

CAB newsletter 1st November 2022

You are receiving this as a member of the Centre for Applied Bioinformatics (CAB)

Not yet joined CAB? Well if you are receiving this you already have joined, but if you know anyone who would like to join, then please forward this message and they can now sign up using a simple web form from the members page at <https://www.appliedbioinformatics.com.au/Members.php>

News:

Alphafold now available at Pawsey: Pawsey's new supercomputer Setonix provides new and easy use of Alphafold and InterProScan, made available as modules, complete with reference databases. Alphafold is Google's breakthrough AI protein structure prediction software. InterProScan integrates protein function predictive information.

Bioinformaticians, you can now login into Setonix and load your module with "module load alphafold/2.2.3" and "module load interproscan/5.56-89.0" instead of spending time and effort installing and downloading manually.

We also have common bioinformatics reference datasets pre-downloaded and ready to use.

If you want to give it a go, you can find a self paced training here

https://www.youtube.com/watch?v=fgL9HcD_opY

, or visit our documentation

<https://support.pawsey.org.au/documentation/display/US/Modules>.

Want to work with the University of Arizona? Following a virtual symposium we recently hosted a visit by Janko Nikolich from the University of Arizona we are looking to support student exchange between Universities as well as broader collaborations in applied bioinformatics. If you are a student interested in such an exchange, please contact dave.edwards@uwa.edu.au

Masters student project available: Masters level student project available with Dr Luke Garratt at Telethon Kids Institute. The project will interrogate RNAseq data using primary lung airway epithelium cells from children with and without cystic fibrosis. Please contact Luke on luke.garratt@telethonkids.org.au for more details.

Twitter addicts, get your fix of the latest bioinformatics tweets at @UWABioinfo Promote your publications through CAB tweets! Please email any of your recent publications and we can promote through the CAB newsletter and twitter account [@UWABioinfo](https://twitter.com/UWABioinfo)

Missed a previous newsletter? Fear not, they are now all available online at: <https://www.appliedbioinformatics.com.au/Newsletters.php>

Interesting papers:

Title: Human prefrontal cortex gene regulatory dynamics from gestation to adulthood at single-cell resolution

Summary: A resource charting the gene expression and chromatin accessibility landscapes of human prefrontal cortex reveals gene expression reconfiguration at the prenatal-to-postnatal transition followed by continuous reconfiguration into adulthood.

Link: [https://authors.elsevier.com/sd/article/S0092-8674\(22\)01258-2](https://authors.elsevier.com/sd/article/S0092-8674(22)01258-2)

Tags: [@Chuck_Herring](#) [@SaskiaFreytag](#) [@DanielPoppe83](#) [@ry_lister](#)

Title: Simultaneous Inference of Past Demography and Selection from the Ancestral Recombination Graph under the Beta Coalescent

Summary: Preprint overcoming limitations in selection biases on demographic inference using ancestral recombination graph methods. Only tested on an ideal dataset but has promising applications for mapping the evolution of populations.

Link: <https://www.biorxiv.org/content/10.1101/2022.09.28.508873v1.full>

Please send information on interesting papers that I can promote in the newsletter/CAB twitter feed.

Talks:

COMBINE Fireside Chats with Industry

The next speaker for November will be Dr Harinda Rajapaksha from [Oracle for Research](#).

Date and time: Thursday 3rd November, 2-3pm (AEDT) Melbourne time

Please [register via zoom](#) for this free webinar. [You can submit questions here](#).

Conferences:

COMBINE 2022 Symposium

COMBINE Symposium 2022 is creeping up [28/11/2022]! Check out our guests for the event - featuring Torsten Seemann, Shila Ghazanfar, Natalie Twine, Milicia Ng and Tony Papenfuss

Register for COMBINE here: <https://www.abacbs.org/registration#!event-register/2022/11/28/abacbs-2022>

And what better way to cap off a long day of building networks, connecting with peers, [and engaging with your future than to join the COMBINE after party \(register here\)](#)!

Infrastructure:

Nimbus servers:

Did you know that you can request Linux servers with up to 16 cores and 64 GB RAM through Pawsey? Users have full access to these machines and we have prepared an image that supports many standard bioinformatics tasks that can run on this scale of machine, please contact Dave.Edwards@uwa.edu.au for details.

Training:**NCI Training:**

- [NCI HPC Toolkit - Programming in C](#) on **8-9 Nov**
- [AI/ML Applications on Gadi - Natural Language Processing](#) on **15 Nov**
- [AI/ML Applications on Gadi - Materials Science](#) on **23 Nov**

Additionally, NCI are delighted to be cooperating with Intersect to bring you the [HPC and Data in Drug Design and Delivery](#) course. It started **6 Sep** and runs until **1 Dec 2022**.

PhD Scholarship:

Advertise your PhD scholarships here

Jobs:

Advertise your bioinformatics job vacancies here