

ANDRE HOLZER

Department of Plant Sciences, Downing Street, University of Cambridge, UK

ORCID: [0000-0003-2439-6364](https://orcid.org/0000-0003-2439-6364) E-mail: ah830@cam.ac.uk

EDUCATION

- 2017 – 2021** **Doctor of Philosophy (PhD)**
University of Cambridge, United Kingdom
Full-time research degree in the Department of Plant Sciences consisting of research, training and teaching in the areas of Algal Biotechnology, Systems Biology and Bioinformatics. PhD thesis: “Investigating the genomic, transcriptomic and metabolic landscape of *Chlamydomonas reinhardtii* in the context of vitamin B₁₂ availability.”, supervised by Prof Alison Smith, funded by the Gates Cambridge Scholarship
- 2014 – 2015** **Semester abroad, Visiting student**
University of Cambridge, United Kingdom
Microbiological reserach training program in the area of algal-bacterial symbiosis performed in the laboratory of Professor Alison Smith, Department of Plant Sciences; supported by Heidelberg University, funded by the Baden-Württemberg scholarship
- 2013 – 2017** **M.Sc. Molecular Biotechnology**
Ruprecht-Karls University Heidelberg, Germany (final grade: 1.1)
Interdisciplinary life science programme combining the fields of Drug Discovery, Biophysical Chemistry and Bioinformatics. Master thesis: “Probing and Modulating Chromatin Accessibility to Investigate Enhancer-Promoter Wiring in Human Cells.”, supervised by Prof Karsten Rippe, BioQuant & DKFZ
- 2010 - 2013** **B.Sc. Molecular Biotechnology**
Ruprecht-Karls University Heidelberg, Germany (final grade: 1.5)
Bachelor thesis: “FRET-biosensors for *in vivo* studies of PhrC signaling in *Bacillus subtilis*.”, supervised by Dr Ilka Bischofs, BioQuant & ZMBH
- 2002 - 2010** **Abitur (equivalent to A levels)**
Cusanus Gymnasium St. Wendel, Germany (final grade: 1.7)
With distinctions in Math, Chemistry and History

RECENT PUBLICATIONS

- Llaverro-Pasquina M, Geisler K, **Holzer A**, Mehrshahi P, Mendoza-Ochoa GI, Newsad S, Davey MP, Smith AG (2022) [Thiamine metabolism genes in diatoms are not regulated by thiamine despite the presence of predicted riboswitches](#). *New Phytologist* 235: 1853-1867.
- Urban L*, **Holzer A***, Baronas JJ, Hall MB, Braeuninger-Weimer P, Scherm MJ, Kunz DJ, Perera SN, Martin-Herranz DE, Tipper ET, Salter SS, Stammnitz MR (2021) [Freshwater monitoring by nanopore sequencing](#). *eLife* 2021.
- Geisler K, Scaife MA, Mordaka PM, **Holzer A**, Mehrshahi P, Mendoza-Ochoa G, Smith AG (2021) [Exploring the impact of terminators on transgene expression in *Chlamydomonas reinhardtii* by a synthetic biology approach](#). *Life* 11(9): 964.
- **Holzer A** & Stammnitz MR (2020) [Water quality monitoring by citizen science](#). *The Scholar* 17: 15.
- **Holzer A**, Newsad S, Tran NA, Harrison E, Smith AG (2020) [Microalgae, bacteria and vitamins: three key players in aquatic microbial communities](#). *Microbiology Today* 47: 51-53.
- Bunbury F, Helliwell KE, Mehrshahi P, Davey MP, Salmon DL, **Holzer A**, Smirnoff N, Smith AG (2020) [Responses of a Newly Evolved Auxotroph of *Chlamydomonas* to B₁₂ Deprivation](#). *Plant Physiology* 183: 167–178.
- for more please visit [Goolge Scholar](#).

