

Continuing Education for the Research Scientist

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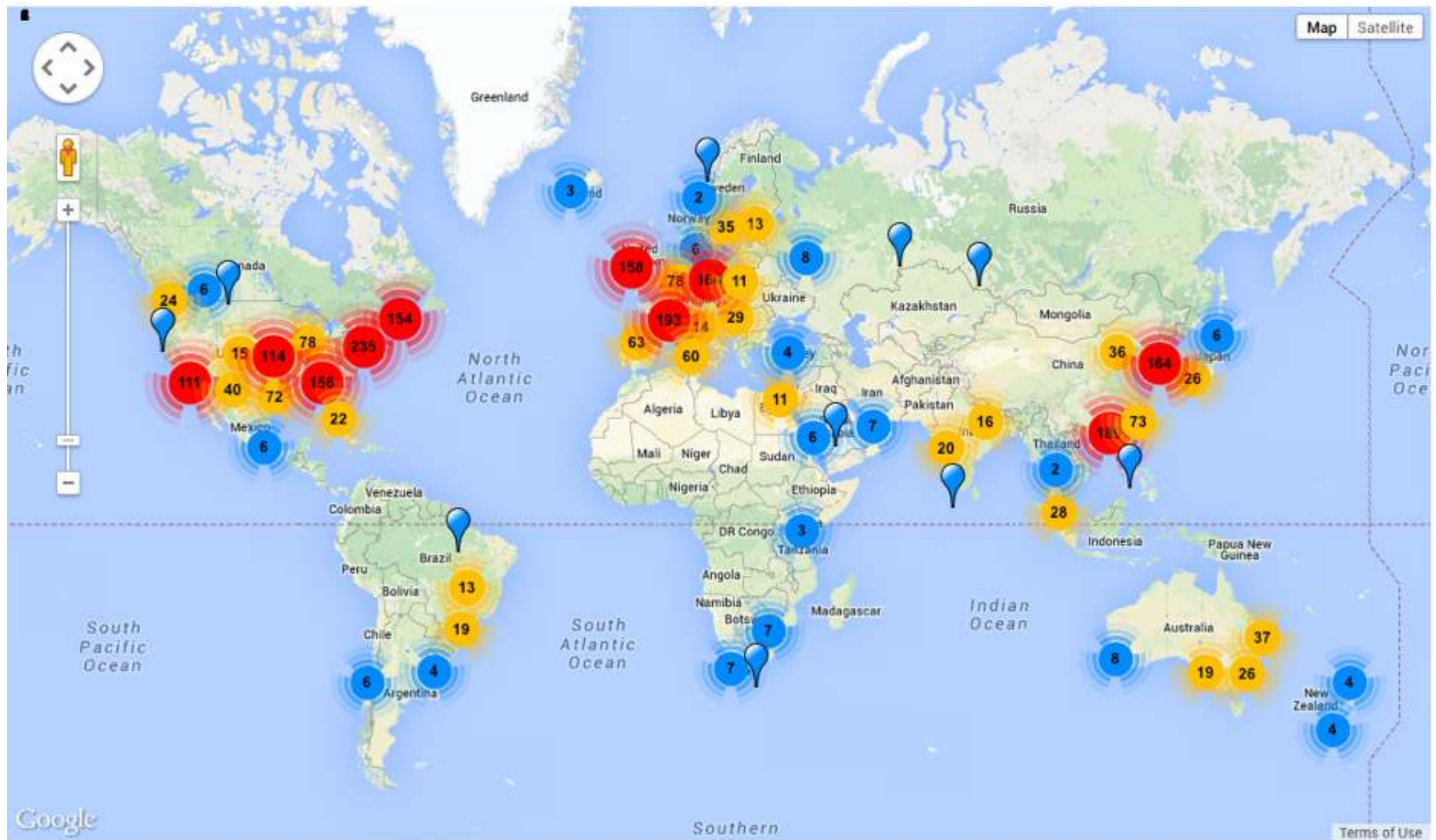
September 15, 2014

What does continued bioinformatics training address?

How to go from study design to interpretable data using modern sequencing technology and techniques



Lots of Access to Sequencing Technology



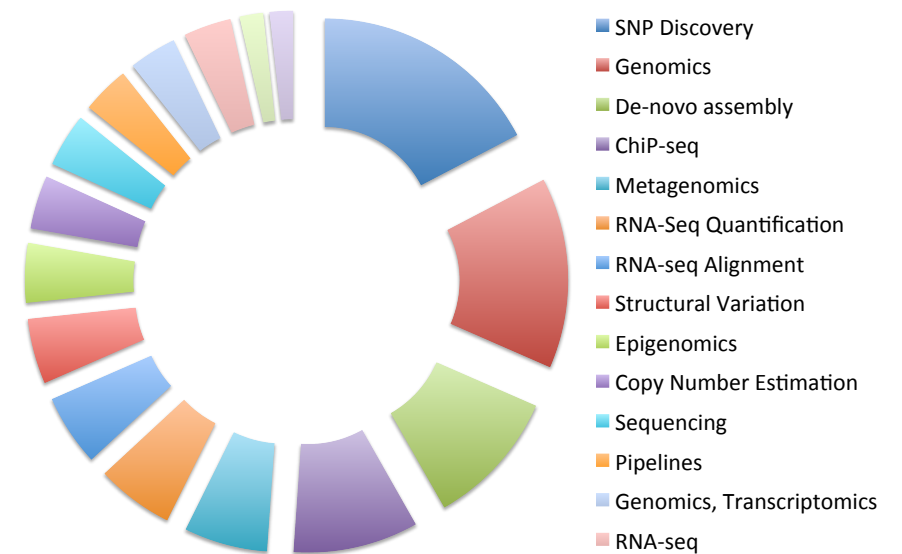
<http://omicsmaps.com>

As of May 21, 2014

Lots of Tools



As of May 21, 2014 SEQwiki contains pages for 673 (530 last year) bioinformatics applications related to genomic analysis!



