

Connor Sampson

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Biological scientist with award winning levels of excellence in both laboratory research and scientific communication. Have worked as the first member of a newly founded research group, aiding in the setup of a functional research environment whilst successfully carrying out a range of independent and collaborative research projects. Have high levels of expertise in the areas of protein biochemistry and molecular biology.

Experience

Laboratory Research

Possess a wide range of technical proficiencies, and am quick to master new techniques.

Successfully developed novel experimental systems, designed original protocols, and rapidly produced high quality results.

My work formed the basis of multiple first author manuscripts, and has been accepted for presentation at an international level.

Laboratory Management

Played a major role in creating a functional laboratory as the first member of the Mulligan Laboratory.

Science Communication

Skilled in the presentation of complex subjects to both academic and non-academic audiences.

Regularly presented my research at a departmental level, and have also discussed my work at conferences.

Co-authored scientific manuscripts based upon my research.

Performed outreach projects in schools, teaching research techniques and discussing scientific subjects.

Project Management and Teamwork

Successfully planned and performed complex scientific projects, forming the basis of academic publications and grant applications.

Conducted independent project work, as well as organising collaborative work.

Performed networking in order to gain skills and resources, allowing me to complete research which would not have been independently achievable.

Teaching and Mentoring

Mentored both students and research staff, teaching them complex scientific procedures, and providing general research skills.

Performed laboratory supervision for undergraduate students, while undergoing teacher training.

Health and Safety

Was an active member of the University of Kent School of Biosciences Health and Safety Committee.

Created risk assessments for new procedures.

Ensured that large groups of students worked safely within a busy laboratory.

Technical Skills

- Rapid optimisation of protein expression and purification
- Protein expression and purification from both *E. coli* and *S. cerevisiae*
- HPLC SEC based protein analysis
- Circular Dichroism
- Cysteine accessibility assays
- High throughput thermostability based binding assays
- MST based affinity assays
- Aggregation based lipid interaction screens
- Immunoprecipitation assays
- Proteoliposome based radioisotope transport assays
- Optimisation and use of native lipid nanodiscs
- Optimisation and use of MSP based nanodiscs
- PCR
- Site-Directed Mutagenesis
- Detection and management of a phage outbreak
- Generation of protein family phylogenetic trees

n.b. These skills apply to both soluble and integral membrane proteins

Qualifications

PhD in Microbiology / Biochemistry, University of Kent, 2017-2020

Examined the dynamics and molecular interactions of a secondary active transporter from a poorly characterised protein family, generating a far more detailed model of the protein's substrate interactions and transport cycle.

Developed new techniques for use with this protein, generated two principle author manuscripts, and laid the foundations for future research.

Was awarded the *Lonza Biologics Prize for Best Talk* for the presentation of my research.

Associate Fellow of the Higher Education Academy, University of Kent, 2017-2018

Became qualified as a teaching assistant through lessons, assignments, and teaching observations.

MSc in Biochemistry, University of Kent, 2016-2017

Studied the effect of translational errors on proteins and their host cells for *S. cerevisiae* and *E. coli* through a combination of *in vitro*, *in vivo*, and computational techniques.

Was awarded the *1st Prize at the Research Masters Symposium* for the presentation of my research.

BSc(hons) in Biochemistry, 1st Class – University of Kent, 2013-2016

Received three separate awards for highest achieving student within my year group.

Hobbies

Running tabletop roleplaying games, gaining experience in communication and presentation, while managing diverse groups of people with differing needs.