

Event title	WORKSHOP: Refining genome annotations with Apollo
Event type	Workshop
Date of event	17/11/2021
Time of event	3-6pm AEDT
Topic description	<p>Genome annotation is crucial to defining the function of genomic sequences. This process typically involves a round of automated annotation followed by manual curation. Manual curation allows you to visualise your annotations so you can understand what your organism looks like, and then to manually refine these annotations along with any additional data you might have. This process is typically performed collaboratively as part of a team effort.</p> <p>Apollo is a popular tool for facilitating real-time collaborative, manual curation and genome annotation editing. In this workshop we will learn how to use Apollo to refine genome annotations using example data from an E. coli strain. We'll focus on the basics like getting data into Apollo, viewing evidence tracks, editing and adding structural and functional annotation, visualising the results and collaborating on genome annotations.</p> <p>This workshop made use of a training instance of the new Australian Apollo Service. This service enables Australian-based research groups and consortia to access Apollo and host genome assembly and supporting evidence files for free. This service has been made possible by The Australian BioCommons and partners at QCIF and Pawsey. To learn more about the Australian Apollo Service you can watch the Australian Apollo Launch Webinar.</p> <p>This workshop was presented by the Australian BioCommons and Queensland Cyber Infrastructure Foundation (QCIF).</p> <p>The Australian Apollo Service is operated by QCIF and underpinned by computational resources provided by the Pawsey Supercomputing Research Centre and receives NCRIS funding through Bioplatforms Australia and the Australian Research Data Commons as well as Queensland Government RICE funding.</p> <p>The training materials presented in this workshop were developed by Anthony Bretaudeau, Helena Rasche, Nathan Dunn, Mateo Boudet for the Galaxy Training Network. Helena and Anthony are part of the Gallantries project which is supported by Erasmus+ Programme of the European Union.</p>
Format description	<p>Workshop, online via Zoom as described in https://zenodo.org/record/4158583</p> <p>The trainers introduced key concepts and demonstrated the steps involved in the analysis. Participants then moved into breakout rooms</p>

	<p>where they had the chance to apply these skills with support from facilitators.</p> <p>The workshop followed the tutorial linked in the 'Related work' section.</p> <p>A breakdown of timings and topics is provided in the schedule.</p> <p>Participation was free but subject to application with selection.</p> <p>Applications were reviewed by the organising committee.</p>
Identifier(s)/URL	https://www.biocommons.org.au/events/apollo-2021
Licence	Materials are shared under a Creative Commons Attribution 4.0 International agreement unless otherwise stated on the materials
Keywords	<p>Apollo Software</p> <p>Bioinformatics http://edamontology.org/topic_0091</p> <p>Analysis http://edamontology.org/operation_2945</p> <p>Workflows http://edamontology.org/topic_0769</p> <p>Genomics http://edamontology.org/topic_0622</p> <p>Genome annotation http://edamontology.org/operation_0362</p>
Contact	Melissa Burke (melissa@biocommons.org.au)
Audience	This workshop was for Australian researchers who have or will work on genome annotation and manual curation/editing as part of their projects.
Prerequisites	You should be familiar with the concepts of genome annotation and have, or soon have, genome annotation files that require manual annotation and curation.
Technical requirements	<ul style="list-style-type: none"> • Access to a training instance of the Australian Apollo Service was provided. • Slack was used to facilitate discussions. • Access to the internet, speakers, a webcam, microphone and Zoom.
Learning outcomes	<p>By the end of the workshop you should be able to:</p> <ul style="list-style-type: none"> • Upload data to Apollo • Visualise your genome and associated automated annotations • Manually annotate genomes after automated annotations have been performed • Evaluate and visualise annotated genomic features • Use Apollo to collaborate on genome annotation
Trainers	<p>Anthony Bretaudeau, French National Institute for Agriculture, Food, and Environment</p> <p>Helena Rasche, Erasmus Medical Center, The Netherlands</p>

	Dr Sarah Williams, QCIF Bioinformatics Dr Tiffanie Nelson, Australian BioCommons
Facilitators	Dr Mike Thang, QCIF Bioinformatics Dr Justin Lee, QCIF Bioinformatics
Related work	<p>This workshop is based on the tutorial 'Refining genome annotations with Apollo' which was developed for the Galaxy Training Network.</p> <p>Anthony Bretaudeau, Helena Rasche, Nathan Dunn, Mateo Boudet, Erasmus+ Programme, 2021 Refining Genome Annotations with Apollo (Galaxy Training Materials). https://training.galaxyproject.org/training-material/topics/genome-annotation/tutorials/apollo/tutorial.html Online; accessed Wed Dec 15 2021</p> <p>See also:</p> <p>Batut et al., 2018 Community-Driven Data Analysis Training for Biology Cell Systems 10.1016/j.cels.2018.05.012</p>