Anders Jensen MBiolSci (Biochemistry)

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UNIVERSITY: Ageing and chronic disease
William Henry Duncan
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University of Liverpool
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RESEARCH INTERESTS

- Proteomic and other omics-based techniques
- The extracellular-matrix, specifically metalloproteinases and endocytosis
- Understanding the ageing process in different tissues
- Data Analysis/visualisation and bioinformatics using softwares, such as R, ClusterProfiler and IPA

EDUCATION:

2021 – Present

PhD in Musculoskeletal Biology

University of Liverpool
Due to be submitted by March 2025

2017 – 2021

Integrated masters (Biochemistry)

University of Liverpool

Lab-based modules

- Experimental Skills in Current Biology (75)
- Biochemical Methods (72)
- Advanced Biochemical Techniques (70)
- Research Project (69) (Supervised by Professor David Fernig)

Theory-based modules (Specific)

- Molecules and Cells (73)
- Essential skills for the Life Sciences 1 (72)
- Essential skills for the Life Sciences 2 (70)
- Biochemical Messengers and Signal Transduction (73)
- Molecular Medicine (83)
- Advanced statistics for Biological Research (77)
- Informatics for Life Sciences (76)
- Research methods and Applications in Biological Sciences (70)

2015 – 2017

A Level Chemistry (A), Biology (A), Physics (B) and Maths (C)

Grove College, Market Drayton

RESEARCH EXPERIENCE

2021 - Present

PhD Thesis

University of Liverpool
Supervised by Dr Kazuhiro Yamamoto, Prof Mandy Peffers, Prof Fadi Jarad

Project title: Investigation of age-related differences within the extracellular matrix of dental tissues

Project description: The frequency of dental diseases increases with age, are some of the most common diseases worldwide, and provide a major socio-economic burden. This project aims to use proteomic techniques

to deduce the biochemical changes that occur with age. We hope to use this information to pinpoint why dental health deteriorates with age.

2020-2021

Integrated Masters Research Project (73%)
University of Liverpool
Supervised by **Dr Kazuhiro Yamamoto**

Project title: The characterisation of endocytosis of newly identified ligands of LRP-1 (SPARC, WNT-5a and LIF)

Project description: Novel ligands of the membrane protein, lipoprotein receptor related protein (LRP-1,) were previously identified. The aim of this project was to deduce if specific ligands are true LRP-1 ligands and potentially observe whether the endocytosis occurs in an LRP-1 mediated manner.

2019-2020

Undergraduate Research project (68%)
University of Liverpool
Supervised by **Professor David Fernig**

Project title: Metal ion coordination of non-sulfated domains of heparan sulfate and the measurements of their interactions with FGF-2, using differential scanning fluorimetry.

Project description: Non-sulfated regions of heparan sulfate are predicted to have no direct contact with regulatory proteins, such as FGF-2. Differential scanning fluorimetry was used to determine the effects of zinc (Zn^{2+}) and copper (Cu^{2+}) variants of heparan sulfate. Our results conveyed that the thermal stability of FGF-2 changed in the presence of cation-coordinated, suggesting a potential novel binding mechanism of heparan sulfate to FGF-2.

ADDITIONAL SKILLS

Laboratory techniques: I have developed a wide range of biochemical techniques, demonstrated by the lab-based modules I completed and my research experience, e.g. Spectroscopy, Ion-exchange chromatography, Western blotting, Cell culture, protein purification, Immunohistochemistry, Proteomics, Histology.

Bioinformatics and Data analysis: I am familiar with a wide range of statistical and bioinformatic tools such as; SPSS, Rstudio, BLAST, PYMOL, Modeller, ChemDraw, ImageJ, PROCHECK, DIALIGN and IPA.

Presenting: During my PhD I have presented my research within the University of Liverpool and outside at research conferences. I have done this in many different formats, such as Oral presentations, Posters and less-formal lay-presentations at public engagements events. (British Society of Matrix Biology, International Associated of Dental Research, British Equine Veterinary Association)

Teaching Experience: Alongside My PhD, I have been involved in multiple undergraduate modules including, Experimental skills in current biology, Biochemical Methods and Advanced Biochemical methods. I have also supervised several undergraduate students through their own research projects, leading to publications and presentation at conferences.

Communication: I work effectively with different groups of people including Researchers, Students and members of the public. Throughout my PhD I have developed collaborations with different researchers and have managed to gain insight from other people in order to benefit my own research. When demonstrating and supervising undergraduate students I have learnt how to communicate complex ideas to an audience that are new to the area of research. Finally, I have attended public engagement events, such as Bluedot festival and Cheshire show, which has shown me how to discuss the potential impact of my research and why it is important.

REFERENCES

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