



www.crs4.it

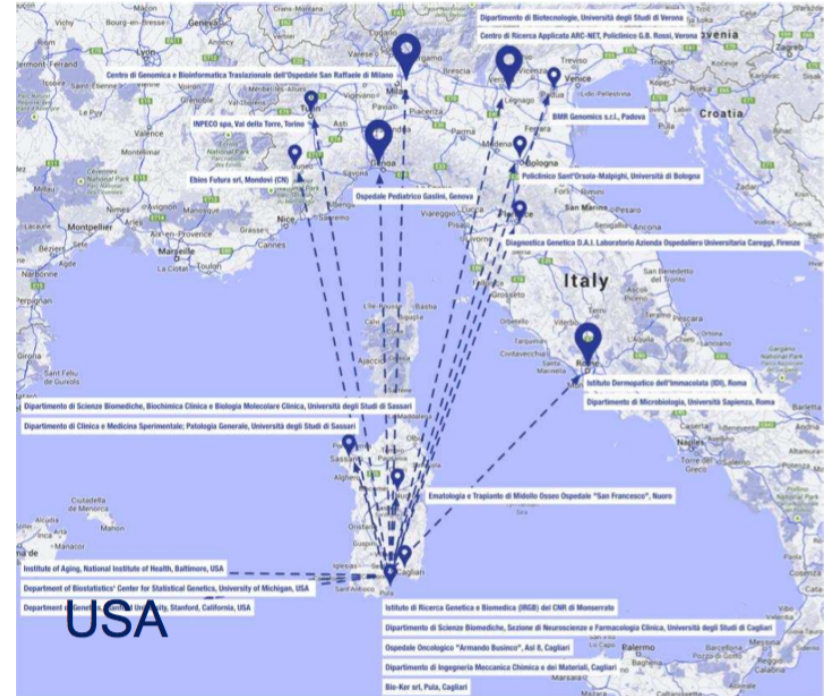
Centro di Ricerca, Sviluppo e Studi Superiori in Sardegna



- Interdisciplinary research center focused on computational sciences
- Located in the POLARIS Science and Technology Park (Pula, Sardinia, Italy)
- Operational since 1992
- RTD staff of about 150 people

CRS4 High throughput NGS facility

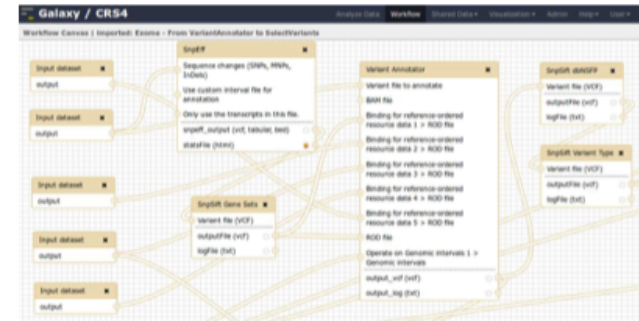
- Currently the largest sequencing center in Italy
 - Equipment: 3 Illumina HiSeq2000/2500
 - HiSeq 3000 under procurement
 - Capacity: about 5.4 Tbases/month
 - NGS applications: Whole DNAseq, exome seq, RNA-Seq, CHIP-Seq
 - Largest and most productive in Italy, in the European High League, > 3000 sequenced samples since 2010
- Fully integrated with CRS4 computing center
 - Automated and fast processing pipelines
 - Scalable dynamic data management



Strong impact on biomedical research
~ 50 papers

CRS4 Data analysis and interpretation platform

- **Based on Galaxy, an open web based platform**
 - Accessible, reproducible, and transparent community standard
 - Personalized data access and specialized tools for downstream data analysis
- **Backed on a 3200+ cores HPC cluster with 4PB storage**
 - Use “Big Data” technologies to help scale computation
 - Centralize storage policies and management



CRS4 Experimental Core Facility



NGS

MA

- Gene sequences
- Any assay data

EXPERIMENT

OMERO.biobank



iRODS



- Data repository
- Data integration
- Security

ORGANIZE

Galaxy



- Genomics
- Transcriptomics
- Metagenomics
- Any data analysis workflow

COLLABORATE

Hadoop



3200+ cores
HPC Cluster
5 PB Storage

COMPUTE
&
ANALYZE DATA

More information

Fully customizable solutions are available at CRS4 for acquisition, analysis and storage of raw data from any NGS experiment.

For more information, please inquire: ngs_services@crs4.it