

Curriculum Vitae

Personal information Sarah Verbeek

Work experience

Postdoctoral fellow Physical Virology

- Start date: 06-2022
- End date: 06-2024
- Employer: Umeå University
- Country: Sweden
- Activities: Established atomic force microscopy experiments on living cells in the lab, including safety procedures for virus-infected cells in an open experimental setup (BSL-2); literature review on methods to characterize the glycocalyx

Project management intern Marketing and R&D

- Start date: 03-2022
- End date: 06-2022
- Employer: IBA Lifesciences GmbH
- Country: Germany
- Responsible for the development of an ELISA user protocol for customers, using IBA products with the [Strep-Tag system](#); Worked in a German-speaking, quality-controlled environment according to GMP principles; Practical laboratory experience with ELISA assays

Graduate researcher Biophysical Chemistry

- Start date: 09-2015
- End date: 09-2020
- Employer: University of Göttingen
- Country: Germany
- Conducted interdisciplinary collaborative study on model membranes, aiming to gain understanding of the precise mode of action of arginine-rich cell-penetrating peptides, for more strategic use in drug delivery systems and antimicrobial applications, which led to a prize-winning publication; Experience in atomic force microscopy and other advanced microscopy; Teaching assistant and head assistant *Introduction to physical chemistry*: responsible for organization and preparation of tutoring groups, seminars and exams; Creation of digital practical courses and instructions for device use

ERASMUS research trainee biophysical chemistry

- Start date: 10-2014
- End date: 04-2015
- Employer: University of Göttingen
- Country: Germany
- Activities: Responsible for the experimental work of a fundamental interdisciplinary study presenting a novel theoretical framework for restricted diffusion within lipid bilayers (published); experienced with confocal laser scanning microscopy

Creator digital learning material for Physics and Chemistry

- Start date: 02-2014
- End date: 06-2014
- Employer: NTI/Educatief (educational publishers)
- Country: Netherlands
- Activities: Conversion of workbook assignments for school students to a digital environment

04-2013 - 09-2013

Research assistant soft matter chemistry

- Start date: 04-2013
- End date: 09-2013
- Employer: Leiden University
- Country: Netherlands
- Activities: Assessed a novel tripeptide complex's ability to induce membrane fusion as a novel strategy for drug delivery

Research assistant inorganic chemistry

Metals in Catalysis, Biomimetics and Inorganic Materials, Universiteit Leiden

- Start date: 11-2010
- End date: 04-2011
- Employer: Leiden University
- Country: Netherlands
- Activities: Synthesized crystals of a Tb(III) complex, resulting in resolution of a crystal structure and being part of a publication

Education and training

Project Management Associate ([IPMA Level D](#))

- Start date: 11-2021
- End date: 06-2021
- Institution: BUPNET GmbH
- Country: Germany
- Subjects/skills: Comprehensive course on project management, including project planning strategies, setting operational goals, team management and stakeholder management; Introduction to several forms of project management, including agile methods

Dr. rer. nat. Biophysical Chemistry (magna cum laude)

- Start date: 09-2015
- End date: 09-2020
- Institution: University of Göttingen
- Country: Germany
- Subjects/skills: Thesis with Prof. Dr. A. Janshoff: *Effects of arginine derivatives and oligopeptides on the physical properties of model membranes*

MSc Chemistry (cum laude)

- Start date: 02-2012
- End date: 05-2015
- Institution: Leiden University
- Country: The Netherlands
- Subjects/skills: Design & Synthesis specialism; Thesis with Dr. A. Kros: *Heterotrimeric coiled coil-forming peptides in two novel membrane fusion systems*; ERASMUS research report Göttingen, Germany: *Characterizing fusion of membrane-coated silica beads through FRAP experiments* (led to co-authorship in publication); Literature essay and colloquium on the SLC4A11 gene responsible for CHED and Harboyan Syndrome (rare eye disease, syndrome with sensorineural hearing loss)

BSc Molecular Science & Technology

- Start date: 09-2008
- End date: 10-2011
- Institution: Leiden University & Delft University of Technology
- Country: The Netherlands
- Subjects/skills: Major chemistry, Minor Linguistics

Additional information

Publications

Verbeek SF, Awasthi N, Teiwes NK, Mey I, Hub J, Janshoff A, 2021, *How arginine derivatives alter the stability of lipid membranes: dissecting the roles of side chains, backbone, and termini*
European Biophysics Journal 50: 127–142

- **Awarded** the [European Biophysics Journal \(EBJ\) Prize](#) at the EBSA Congress 2023

Verbeek SF, *Effects of arginine derivatives and oligopeptides on the physical properties of model membranes*, **Doctoral Thesis**, Göttingen, 2021

Witt H, Savić F, **Verbeek S**, Dietz J, Tarantola G, Oelkers M, Geil B, Janshoff A, 2021,

Membrane fusion studied by colloidal probes

European Biophysical Journal 50: 223–237

Savić F, Kliesch T-T, **Verbeek S**, Bao C, Thiart J, Kros A, Geil B, Janshoff A, 2016, *Geometry of the Contact Zone between Fused Membrane-Coated Beads Mimicking Cell-Cell Fusion*

Biophysical Journal 110: 2216-28

Akerboom S, Hazenberg ET, Schrader I, **Verbeek SF**, Mutikainen I, Fu WT, Bouwman E, 2014, *o-Oxazolinyl- and o-Thiazolinylphenol as Antennae in Luminescent EuIII and TbIII Complexes*

European Journal of Inorganic Chemistry 2014: 4896-906

Projects

I have participated in several research projects, but none directly involving development of medication or medical devices. They are listed in the fields above.

Memberships

I am a member of the Dutch cornea patient association and an editor for its magazine, Cornea Magazine. As a junior researcher, I had presentations at several national and international conferences, but unrelated to medical research.

I received a publication award for my first-author paper:

Verbeek SF, Awasthi N, Teiwes NK, Mey I, Hub J, Janshoff A, 2021, *How arginine derivatives alter the stability of lipid membranes: dissecting the roles of side chains, backbone, and termini*

European Biophysics Journal 50: 127–142

- **Awarded** the [European Biophysics Journal \(EBJ\) Prize](#) at the EBSA Congress 2023

Other Relevant Information

I am a patient representative