

OMICS

IT4Innovations



PRINCIPE FELIPE
CENTRO DE INVESTIGACION

Computational • Genomics



July 2014

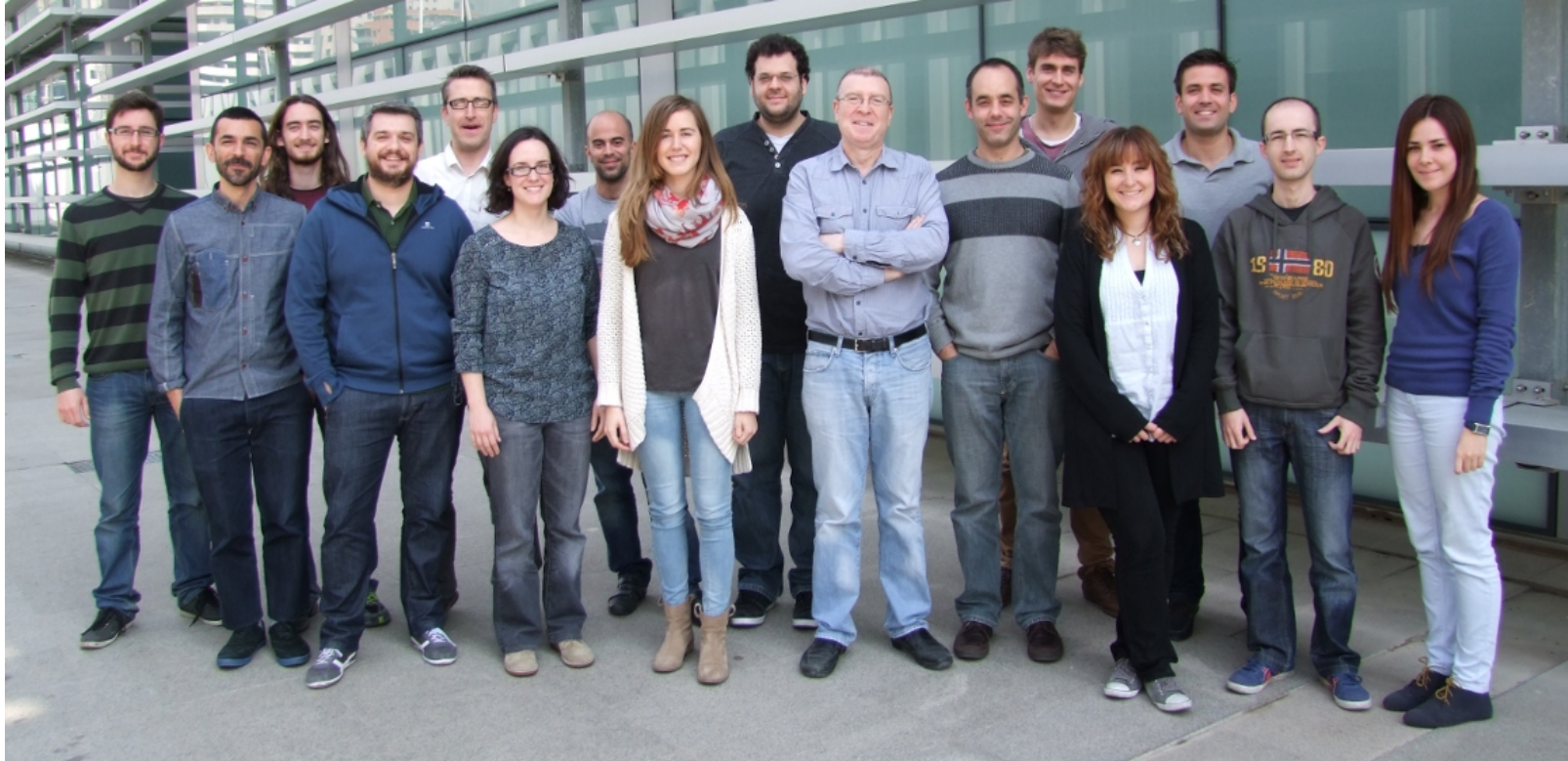
Ostrava, Czech Republic

Who are we?

