Alex Paterson, Ph.D.

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⚲ Bristol, UK

APPLICABLE SKILLS

- **Computer proficiency**
  Computer proficient across GUI/CLI based operating systems (Windows/*nix). Well versed with BASH, LaTeX, and R scripting, with experience in Python. Able to build and configure high performance Linux compute servers, and current System administrator for several CLI based supercomputers.

- **Project management**
  Consultancy and data processing with international collaborators requires meticulous record keeping of pipeline employed, including all parameters used as well as version control. Bioinformatics consultancy operating under a cost-recovery structure.

- **Independent development**
  Self guided learning has been the backbone of my research and professional career. With little specialised mentorship, all learning and development had to be self directed and managed.

- **Communication**
  Excellent communication skills; both written and verbal, as demonstrated by invited speaker roles, a lecturing position, and extensive publications in multiple high impact research journals.

- **Bioinformatic/Software Pipeline development**
  RNAseq/Microarray Pipeline development, including quality control, alignment to a reference Genome, generating transcript counts, normalisation, differential expression calling, and alternative splice event predictions. Current projects involve maintaining software installation pipelines, making use of the Azure DevOps platform.

- **Agile Scrum Framework**
  Contracts operating within the Agile/Scrum framework have strengthened my ability to embrace adaptive development of software. Adopting this approach shifts the focus to iteratively delivering solutions of the highest value for product owners.

CAREER

- **Consultant Bioinformatician**
  - ⚲ InSilico Consulting, UK 📅 2021 -

  Director of bespoke consultancy company for both academic and commercial research groups.

- **Research Associate Bioinformatician**
  - ⚲ University of Bristol, UK 📅 2019 - 2021

  Bespoke consultancy on a range of established and novel bioinformatic experiments for academic research groups.

EDUCATION

- **Ph.D. Diagnostic Medicine**
  - ⚲ University of Bristol, UK 📅 2015 - 2020

  Identifying novel prognostic biomarkers of neurogenic hypertension

- **M.Sc. Molecular Neuroscience - 74%**
  - ⚲ University of Bristol, UK 📅 2014 - 2015

- **B.Sc. (Hons) Biochemistry - 69%**
  - ⚲ University of Surrey, UK/Universidad Pompeu Fabra, ES 📅 2010 - 2014

  Professional secondment year researching the effects of Δ^9-THC on memory deficits at world leading neuropharmacology department in Barcelona

SOFTWARE PROFICIENCIES

Languages/Packages

R Bash Python LaTeX Git SQL JavaScript Cypress Docker

Visualisation & Graphical

BLAST Graphpad Prism Ingenuity Pathway Analysis (IPA) Partek FlowJo TOAD Integrative Genome Viewer (IGV) SQL Developer Adobe Creative Cloud

Productivity & other

Microsoft Office Reference Managers Azure DevOps

PROFESSIONAL DEVELOPMENT & AWARDS

2021 — Founded InSilico Consulting Limited, for bespoke bioinformatics solutions

2020 — Co-director MSc Bioinformatics and Entrepreneurship

2017 Supervised successful MSc Project
"Identifying novel prognostic biomarkers of hypertension"

2017 International Union of Physiological Scientists (IUPS) Rio de Janeiro, Brazil
"Hypertension; the Genome – Environment interface" - Oral presentation

2017 World Congress on Neurohypophyseal Hormones (WCNH) Mangaratiba, Brazil
"Effects of ageing on biosynthetic processes in the rat hypothalamic osmoregulatory neuroendocrine system"
- Poster presentation

2016 Nominated for Post-Graduate Excellence in Teaching award

2016 — Developed and delivered original lecture materials for MSc Molecular Neuroscience
Introduction to Bioinformatics

2016 — Developed and delivered practical materials for MSc Molecular Neuroscience
Introduction to Genetic Cloning

2016 Home office Animal handling license

2014 Eli-Lilly Award
Awarded for the highest neuroscience grade in cohort

RECENT PUBLICATIONS

Comparison of Blood Bacterial Communities in Periodontal Health and Periodontal Disease.
Emery, D. C., Cerajewska, T. C., Seong, J., Davies, M., Paterson, A., Allen-Birt, S. J., & West, N., X. 2021
Frontiers in cellular and infection microbiology

A general role for MIA3/TANGO1 in secretory pathway organization and function.
McCaughey, J., Stevenson, N. L., Mantell, J. M., Neal, C. R., Paterson, A., Heesom, K., Stephens, D. J. 2021
Journal of Cell Science

Sex-specific differences in cardiovascular and metabolic hormones with integrated signalling in the paraventricular nucleus of the hypothalamus.
Loewen, S.P., Paterson, A., Loh, S.Y., Rogers, M.F., Hindmarch, C.C.T., Murphy, D. & Ferguson, A.V. 2017
Experimental Physiology

HOBBIES & INTERESTS

Surfing

Drone Piloting

Photography

3D Printing

REFERENCES

References available on request