

Edward Saunders

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Enthusiastic biologist experienced in developing and implementing research projects to **complex neurodegenerative disorders**, with a focus on biological and computational approaches. **Skilful communicator** with experience liaising between senior management, staff, students, and unions. **Experienced researcher** across a range of research fields, with current focus on **computational analysis** of sMRI and DWI tractography in **Alzheimer's**. Previous research experience in **cannabinoids**, and their therapeutic potential for **Parkinson's disease**; **qPCR** detection of MotA and **antibiotic resistance**; strain typing of bacteria.

PROFESSIONAL EXPERIENCE

Human Biologist and Computational Neuroscientist Researcher

Sept. 2017 – Present
2020 - 2021

University of Nottingham / Nottingham, UK

- Computational conversion and analysis of sMRI and DWI tractography in Alzheimer's patients
- Use of MATLAB and Python to develop computational programs suitable for research purposes
- Professional and academic writeup, statistical analysis, and code contribution for larger research project

Student

2020 - 2021

University of Nottingham / Nottingham, UK

- Computational structural analysis of the LC in Alzheimer's Patients
- Bioinformatics gene sequence analysis
- Biomedical modelling of inhibitory synaptic networks; neuronal decoupling through synchrony with propagation delays; neuronal oscillation on evolving networks; synaptic depression

Researcher

2019 - 2020

University of South Wales / Pontypridd, UK

- Rearing and animal husbandry of Planarian flatworms
- Therapeutic Potential of Cannabinoids for Parkinson's and Methamphetamine Use
- Proper and regulated drug administration of schedule II drugs anadamide and methamphetamine
- Immunohistochemistry and immunofluorescent staining of TyH in Planaria, RT-PCR and qPCR
- Statistical analysis and academic writeup of quantitative and qualitative data

Microbiology Researcher

2019

University of South Wales / Pontypridd, UK

- Strain typing and serotyping, and antibiotic resistance through disk diffusion testing in Welsh water samples

Genetics Researcher

2018

University of South Wales / Pontypridd, UK

- Investigation of antibiotic resistance in E.coli samples, and subsequent effect of gene cassettes
- Detection of MotA using qPCR

EDUCATION

Masters of Science in Computational Neuroscience, Cognition, and AI University Of Nottingham	2020-2021
Bachelors of Science Honours in Human Biology University Of South Wales	2017-2020

SKILLS & LANGUAGES

Skills: Academic Writing | Animal Dissection | Aseptic Technique | Biomedical Modelling | Class II Substance Regulation | Communication Strategy | Cross-Functional Communication | Data Analysis | Data Collection | Human Tissue Handling | MATLAB and Python Development | Organisational Strategy | Professional Liaison | Project Design | Project Management | Safe Laboratory Practice |

Languages: English (*native*) | Spanish (*beginner*) | BSL (*beginner*)

AWARDS

Platinum Award as Course Representative University of South Wales	2018/19 & 2019/20
Award of Outstanding Achievement in Human Biology University of South Wales	2017
National Citizen Service (NCS)	2016
Oracle iLearning Java Foundations certificate	2015

REFERENCES

Biological Research

Dr Darren Johnson

Dissertation Supervisor

d.l.johnson@kingston.ac.uk

Dr Jeroen Nieuwland

Senior Lecturer in Human Biology

jeroen.nieuwland@southwales.ac.uk

Computational Research

Dr Andrew Reid

Research Project Supervisor

andrew.reid@nottingham.ac.uk

Dr Mark Van Rossum

Course Convenor

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Medical Research

Dr Tracie McKinney

Course Leader for Human Biology

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Dr Lewis Fall

Course Leader for Medical Sciences

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