- The Department of **Computational Genomics**, in Research Center Prince Felipe
- **Team:** multidisciplinary group of 20 researchers and technicians led by **Joaquín Dopazo**

<http://bioinfo.cipf.es/>

Who are we?



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Genomic Computational Department, CIPF

Why are we interested in Computational Genomics?

- The **overall goal** of the department:
 - Apply computational methods to biomedical and biotechnological problems
- **Research interests:**
 - The development and application of novel bioinformatics methods aimed at **discovering new drugs**
 - Identification of genes or proteins may be considered **therapeutic targets**
 - **Personalized medicine:** tools for discovering and diagnostic

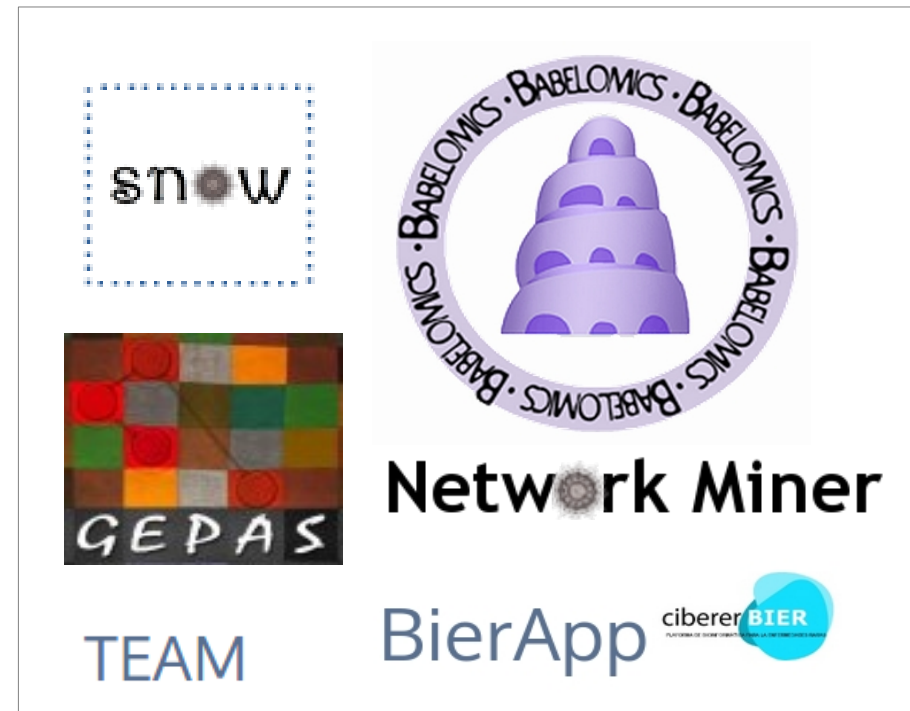
How do we work?

- Our department **converts** customer needs into bioinformatics solutions
- Free software for several reasons:
 - **Any customer can try our tools**
 - The **scientific community can test our software**
 - This is the **current trend in Computational Genomics**

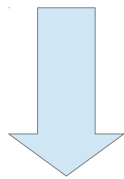
How do we work?



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Computational Genomics



SNOW
GEPAS
Network Miner
BierApp ciberer BIER



Machine Learning for Personalized Medicine
msp
Proyectos PROMETEO Generalitat Valenciana
MGP Medical Genome Project
HPC4G
INB
er ciberer CENTRO DE INVESTIGACIÓN BIOMÉDICA EN RED DE ENFERMEDADES Raras
MINISTERIO DE CIENCIA E INNOVACIÓN
ciberer BIER
BULL
STATegra
iSCBS INTERNATIONAL SOCIETY FOR COMPUTATIONAL BIOLOGY AFFILIATED REGIONAL INSTITUTE

