Call for cardiovascular scientists to contribute data to multinational platform

Topics: Cardiovascular research, data sharing, big data
Embargo: 6 April 2021 at 05:00 CEST

Sophia Antipolis – 6 April 2021: The first international platform for sharing cardiovascular data has been launched by **euCanSHare**, an EU-Canada funded project being implemented by **17 partners,** led by the University of Barcelona (UB)[1] and including the European Society of Cardiology (ESC).[2] Cardiovascular researchers are encouraged to use the platform to browse, deposit and analyse data.

The project brings together information on more than one million individuals from **35 cardiovascular cohorts** in the EU, Canada and beyond. It aims to accelerate research in personalised medicine for cardiovascular disease and to promote the responsible exchange of data while reducing cultural, behavioural and technological barriers to Open Science.

Project coordinator Dr. Karim Lekadir of the University of Barcelona, Spain said: "euCanSHare is an unprecedented effort to create a long-awaited international data platform for more responsible sharing and more efficient exploitation of large-scale cardiovascular research studies across institutions. euCanSHare will facilitate access to information on available cardiovascular datasets, while increasing trust through well-established and highly secure data management mechanisms."

The **platform**, which is hosted on the Barcelona Supercomputing Centre's (BSC's) cloud, holds metadata on social and demographic factors, "omics" (DNA/RNA/proteins), cardiac imaging, lifestyle behaviours, and clinical data including outcomes.

Cardiovascular disease is the leading cause of death worldwide: ischaemic heart disease and stroke were responsible for the most deaths globally in 2019.[3] The majority of heart attacks and strokes can be prevented with healthy lifestyles including physical activity and a nutritious diet, controlling body weight, and not smoking. Management is most effective when conditions are diagnosed early, and treatments are tailored to individual patients.

Personalised management relies on the discovery of individual biomarkers that identify who is at risk of cardiovascular disease and who will respond to a particular therapy. Research in this field requires integrating large amounts of cardiovascular data, including molecular, imaging and clinical data as well as lifestyle and demographic information from heterogeneous population and patient cohorts. This presents fundamental challenges for data storage, management and analysis, IT capacity, and accessibility[4] – which are addressed by euCanSHare, the most comprehensive cardiovascular data catalogue ever assembled.

Consortium member Professor Steffen Petersen of Queen Mary University of London, UK, and president-elect of the ESC's European Association of Cardiovascular Imaging (EACVI) said: "My research focuses on how to prevent, diagnose and treat heart failure in at-risk diabetic patients. Using multiple diverse cohorts from euCanSHare increases the statistical power of my research and enables me to more thoroughly investigate the role of lifestyle, ethnicity and genetics."

"euCanSHare provides the privacy and governance mechanisms for the secondary use of data," said Professor Bartha Maria Knoppers (McGill University, Canada) who together with Professor Pascal Borry (Katholieke Universiteit Leuven, Belgium) leads the work package on ethics and interoperability.

The euCanSHare platform covers the entire research path, from data access to distribution of results. Features include: 1) a cohort browser and catalogue enabling professionals to search for cohorts to use in their research; 2) a controlled access manager user interface for providing credentials and requesting permission to use selected information (which will go live next year); 3) a data manager tool for new data depositions; 4) a data analyser workspace for approved users; and 5) written instructions and a helpdesk to guide new users of the platform.

In particular, the catalogue provides a detailed description of available datasets, including key variables, access policies and harmonisation status across cohorts. In the current version, the catalogue provides information on 310,000 individuals from 30 studies.

Consortium member Dr. Josep Lluis Gelpi of the BSC said: "The platform is cross-linked to well-established data infrastructures, such as the European Genome-phenome Archive (EGA) and the European Research Infrastructure for Imaging Technologies in Biological and Biomedical Sciences (Euro-BioImaging), to enhance and standardise data deposition, data security, harmonisation and sharing procedures."

ENDS

Authors: ESC Press Office, UB.

ESC Press Contact
Tel: +33 (0)4 89 87 20 85
Mobile: +33 (0)7 8531 2036
Email: **press@escardio.org**
Follow us on Twitter **@ESCardioNews**

Notes to editor

	This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 825903
	All Canadian project partners have been funded by the Canadian Institutes of Health Research and the Fonds de recherche du Québec – Santé

euCanSHare Consortium
1. Universitat de Barcelona, Spain (Project Coordinator);
2. Research Institute of the McGill University Health Centre, Canada;
3. Universitätsklinikum Hamburg-Eppendorf, Germany;
4. Lynkeus, Italy;
5. Erasmus Universitair Medisch Centrum Rotterdam, Netherlands;
6. Queen Mary University of London, United Kingdom;

7. Centre of Genomics and Policy, McGill University, Canada;

8. Katholieke Universiteit Leuven, Belgium;

9. Barcelona Supercomputing Center, Spain;

10. Fundacio Centre de Regulacio Genomica, Spain;

11. European Society of Cardiology, France;

12. Biobanks and Biomolecular resources Research Infrastructure - European Research Infrastructure Consortium (BBMRI-ERIC), Austria;

13. Population Health Research Institute, McMaster University, Canada;

14. Terveyden ja Hyvinvoinnin Laitos, Finland;

15. Universitätsmedizin Greifswald, Germany;

16. Nostrum Biodiscovery, Spain;

17. University of Pompeu Fabra, Spain.

References

[1]For more information on EU-funded research projects, with Karim Lekadir's involvement visit:
https://www.bcn-aim.org/projects/

[2]For more information on ESC EU-funded research projects visit:
https://www.escardio.org/Research/Research-Funding/eu-funded-projects

[3]World Health Organization. Global Health Estimates: Life expectancy and leading causes of death and disability. Available at **https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates**

[4]Kirchhof P, Sipido KR, Cowie MR, *et al*. The continuum of personalized cardiovascular medicine: a position paper of the European Society of Cardiology. *Eur Heart J*. 2014;35:3250–3257.

About the University of Barcelona

The University of Barcelona is the major public university in Catalonia and one of the most prestigious higher education institutions in Spain.
www.ub.edu

About the European Society of Cardiology

The European Society of Cardiology brings together health care professionals from more than 150 countries, working to advance cardiovascular medicine and help people lead longer, healthier lives.