EUCANCan: A federated network of aligned and interoperable infrastructures for the homogeneous analysis, management and sharing of genomic oncology data for Personalized Medicine

Description

We propose to create the EUropean-CANadian Cancer network (EUCANCan), a federated infrastructure whose mission is to enable Personalized Medicine in Oncology by promoting the generation and sharing of harmonized genomic and phenotypic data. EUCANCan builds on work performed by members of the consortium and related projects to align and interconnect existing European and Canadian infrastructures for the analysis and management of genomic oncology data. The EUCANCan network will be composed of reference nodes in Amsterdam, Barcelona, Berlin, Heidelberg, Paris and Toronto which have established strong research and clinical programs in the field of genomic oncology. These reference nodes will work together in an interoperable fashion to provide the genomic oncology community with a uniform computing environment for the processing, harmonization and secure sharing of cancer genome and phenome data in the context of clinical research, enabling the discovery of clinically-relevant patterns of variation in the cancer genome such as biomarkers predictive of therapeutic response. The infrastructure will also provide a proving ground for federated genome analysis systems that may one day be integrated into national and regional healthcare systems. EUCANCan's objectives are:

- Harmonise protocols for the identification and interpretation of germline and somatic variation profiles within cancer genomes
- Generate strategies for the flow, management, storage and distribution of data within and across EUCANCan nodes
- Define community standards for data elements, types and formats
- Develop an open and accessible data portals for the searching and download of EUCANCan data
- Define an appropriate ethical and legal frame to ensure the secure sharing of protected individual genomic and phenotypic data across countries.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

---

Source URL (retrieved on *25 Nov 2024 - 14:00*): https://www.bsc.es/es/research-and-development/projects/eucancan-federated-network-aligned-and-interoperable