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Nationality: Latvia (with UK settled status: full right to work in both EU and UK)

A scientist by training (Cell Biology PhD, University of Cambridge/MRC LMB) with experience in academia, industry and non-profit sectors. Main expertise includes cell biology and biochemistry, proteomics, as well as other -omics techniques, in addition to a diverse skillset of teaching, outreach, community-building, project coordination, and communications.

EDUCATION

Oct 2017 – Apr 2022	PhD in Biological Sciences, University of Cambridge MRC Laboratory of Molecular Biology (LMB) Thesis: Circadian regulation of protein homeostasis
Sept 2013 – Jul 2017	BSc in Molecular Cell Biology with a year in Europe, University of York, UK Thesis: The role of protein glycosylation in mesenchymal stem cell differentiation First class honours with distinction (82 weighted average)

SELECTED WORK EXPERIENCE

OUTREACH & COMMUNITY-BUILDING

Oct 2022 – present Co-Director & Programme Manager at Cell Ag UK

- Leading on science outreach and public engagement: e.g. organised a panel talk at a music festival in Scotland, interactive workshops at schools.
- Established several new partnerships; involved in community-building projects: careers development programmes, journal clubs
- Secured grant funding, talked at public events nationally and internationally
- Completed a project on UK universities' potential in cellular agriculture. Led on conceptualisation, planning and implementation, incl. gathering relevant quantitative and qualitative data; interviewing stakeholders; synthesising, summarising and visualising findings

Apr 2025 – present Science outreach & open science event organiser

- Organising an interdisciplinary science school & retreat at INTP (Institut Nature e Teoria en Pireneus) in France in Sept 2025
- Working on open science and metascience initiatives; securing grant funding

Sept 2018, Sept 2019 Volunteer Scientist at European Researchers Night / LifeLab, UK

- Bringing research and hands-on experiments to general public in shopping centres
- Designing and delivering interactive lecture on my research, as part of "LifeLab School Roadshow"

Jun 2018 – Jun 2022 Coordinator, Cambridge Convoy Refugee Action Group, UK

Acted as an Outreach coordinator, and previously as an executive committee secretary for the registered charity. Involved in events organisation, volunteer recruitment, communications & G-suite admin.

LEARNING AND TEACHING

Jun 2018 – Aug 2021 Session Leader, Postgraduate Outreach at the University of Cambridge

- Worked for University's Admissions Office on various widening participation programmes (e.g. HE+, Melanin Medics), open day events, etc: designed, organised and led bespoke taster lectures and supervisions for high school students.
- Developed online resources (reading, activity sheets) on Biology topics for She Talks Science programme at Murray Edwards college; organised a site visit to the LMB for students

Jun 2020 – Apr 2021 PhD Tutor at The Scholars Programme, Brilliant Club

- Designed and conducted a set of tutorials on my research topic to pupils from low representation backgrounds with the aim to introduce them to HE-style education and increase access
- Developed a short syllabus with a dedicated handbook and delivered 16 virtual (due to the pandemic) group sessions (a set of 8 tutorials for 2 groups).
- Set homework and essay questions, incl. a 2000-word final assignment. Provided written feedback throughout the course, assessed and graded the assignments.
- Undergone training on syllabus design and tutorial delivery

Jun 2011 – present Teacher and Mentor at ABFS, Latvia

- Independently conducted hands-on science projects for middle- and high school pupils during ABFS summer school, as well as read lectures on various STEM topics
- Organised and delivered extra-curricular activities, creative workshops and social events
- Acted as welfare tutor for pupils at the school, subsequently as a mentor for youth leaders and assistants

Aug 2017 Research Assistant & Course Leader at School of Molecular and Theoretical Biology, Spain

Worked at an international summer school for high school students from diverse backgrounds: acted as a lab assistant as well as a course leader for afternoon classes.

RESEARCH

May 2025 – present Research Fellow – Computational Scientist for Proteomics at UCL Cancer Institute, London

- Responsible for implementing computational approaches for quantitative processing of mass spectrometry data, characterisation of the regulatory phosphoproteome, and data integration with multi-omics.
- Working in close contact with other members of the institute and managing a variety of high-paced, collaborative projects; collaborating with researchers from project design to the interpretation of experimental results as well as training other scientists

Jun 2023 – Oct 2024 Proteomics Scientist at RxCelerate, Cambridge

Delivered ProQuant® platform offering proteomics and data analysis services for drug discovery:

- Designed LC-MS/MS proteomics experiments for biotech and pharma clients, e.g. for analysis of biologics' cleavage patterns, proteoforms, PTM biomarkers in human serum.
- Processed and analysed proteomics data from raw mass spectra to biological insights using commercial & open-source software and custom Python & R scripts.
- Developed bioinformatics methods, incl. DIA analysis pipelines and QC procedures;
- Conducted exploratory data analysis on clinical and plasma proteomics datasets
- Managed internal and external projects, collaborating with *in vitro* scientists and service providers, and presenting findings to clients; supported data-driven projects beyond proteomics

