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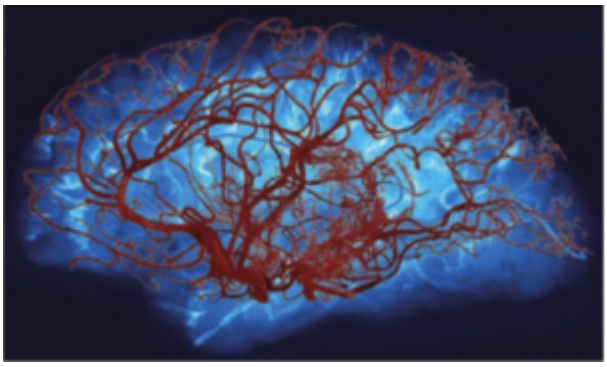
CompBioMed, a centre of excellence in computational biomedicine, is born

BSC is one of the partners. CompBioMed will develop parallel software (including Alya, the BSC's multiphysics simulation code) that will be installed in European supercomputing centres for use by biomedical researchers.



Predictive models of diseases are gaining importance in medicine thanks to their usefulness when **customizing treatments**. Hence, computational methods based on human biology have become a key factor for the development of customized medicine. This scenario has led to the birth of **CompBioMed** project, a centre of excellence in biomedical computing that promotes the uptake and exploitation of high performance computing (HPC) in the field of biomedicine. Basic, clinical and industrial researchers will be able to participate as users in the new project, which, for the moment, will work in three different areas: cardiovascular, molecular and neuromusculoskeletal. University College of London is leading the initiative, which promotes **interdisciplinary business opportunities** by getting its industrial partners to participate, as well as support and facilitate modelling and simulation activities and provide education to a diverse set of communities.

Among the 14 centres participating in the project is the Computational Biophysics research group, led by the ICREA researcher **Gianni de Fabritiis**, at the Research Programme on Biomedical Informatics (GRIB), a joint programme between Universitat Pompeu Fabra and Hospital del Mar Medical Research Institute (IMIM). This group will play a substantial role in work package 2 of CompBioMed: *Molecularly-based Medicine Exemplar Research*, and also in work package 6: *Empowering Biomedical Applications*.

The Barcelona Supercomputing Center, BSC-CNS) is another CompBioMed partner. The researcher **Mariano Vázquez**, team leader of the CASe Department, is the CompBioMed application manager, responsible for coordinating the research work of the Centre of Excellence. CompBioMed will develop parallel software (including Alya, the BSC's multiphysics simulation code) that will be installed in European supercomputing centres (BSC-CNS, SurfSARA in the Netherlands and EPCC in Scotland) for use by biomedical researchers.

CompBioMed is part of one of the new centres of excellence funded by the Horizon 2020 programme and has funding of **more than 4.9 million euros**. In addition to University College of London and Pompeu

Fabra University, the universities of Amsterdam, Edinburgh, Oxford, Geneva and Sheffield, as well as the National Supercomputing Centre (Spain); the SURFsara organization (Netherlands); consultant CBK Sci Con (United Kingdom); companies LIFETEC Group (Holland), Bull Sas (France), Janssen Pharmaceutica (Belgium), and Acellera (Spain) and Evotec Ag (Germany), will be the project partners.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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