Current Challenge



+

- RNA-Seq
- SNP discovery
- ChIP-Seq
- Metagenomics
- Copy number estimation
- DNA Methylation
- Whole Genome Resequencing
- Genomics
- De-novo assembly
- Structural variants
- Epigenomics
- InDel discovery
- Alignment
- Mapping



The Reality

TGATCGAGCTAGCTGACGTACTATCGATCGTAGCT
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More people have this ...

Than this

Do Bioinformatics

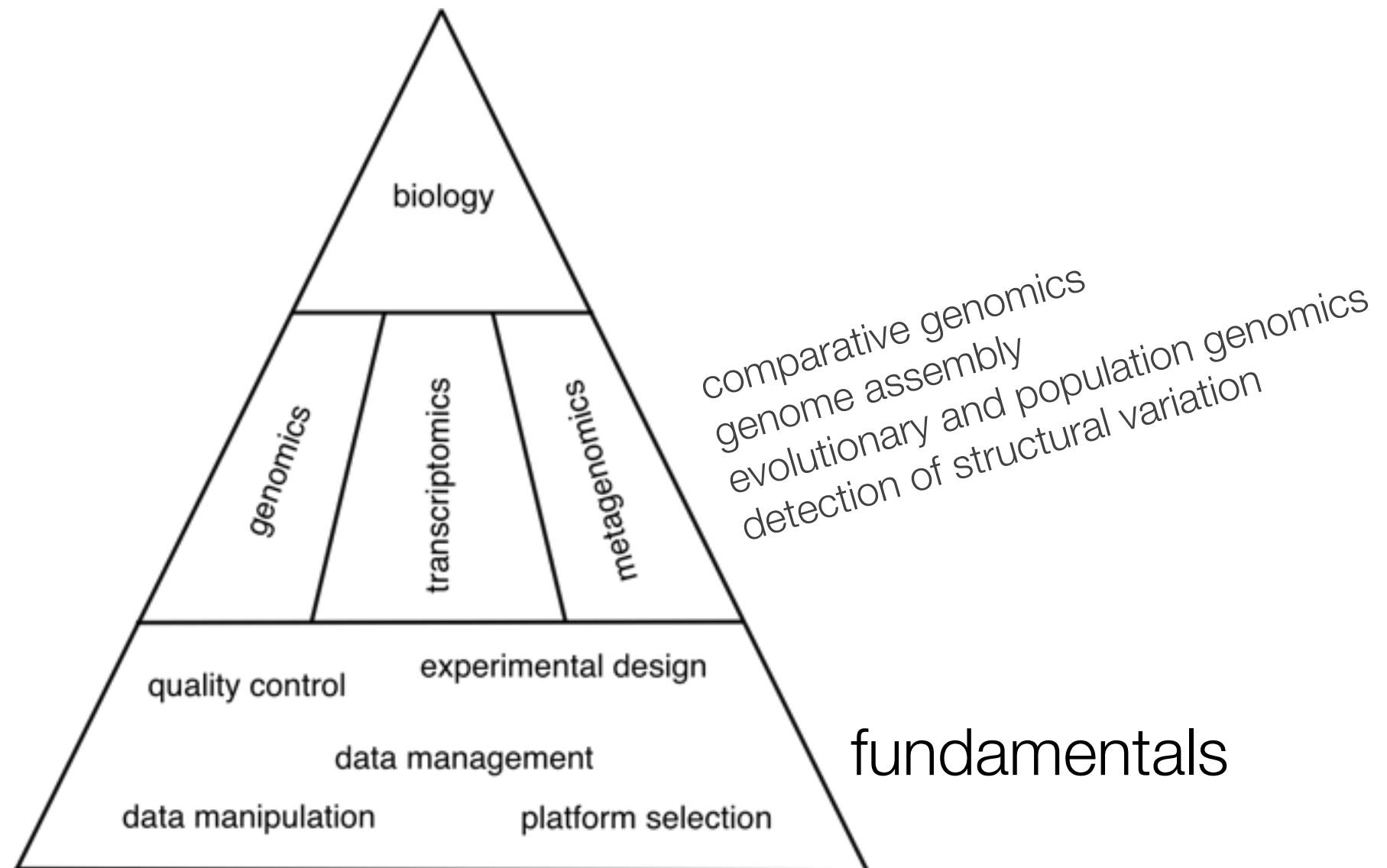
This is the bottleneck to
novel biological insights.



What to do about it?



Workshop on Genomics



- broad range of biological disciplines and levels of experience

Workshops

- Trained over 1,000 people from over 50 different countries
- Europe, Smithsonian Institution, Centers for Disease Control, Colorado State University
- <http://evomics.org>



Evolution and Genomics

immersive training opportunities

<http://evomics.org>

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Upcoming Events

- 2015
 - Cesky Krumlov, Czech Republic
 - Workshop on Genomics (January)
 - Workshop on Molecular Evolution (January)
 - Workshop on Pathogen Genomics (Spring)
- <http://evomics.org>

Web-site for this Workshop

<http://evomics.org/workshops/hu-cfar-workshop-on-metagenomics-and-transcriptomics/>

Expectations

- You are going to hear a lot of material in a very short period of time. Take breaks and relax
- There will be technical issues. Take breaks and relax
- You will leave knowing more about genomics than anyone else in your lab, which will enable you to take more breaks and relax more
- Everything will be available after the Workshop ends, so you can take breaks and relax!
- Meet your neighbors, the staff and TA's!