

mGIG

11 May 2021

Agenda

1. Webpage
2. Summary of STN proposal
3. Results of survey
4. Training
5. Pilot annotation project
6. Final points

1. mGIG webpage

- <https://mgig.weebly.com/>
- Includes contact form
- Would it be useful to compile resources here? If so, send them to us!



2. Summary of STN proposal

Co-authors: Alice Dennis, Angus Davison, Kara Layton, Luis Chueca, Joris Koene, and Maurine Neiman

Submitted 31 March. Results approx. August.

- Centered on research topics from you:
 - Conserved features of shell formation
 - Genomic basis of sex and sexual systems
 - Evolution of color variation
 - Basis and patterns of repeats across taxa
 - How unique or conserved are immune defenses
- Main goals:
 - Web resource for manual gene curation and
 - Training - annotation and assembly
 - Conferences - annual meetings and/or conference symposia

3. Survey results

36 respondents

15 countries

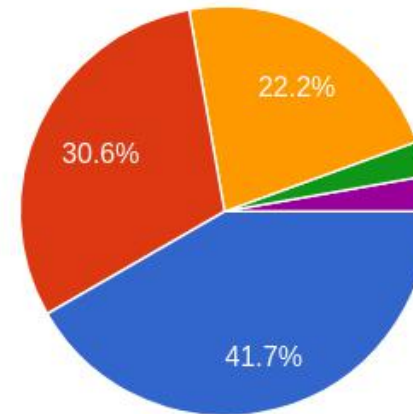
Varied career stages

Meet every 2 months

Alternate time zones

How often would you like to attend mGIG meetings?