Oct 2017 – Oct 2021 PhD Candidate

Nov 2021 – Oct 2022 Postdoctoral scientist at MRC Laboratory of Molecular Biology, Cambridge

- Completed PhD project, investigating the interplay between cell-autonomous circadian rhythms and protein homeostasis in mammalian cells. Developed and optimised cellular assays to gain insight into temporal regulation of cell metabolism, protein synthesis & degradation, and post-translational function
- Developed and implemented advanced pulsed SILAC-TMT dynamic proteomics strategies as well as novel analyses of existing -omics datasets (RNAseq, phosphoproteomics, network/GO analyses)
- Involved in multiple collaborative projects, incl. performing a novel phosphoproteomics and protein disorder regions (IDR) analysis for a biophysics project, resulting in a *Nature* article
- Wrote and edited multiple scientific articles, reviews, proposals, presentations; presented findings at national and international conferences
- Proactively involved in public engagement initiatives around the institute's research, incl. participating in open days, organising school visits
- Organised scientific conferences (e.g. graduate student-run interdisciplinary conference, UK Clock Club – a circadian community meeting) and talks

2014-2016 Research Intern, multiple months-long placements in UK, Germany, Sweden

- Worked with GC-MS-based glycomics and Bayesian modelling approaches for investigating protein glycosylation (University of York, research assistant & final year project)
- Developed tumour spheroids methods for spatial metabolomics (EMBL, Germany, internship)
- Conducted CRISPR screens for glioblastoma cancer models (Karolinska Institutet, Sweden, Erasmus+)
- Employed lipidomics and signalling studies in prostate cancer organoids (Babraham Institute, UK, Amgen Scholars placement)

KEY SKILLS AND TRAINING

- **Teaching:** preparation of written and oral teaching materials, facilitation, delivery of virtual and in-person classes, assessment & feedback
- **Communications:** writing, editing, and oral presentations for academic and non-academic audiences
- **Bioinformatics and programming skills:** R (advanced), Python (intermediate); statistical analysis of omics data (advanced proteomics, PTM analysis; experience with other -omics); biological network gene ontology analysis; data integration with public databases
- **Other computer skills:** full proficiency in MS Office365 and Google Suite, database software (Filemaker), web management, AI tools, virtual learning environments
- **Laboratory skills:** extensive hands-on experience and understanding of cell culture (incl. stem cells, 3D models, cancer models) and cell assays; protein biochemistry; molecular genetics; microscopy; FACS
- **Languages:** English (fluent); French, German (intermediate); Latvian, Russian (fluent)
- **Other transferable:** problem solving, critical thinking; teamwork; project coordination; event organisation

SELECTED AWARDS & PUBLICATIONS

2022 Excellence Award (Society for Research of Biological Rhythms – SRBR) – award of \$600 for presentation at SRBR 2022 conference (~5 awards given out, selected from ~500 submitted abstracts)

2020 Merit Award (SRBR) – award of \$300 for (online) presentation at SRBR 2020 conference

2017 LMB Scholarship (Medical Research Council) – full paid tuition and living expense stipend for 3.5 years for PhD study at the University of Cambridge and MRC Laboratory of Molecular Biology (LMB)

2017 Top Project award (Royal Society of Biology) for the best undergraduate final year project

Publications

E. Seinkmane, et al., Circadian regulation of macromolecular complex turnover and proteome renewal. *EMBO J* (2024)

J. Watson, E. Seinkmane, et al., Rapid changes in protein condensation buffer intracellular water against osmotic and thermal challenge, *Nature* (2024)

D. Wong, E. Seinkmane, et al., CRYPTOCHROMES promote daily protein homeostasis. *EMBO J.* (2022).

A. Stangherlin, E. Seinkmane, J. O'Neill, Understanding circadian regulation of mammalian cell function, protein homeostasis, and metabolism. *Curr. Opin. Syst. Biol.* (2021).

A. Stangherlin, [...], E. Seinkmane, [...], et al., Compensatory ion transport buffers daily protein rhythms to regulate osmotic balance and cellular physiology. *Nat. Commun.* (2021).

M. Putker, D. Wong, E. Seinkmane, et al., CRYPTOCHROMES confer robustness, not rhythmicity, to circadian timekeeping. *EMBO J.* (2021)

K. Wilson, [...], E. Seinkmane, et al., Glycans modify mesenchymal stem cell differentiation to impact on the function of resulting osteoblasts. *J. Cell Sci.* (2018)

N. Hoyle, E. Seinkmane, et al., Circadian actin dynamics drive rhythmic fibroblast mobilization during wound healing. *Sci. Transl. Med.* (2017)

N. Rzechorzek, [...], E. Seinkmane, et al., Circadian clocks in human cerebral organoids. *bioRxiv* (2024)