

Alistair Bailey

I am a researcher at the Centre for Proteomic Research and Cancer Sciences Unit at the University of Southampton. My research interests are in antigen processing and presentation by class I MHC molecules, data science and proteomics. The project I currently work on aims to improve immunotherapy treatment for cancer patients.¹ I also contribute to research into the role of MHC molecules in skin sensitization to chemical allergens, and contagious cancer in the Tasmanian Devil. I am also a Data and Software Carpentry² instructor.

EDUCATION

- 2016
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2016
- MACHINE LEARNING**
Stanford University 📍 Coursera
- 10 week online introduction to machine learning.
- 2015
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2015
- DATA SCIENCE SPECIALIZATION**
John Hopkins University 📍 Coursera
- 12 month online set of courses on data science using R, git and command line tools.
- 2013
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2008
- PHD, IMMUNOLOGY**
Cancer Sciences, University of Southampton 📍 Southampton, UK
- Thesis: Relating the structure, function and dynamics of the MHC Class I antigen presenting molecule.
- 2008
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2005
- BENG, CIVIL ENGINEERING**
University of Southampton 📍 Southampton, UK
- First Class Honours in Civil Engineering.
- 2005
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2004
- ENGINEERING, SCIENCE & MATHEMATICS FOUNDATION YEAR**
University of Southampton 📍 Southampton, UK
- Maths and physics foundation year preparation for undergraduate study.
- 1994
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1992
- BTEC ND AUDIO-VISUAL PRODUCTION**
Bournemouth & Poole College of Art & Design 📍 Bournemouth, UK
- Foundation course in film, photography, TV and radio production.

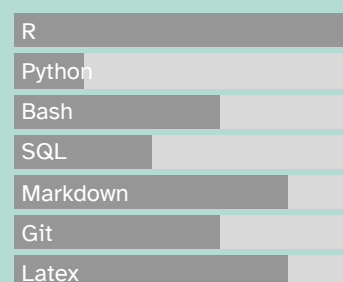


View this CV online with links at ab604.uk/cv/

CONTACT

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🐦 [alistair604](https://twitter.com/alistair604)
🔗 github.com/ab604
🔗 ab604.uk

LANGUAGE SKILLS



*Made with the R package
pagedown.*

*The source code is available on
github.com/ab604/abailey-cv.*

*The font is Atkinson
Hyperlegible*

Last updated on 2021-08-26.



RESEARCH EXPERIENCE

Current
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2018

RESEARCH FELLOW

Centre for Proteomic Research/Cancer Sciences, University of Southampton

📍 Southampton, UK

- Cancer Research UK Accelerator: this project aims to identify potential treatment targets for hard to treat cancers such as lung cancer using peptidomics methods.
- We have also developed our method to identify treatment targets for infectious diseases such as influenza.
- In 2020 I also worked to develop a COVID19 test using proteomics methods.

2018
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2015

RESEARCH FELLOW

Centre for Proteomic Research/Cancer Sciences, University of Southampton

📍 Southampton, UK

- Developed peptidomics methodology at the UoS for research into the role of MHC molecules in skin sensitisation to chemical allergy.

2015
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2013

RESEARCH FELLOW

Cancer Sciences, University of Southampton

📍 Southampton, UK

- MRC Centenary Fellow



INDUSTRY EXPERIENCE

2012
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2012

INTERNSHIP

Microsoft Research

📍 Cambridge, UK

- Helped develop computational model of MHC I peptide selection.

2012
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2004

FREELANCE SATELLITE COMMUNICATIONS ENGINEER

Globecast

📍 London, UK

- I continued to work as an engineer in broadcast TV from 2004 and 2012 on major events such as the Olympics and Football World Cup.

2004
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2000

SATELLITE COMMUNICATIONS ENGINEER

Globecast

📍 London, UK

- Full time engineer working in global broadcast TV primarily on sports, news and live entertainment events.

2000
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1995

FILM AND TELEVISION POST-PRODUCTION ENGINEER

Telecine

📍 London, UK

- I trained as an engineer to operate various TV & film post-production equipment.

I have worked in a variety of roles ranging from engineering to research scientist. I like collaborative environments where I can learn from my peers.



TEACHING EXPERIENCE

I am passionate about teaching foundational coding and data

- 2020
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2019

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CODING TOGETHER³
 University of Southampton

📍 Southampton, UK

 - I created and taught an eight week series of collaborative workshops to teach foundational R coding and data science skills based on Carpentries materials.
- 2018
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2018

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SOFTWARE CARPENTRY
 Umeå University

📍 Umeå, Sweden

 - Taught R for Reproducible Research and assisted in Command Line Basics.
- 2018
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2018

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BRITISH SOCIETY FOR PROTEOMICS 2018 DATA SCIENCE WORKSHOP⁴
 University of Bradford

📍 Bradford, UK

 - I created and taught a proteomics data science workshop including introduction to R, Volcano plots, heatmaps and peptide logos.
- 2017
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2017

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DATA CARPENTRY
 University of Southampton

📍 Southampton, UK

 - Taught R for Reproducible Research and assisted in Command Line Basics and git.
- 2017
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2017

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DATA CARPENTRY
 University of Southampton

📍 Southampton, UK

 - Taught R for Reproducible Research and assisted in introduction to SQL.
- 2017
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2017

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SOFTWARE CARPENTRY
 University of Southampton

📍 Southampton, UK

 - Assisted with python and git for reproducible research.