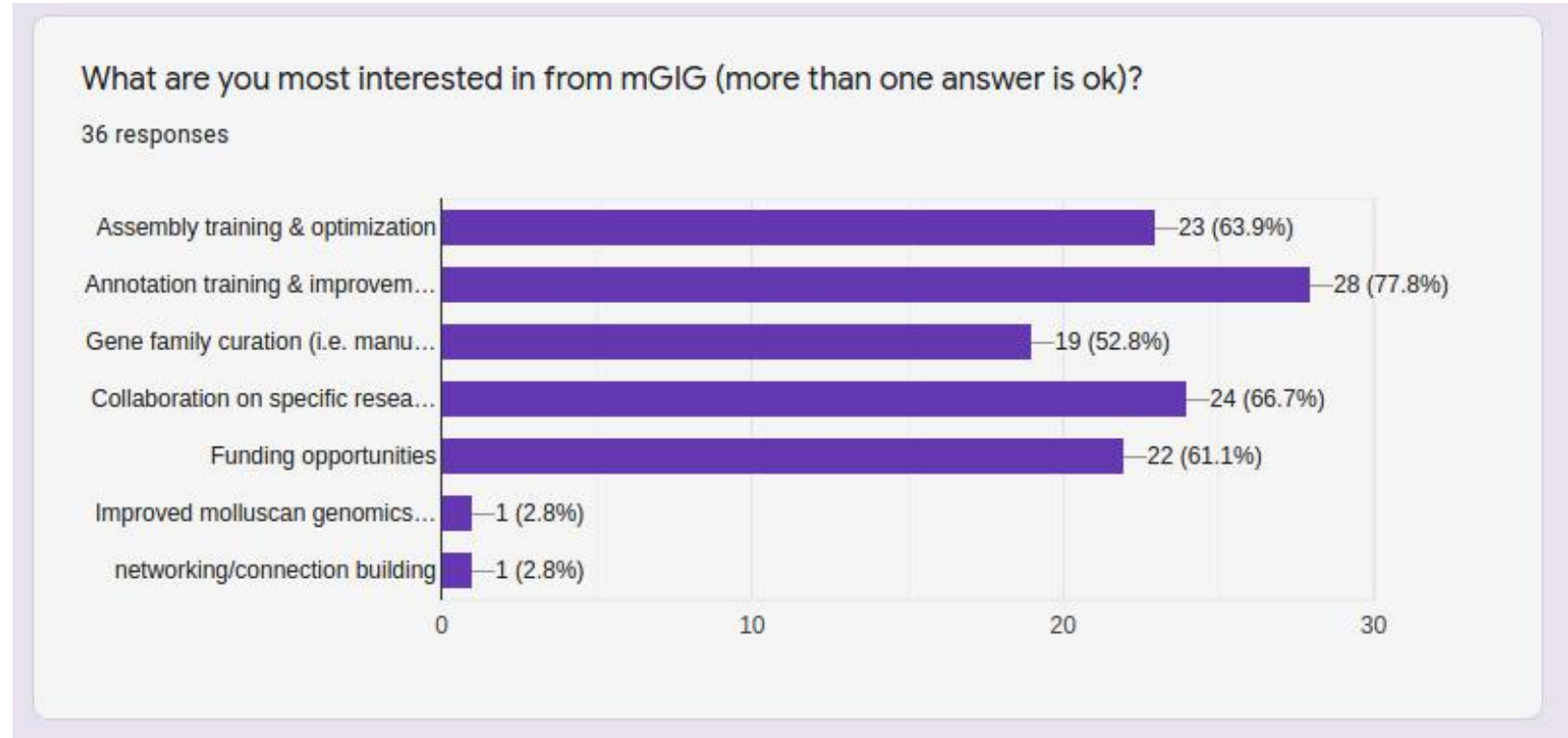
36 responses



- Monthly
- Bi-monthly
- Less often / as needed
- every 1-2 months, if that is warranted
- Every two months? Not sure if that's bi-monthly!

3. Survey results

What do we want?



<https://docs.google.com/forms/d/1dpDru9QmPfAVGQA3hHnfFUB07P-ql6sDa1pImUJMOvg/edit#responses>