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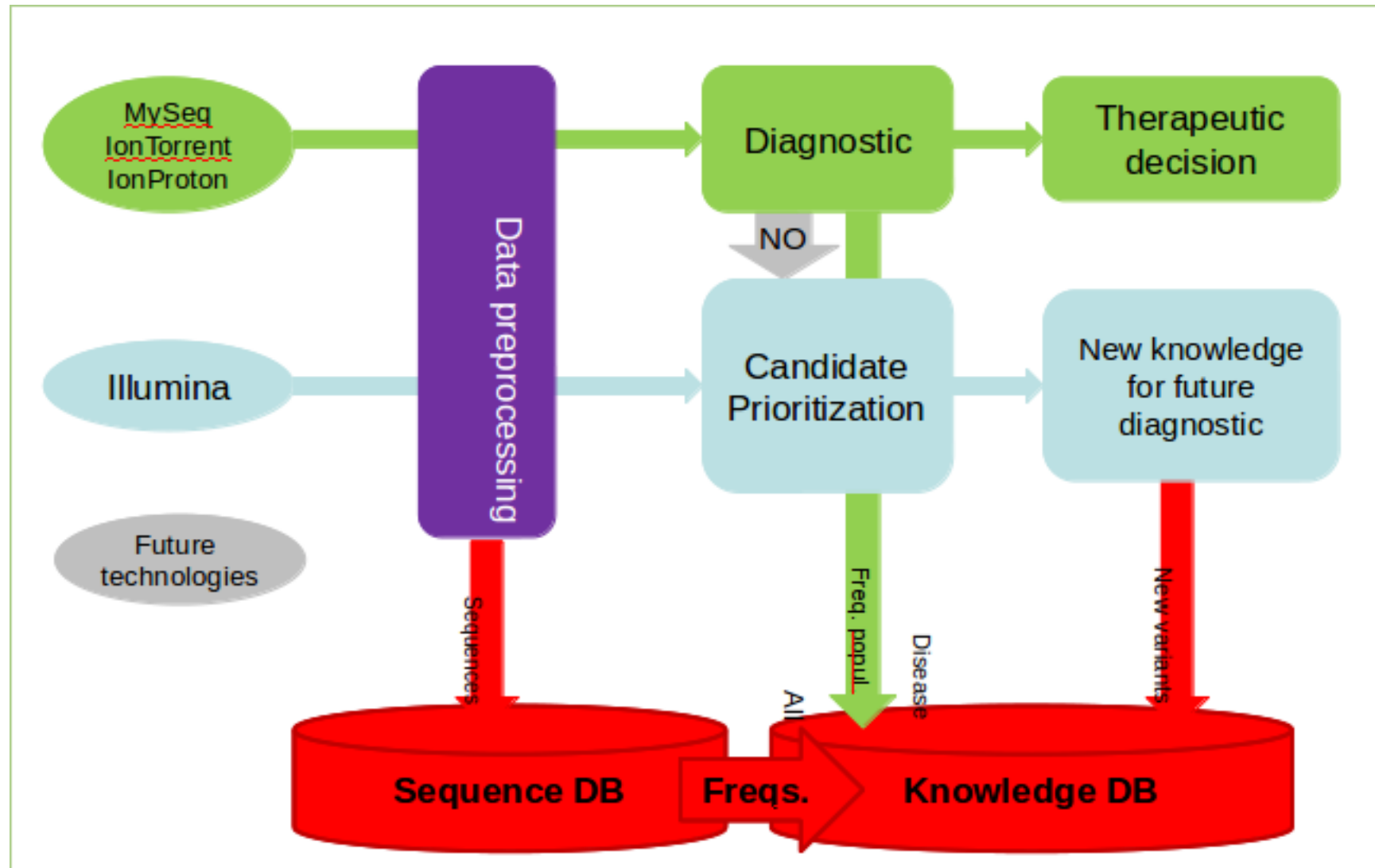
Genomic Computational Department, CIPF

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The final schema: diagnostic and discovery



Program

- 1) Introduction to NGS Technologies for Variation Studies
- 2) Quality Control
- 3) Mapping
- 4) Visualization of NGS data
- 5) Variant Calling / Annotation

Documentation

<http://bioinfo.cipf.es/projects/it4i:start>

User: it4i **password:** it4i