PUBLICATIONS

- 2021
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2021

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CHARACTERIZATION OF THE CLASS I MHC PEPTIDOME RESULTING FROM DNCB EXPOSURE OF HACAT CELLS⁵
 Toxicological Sciences

- Alistair Bailey, Ben Nicholas, Rachel Darley, Erika Parkinson, Ying Teo, Maja Aleksic, Gavin Maxwell, Tim Elliott, Michael Arden-Jones, Paul Skipp.
- 2021
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2021

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IMMUNOPEPTIDOMIC ANALYSIS OF INFLUENZA A VIRUS INFECTED HUMAN TISSUES IDENTIFIES INTERNAL PROTEINS AS A RICH SOURCE OF HLA LIGANDS⁶
 bioRxiv

- Ben Nicholas, Alistair Bailey, Karl J. Staples, Tom Wilkinson, Tim Elliott, Paul Skipp.

- 2021
|
2021
- THE IMMUNOPEPTIDOMES OF TWO TRANSMISSIBLE
CANCERS AND THEIR HOST HAVE A COMMON, DOMINANT
PEPTIDE MOTIF⁷
Immunology
- Annalisa Gastaldello, Sri H. Ramarathinam, Alistair Bailey, Rachel Owen, Steven Turner, N. Kontouli, Tim Elliott, Paul Skipp, Anthony W. Purcell, Hannah V. Siddle.
- 2019
|
2019
- DYNAMICALLY DRIVEN ALLOSTERY IN MHC PROTEINS:
PEPTIDE-DEPENDENT TUNING OF CLASS I MHC GLOBAL
FLEXIBILITY⁸
Frontiers in Immunology
- Cory M. Ayres, Esam T. Abualrous, Alistair Bailey, Christian Abraham, Lance M. Hellman, Steven A. Corcelli, Frank Noé, Tim Elliott, Brian M. Baker.
- 2017
|
2017
- DIRECT EVIDENCE FOR CONFORMATIONAL DYNAMICS IN
MAJOR HISTOCOMPATIBILITY COMPLEX CLASS I
MOLECULES⁹
JBC
- Andy van Hateren, Malcolm Anderson, Alistair Bailey, Jörn M. Werner, Paul Skipp, Tim Elliott.
- 2017
|
2017
- RECENT ADVANCES IN MAJOR HISTOCOMPATIBILITY
COMPLEX CLASS I ANTIGEN PRESENTATION: PLASTIC MHC
MOLECULES AND TAPBPR MEDIATED QUALITY CONTROL¹⁰
F1000 Research
- Andy van Hateren, Alistair Bailey, Tim Elliott.
- 2014
|
2014
- TWO POLYMORPHISMS FACILITATE DIFFERENCES IN
PLASTICITY BETWEEN TWO CHICKEN MAJOR
HISTOCOMPATIBILITY COMPLEX CLASS I PROTEINS¹¹
PLoS One
- Alistair Bailey, Andy van Hateren, Tim Elliott, Jörn M. Werner.
- 2013
|
2013
- A MECHANISTIC BASIS FOR THE CO-EVOLUTION OF
CHICKEN TAPASIN AND MAJOR HISTOCOMPATIBILITY
COMPLEX CLASS I PROTEINS¹²
JBC
- Andy van Hateren, Rachel Carter, Alistair Bailey, Nasia Kontouli, Anthony P. Williams, Jim Kaufman, Tim Elliott.
- 2010
|
2010
- THE CELL BIOLOGY OF MAJOR HISTOCOMPATIBILITY
COMPLEX CLASS I ASSEMBLY: TOWARDS A MOLECULAR
UNDERSTANDING¹³
Tissue Antigens
- A. Van Hateren, E. James, A. Bailey, A. Phillips, N. Dalchau, T. Elliott

LINKS

1. <https://www.cancerresearchuk.org/funding-for-researchers/accelerator-award/portfolio-funded-projects-outputs>
2. <https://carpentries.org/>
3. <https://ab604.github.io/docs/coding-together-2019/>
4. https://ab604.github.io/docs/bspr_workshop_2018/index.html
5. <https://doi.org/10.1093/toxsci/kfaa184>
6. <https://doi.org/10.1101/2021.08.17.456620>
7. <https://doi.org/10.1111/imm.13307>
8. <https://doi.org/10.3389/fimmu.2019.00966>
9. <https://doi.org/10.1074/jbc.M117.809624>
10. <https://doi.org/10.12688/f1000research.10474.1>
11. <https://doi.org/10.1371/journal.pone.0089657>
12. <https://doi.org/10.1074/jbc.M113.474031>
13. <https://doi.org/10.1111/j.1399-0039.2010.01550.x>