WORK EXPERIENCE

## PHARMACIST

### Pharmacie Attal

Fontenay-aux-Roses, France

Oct 2021 – present

Pharmaceutical counseling of patients  
Responsible for communication with medical staff in nursing homes  
Supervision of technical staff and pharmacy students

### Other Pharmacies

Jena, Germany

Nov 2015 – May 2018

## PRE-REGISTRATION PHARMACIST

### F. Hoffmann-La Roche

Basel, Switzerland

May 2015 – Oct 2015

# SKILLS

## LANGUAGES

German: Native Speaker  
English: Professional proficiency  
French: Professional proficiency

## TECHNICAL

- Programming languages:

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- : advanced
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# PUBLICATIONS

Atze et al. (2022) Bouchet et al. (2021) Bouchet et al. (2020) Le Run et al. (2020) Triboulet et al. (2019) Garscha et al. (2017)

## JOURNAL ARTICLES

- Atze, H., Liang, Y., Hugonnet, J.-E., Gutierrez, A., Rusconi, F. and Arthur, M. (2022), “Heavy isotope labeling and mass spectrometry reveal unexpected remodeling of bacterial cell wall expansion in response to drugs”, Elife, eLife Sciences Publications Limited, Vol. 11, p. e72863.
- Bouchet, F., Atze, H., Arthur, M., Ethève-Quelquejeu, M. and Iannazzo, L. (2021), “Traceless staudinger ligation to introduce chemical diversity on  $\beta$ -lactamase inhibitors of second generation”, Organic Letters, ACS Publications, Vol. 23 No. 20, pp. 7755–7758.

- Bouchet, F., Atze, H., Fonvielle, M., Edoo, Z., Arthur, M., Ethève-Quelquejeu, M. and Iannazzo, L. (2020), "Diazabicyclooctane functionalization for inhibition of  $\beta$ -lactamases from enterobacteria", *Journal of Medicinal Chemistry*, American Chemical Society, Vol. 63 No. 10, pp. 5257–5273.
- Garscha, U., Romp, E., Pace, S., Rossi, A., Temml, V., Schuster, D., König, S., et al. (2017), "Pharmacological profile and efficiency in vivo of diflapolin, the first dual inhibitor of 5-lipoxygenase-activating protein and soluble epoxide hydrolase", *Scientific Reports*, Nature Publishing Group UK London, Vol. 7 No. 1, p. 9398.
- Le Run, E., Atze, H., Arthur, M. and Mainardi, J.-L. (2020), "Impact of relebactam-mediated inhibition of mycobacterium abscessus BlaMab  $\beta$ -lactamase on the in vitro and intracellular efficacy of imipenem", *Journal of Antimicrobial Chemotherapy*, Oxford University Press, Vol. 75 No. 2, pp. 379–383.
- Triboulet, S., Edoo, Z., Compain, F., Ourghanlian, C., Dupuis, A., Dubée, V., Sutterlin, L., et al. (2019), "Tryptophan fluorescence quenching in  $\beta$ -lactam-interacting proteins is modulated by the structure of intermediates and final products of the acylation reaction", *ACS Infectious Diseases*, American Chemical Society, Vol. 5 No. 7, pp. 1169–1176.

## REFERENCES

Available upon request

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