

Introduction

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Introduction: *Bioconductor*

Analysis and comprehension of high-throughput genomic data

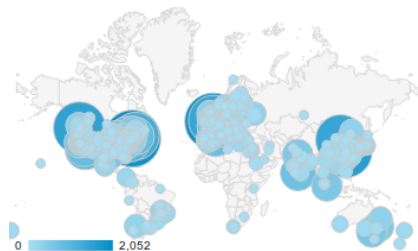
- ▶ <http://bioconductor.org>
- ▶ > 11 years old, 749 packages

Themes

- ▶ Rigorous statistics
- ▶ Reproducible work flows
- ▶ Integrative analysis

Introduction: *Bioconductor*

- ▶ 1341 PubMed full-text citations in trailing 12 months
- ▶ 28,000 web visits / month;
75,000 unique IP downloads / year
- ▶ Annual conferences; courses;
active mailing list; . . .



Bioconductor Conference, July 30 - Aug 1, Boston, USA

Introduction: What is *Bioconductor* good for?

- ▶ Microarrays: expression, copy number, SNPs, methylation, ...
- ▶ Sequencing: RNA-seq, ChIP-seq, called variants, ...
 - ▶ Especially *after* assembly / alignment
- ▶ Annotation: genes, pathways, gene models (exons, transcripts, etc.), ...
- ▶ Flow cytometry, proteomics, image analysis, high-throughput screens, ...

Acknowledgements

- ▶ *Bioconductor* team: Sonali Arora, Marc Carlson, Nate Hayden, Valerie Obenchain, Hervé Pagès, Paul Shannon, Dan Tenenbaum
- ▶ Technical advisory council: Vincent Carey, Wolfgang Huber, Robert Gentleman, Rafael Irizzary, Sean Davis, Kasper Hansen
- ▶ Scientific advisory board: Simon Tavaré, Vivian Bonazzi, Vincent Carey, Wolfgang Huber, Robert Gentleman, Rafael Irizzary, Paul Flicek, Simon Urbanek.
- ▶ NIH / NHGRI U41HG0004059
- ▶ The *Bioconductor* community

Introductions