RESEARCH & TEACHING EXPERIENCE

- Jan 2022 - today** **Postdoctoral Research Associate, University of Cambridge**
Full-time job as bioinformatician researching on microbial systems genomics in the context of understanding microbial communities in hot springs
- April 2018 - today** **Co-founder and co-leader, PuntSeq**
A public health and citizen science initiative employing novel AI based DNA sequencing technology to monitor freshwater quality.
- Nov - Dec 2019** **Course instructor, University of Cambridge**
Algae UK and EIT sponsored workshop on “Expressing transgenes in *Chlamydomonas* and *Phaeodactylum*”
- July - Aug 2019** **Workshop organiser & instructor, BioMakespace Cambridge**
Cambridge Metagenomics Challenge by PuntSeq
- Jan - Feb 2018+19+20** **Course demonstrator, University of Cambridge**
Demonstrated for the course “1B Cell and Developmental Biology”
- March - July 2016** **Graduate research assistant, University of Heidelberg**
Genome Organization & Function Group, BioQuant/DKFZ
Implemented analysis of epigenetic next-generation sequencing data
- Feb - April 2016** **German Cancer Research Centre (DKFZ), Heidelberg**
Division of Optical Nanoscopy, Advisor: Prof. Dr. Stefan Hell
Analysed telomere structure by STED nanoscopy
- May - Oct 2015** **Tutor, IPMB, University of Heidelberg**
Taught and supervised 4th semester students in Physical Chemistry II
- Jan -Feb 2014** **German Cancer Research Centre (DKFZ), Heidelberg**
Computational Oncology Group, Advisor: Dr. B. Hutter
Incorporated computational frameworks into user-friendly pipelines
- May - July 2013+14** **Graduate research assistant, University of Heidelberg**
Theoretical and Computational Chemistry Group, IWR
Instructed, organised and assessed theoretical calculations for evaluating new computational algorithms
- Dec - Jan2013/14** **Graduate research assistant, University of Heidelberg**
Bacterial Signaling Network Group, BioQuant/ZMBH
Developed MATLAB based database framework, analysing experimental FRET data
- Aug - Oct 2013** **Student assistant, Fresenius Medical Care St. Wendel**
Biocompatibility Laboratory, Applications Engineering
Reviewed haemocompatibility of dialysis products and evaluated lab procedures
- Aug - Sep 2012** **Intern, Fresenius Medical Care St. Wendel**
Biocompatibility Laboratory, Advisor: Dr. A. Erlenkötter
Designed, tested and matched arterial with venous anticoagulant application to improve haemodialysis
- Oct - Feb 2011/12** **Tutor, CAPiTO Lernzentrum, Tutoring Centre Nußloch**
Taught principally sixth formers in Maths and Physics

August 2009

Fresenius Medical Care, St.Wendel

Scanning electron microscope, Analytical Laboratory

Scanning electron microscope, Analytical Laboratory Performed cryo-preparation and simple analytical experiments

2006 - 2014

Private tutor

Teaching school students from all levels in Maths and Physics

AWARDS & FELLOWSHIPS

2022	Finalist in the Cambridge Independent Science and Technology Awards
2021	Finalist for the Vice-Chancellor Research Impact and Engagement Award
2020	Finalist for the Vice-Chancellor Research Impact and Engagement Award
2016/17 - 2021	Gates Cambridge scholarship
2018	Frank Smart studentship
2018 - 2021	e-fellows.net scholarship
2016 - 2020	BBSRC DTP scholarship
2016 - 2020	Cambridge Trust scholarship
2016	EMBL/EMBO conference fellowship
2014 -2015	Baden-Württemberg scholarship
2010	German Mathematician Society award (best in Maths)
2010	Fresenius Medical Care award (best in Chemistry)
2010	Adolf-Bender award (best in History)

ADDITIONAL INFORMATION

- **Philosophy.** I am keen to constantly develop my understanding and acquire new skills and knowledge.
- **Versatility.** I gained broadness through a variety of projects within both academic and non-academic environments. I am excellent at problem solving and team working. I show great written and verbal communication skills in my presentations, assignments, articles, posters, essays and projects completed as part of my education and research work.
- **Computing & IT.** I have a high degree of computer literacy and I am well trained in data analysis, with excellent skills using all extensions of Microsoft Office. I routinely conduct advanced Bash, R and Perl scripting, execute cloud and cluster computing and I am experienced in working with GitHub, LaTeX, Pascal, MATLAB, Adobe Photoshop, Adobe InDesign, Illustrator, HTML/CSS and many more applications as well as IT processes.
- **Languages.** German: native speaker; English: fluent (TOEFL iBT 2017: 106), 4+ years of international experience.
- **Personal Interests.** Biking, Hiking, Dancing, Horse riding and Karate

More available on request