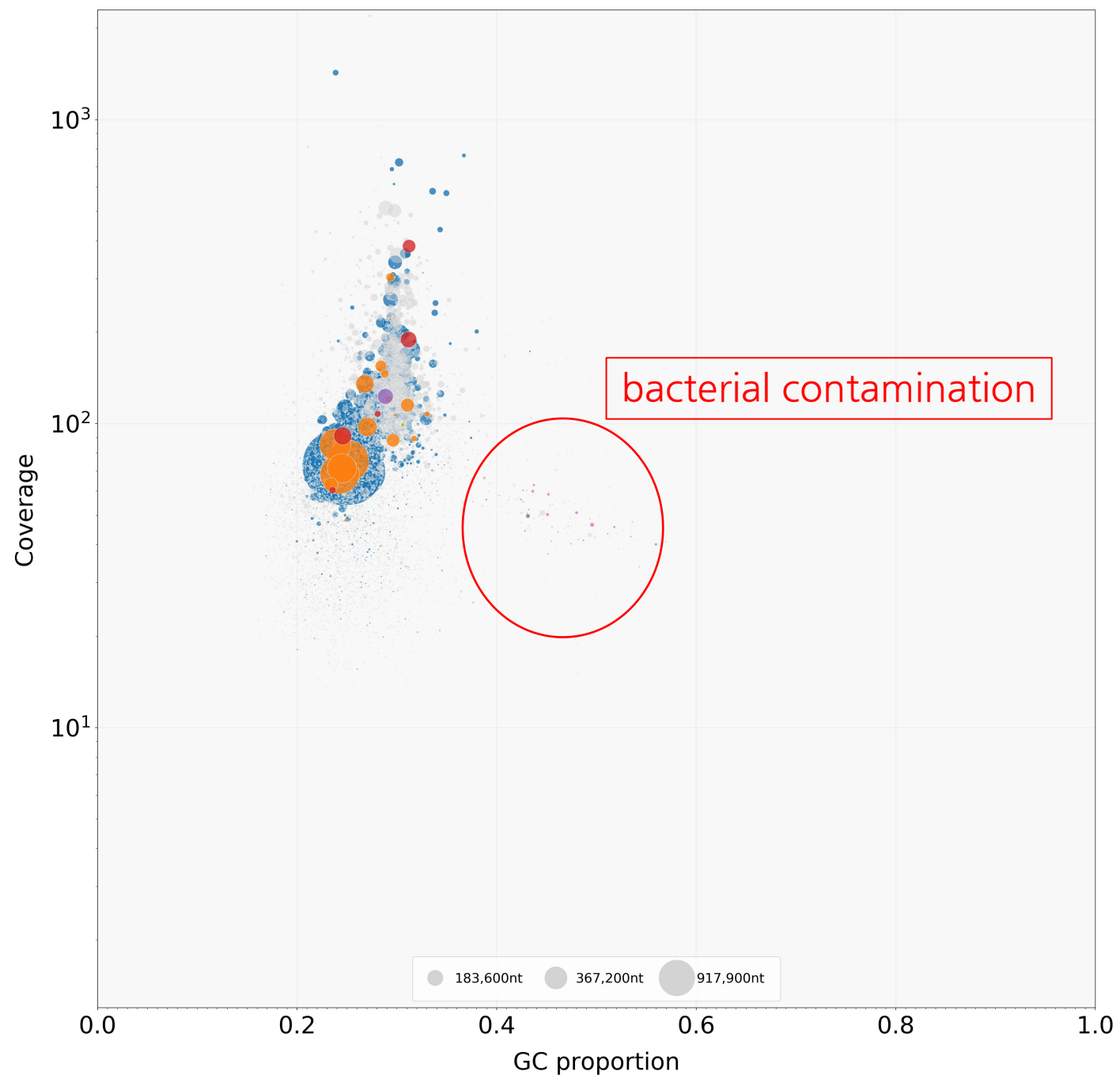
4. Training

4. Training

Already happening:

BlobToolsKit: two training sessions. Link to recordings on Slack and here:

<https://www.youtube.com/channel/UC6QimXygwjaX2CGZ8cgjNxw>



4. Training

Next:

Assembly “optimization” and evaluation

Luis - spreadsheet to evaluate assemblies

Organize meetings to discuss these

Training

Near future:

Repeat annotation. REPET

<https://urgi.versailles.inra.fr/Tools/REPET>

Tools

- BLAST
- GnplS
- PASTEClassifier
- REPET**
- README
- INSTALL
- TEdenovo tuto
- TEannot tuto
- Practical course
- S-Mart
- TE_finder
- Tedna
- Web services

You are here : [Home](#) / [Home URGI](#) / [Tools](#) / REPET

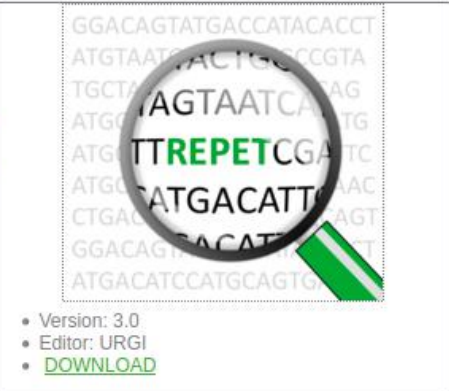
REPET

The REPET package ([Flutre T. et al. 2011](#) , [Quesneville H. et al. 2005](#)) integrates bioinformatics programs in order to tackle biological issues at the genomic scale. It is distributed under [the CeCILL license](#) and deposited to the Agence de Protection des Programmes ([APP](#)) under the Inter Deposit Digital Number FR 001 480007 000 R P 2008 000 31 235.

To download the last [REPET package v3.0](#) , What's new in this release [CHANGELOG](#) (19.10 kB) ?

NEW! For a quick install, REPET and its dependencies are containerized in a [free docker image downloadable](#)

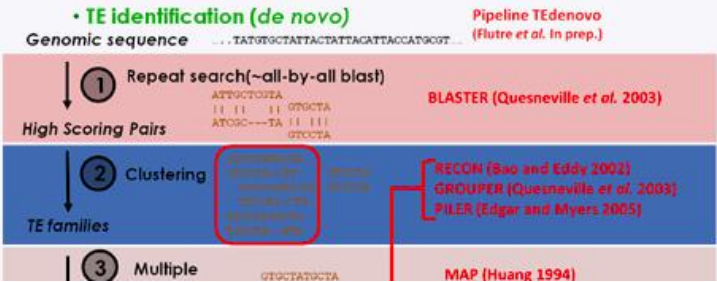
Previous releases are available [here](#)



- Version: 3.0
- Editor: URGI
- [DOWNLOAD](#)

Its two main pipelines are dedicated to detecte, annotate and analyse repeats in genomic sequences, specifically designed for transposable elements (TEs).

- TEdenovo: this pipeline starts by comparing the genome with itself using BLASTER. Then it clusters matches with GROUPER, RECON and PILER, clustering programs specific for interspersed repeats. For each cluster, it builds a multiple alignment from which a consensus sequence is derived. Finally these consensus are classified according to TE features and redundancy is removed. At the end we obtain a library of classified, non-redundant consensus sequences.



```
Genomic sequence . . . TATGTGCTATTACTATTACCAT903T . . .
```

↓ **1 Repeat search (~all-by-all blast)**

High Scoring Pairs

```
ATTGCTGTA  GTGCTA
||  ||  ||  GTGCTA
ATGGC---TA  GTGCTA
```

↓ **2 Clustering**

TE families

```
ATTGCTGTA
ATTGCTGTA
ATTGCTGTA
ATTGCTGTA
ATTGCTGTA
```

↓ **3 Multiple**

```
GTGCTATGCTA
```

Training

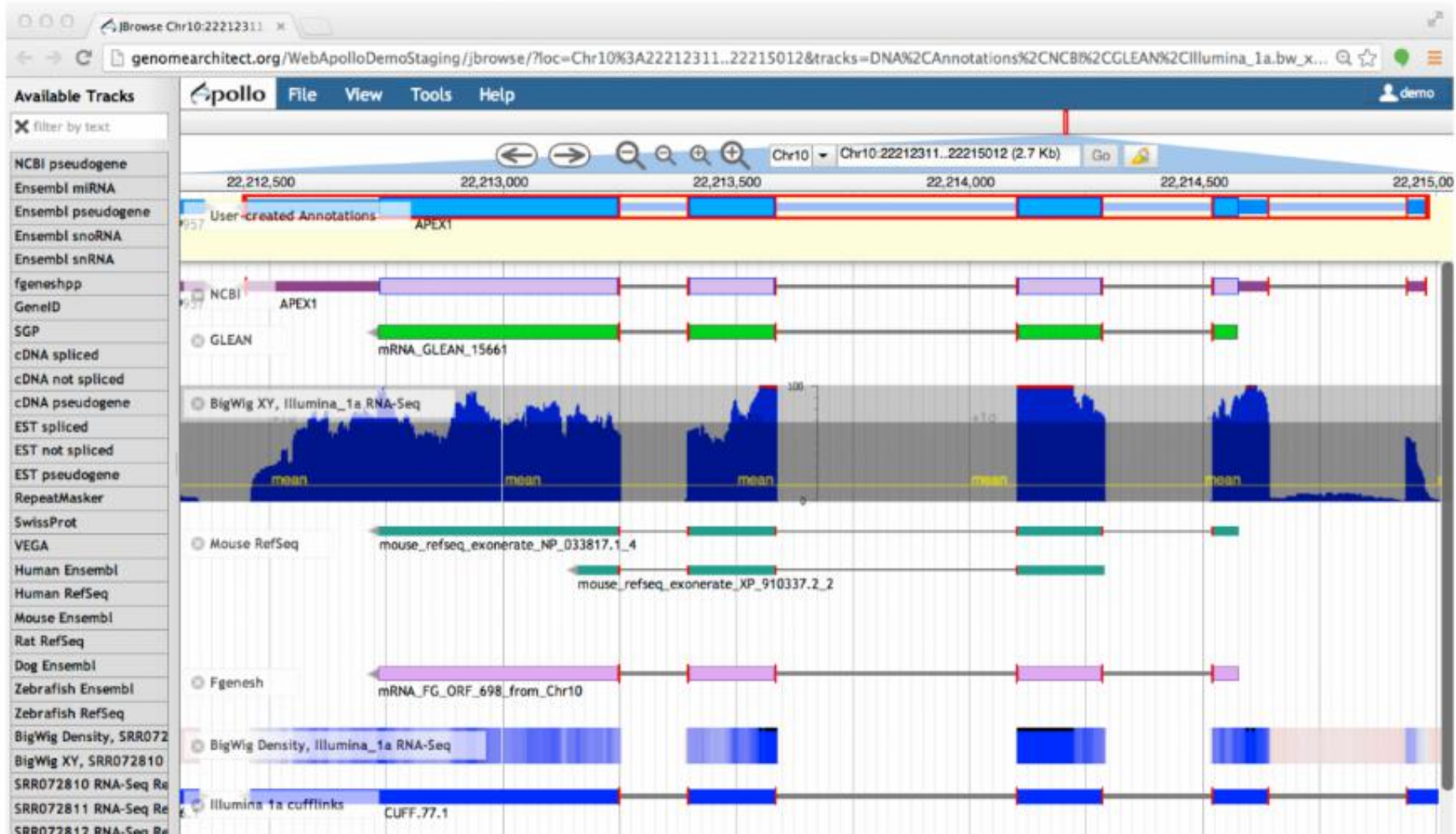
Annotation -

This will be the next step.

Perhaps a few rounds of Assembly Discussions first?

Seeking people who would like to help with this

Pilot annotation project - Robert Waterhouse



Last points

- Upcoming GIGA conference - Mollusc genomics session
- Job postings - SLACK
- Structure of mGIG
- Other points/ questions?
- Next meeting early July
- Before that: Assembly discussion groups

- Slides, minutes, and recording will go on SLACK and adennis5.wordpress.com