

Resource Summary Report

Generated by [kravitz2](#) on Sep 17, 2026

Virtual Physiological Human Network of Excellence

RRID:SCR_002855

Type: Tool

Proper Citation

Virtual Physiological Human Network of Excellence (RRID:SCR_002855)

Resource Information

URL: <http://www.vph-noe.eu/>

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Description: The VPH NoE is a project which aims to help support and progress European research in biomedical modeling and simulation of the human body. This project will improve our ability to predict, diagnose and treat disease, and have a dramatic impact on the future of healthcare, the pharmaceutical and medical device industries. The VPH Network of Excellence (VPH NoE) is designed to foster, harmonize and integrate pan-European research in the field of i) patient-specific computer models for personalised and predictive healthcare and ii) ICT-based tools for modeling and simulation of human physiology and disease-related processes. The main objectives of the VPH Network of Excellence are to support the: :- Coordination of research portfolios of VPH NoE partners through initiation of Exemplar integrative research projects that encourage inter-institution and interdisciplinary VPH research; :- Integration of research infrastructures of VPH NoE partners through development of the VPH ToolKit: a shared and mutually accessible source of research equipment, managerial and research infrastructures, facilities and services; :- Development of a portfolio of interdisciplinary training activities including a formal consultation on, and assessment of, VPH careers; :- Establishment of a core set of VPH-related dissemination and networking activities which will engage everyone from partners within the VPH NoE/other VPH projects, to national policy makers, to the public at large; :- Creation of Industrial, Clinical and Scientific Advisory Boards that will jointly guide the direction of the VPH NoE and, through consultation, explore the practical and legal options for real and durable integration within the VPH research community; :- Implementation of key working groups that will pursue specific issues relating to VPH, notably integrating VPH research worldwide through international physiome initiatives. Finally, by involving clinical and industrial stakeholders, VPH NoE also plans to lay a reliable ground to support sustainable interactions and collaboration between research and healthcare communities. Virtual Physiological Human lists, as its main target outcome, patient-specific computer models for personalized and predictive healthcare and ICT-based tools for modeling and simulation of human physiology and disease-related

processes. Collaborative projects (IPs and STREPs) within the call will meet specific objectives, addressing: patient-specific computational modeling and simulation of organs or systems data integration and new knowledge extraction and clinical applications and demonstration of tangible benefits of patient-specific computational models. The networking action outlined within the call - the VPH NoE - should serve to connect these efforts, and lay the foundations for the methodological and technical framework to support such research. It should also build on previous EC investment in this field, including the outcomes of VPH type' projects funded within the EU Sixth Framework Programme, and through other National and International initiatives. The Virtual Physiological Human Network of Excellence (VPH NoE) has been designed with "service to the community" of VPH researchers as its primary purpose. Its aims range from the development of a VPH ToolKit and associated infrastructural resources, through integration of models and data across the various relevant levels of physiological structure and functional organization, to VPH community building and support. The VPH NoE aims to foster the development of new and sustainable educational, training and career structures for those involved in VPH related science, technology and medicine. The VPH NoE constitutes a leading group of universities, institutes and organizations who will, by integrating their experience and ongoing activities in VPH research, promote the creation of an environment that actively supports and nurtures interdisciplinary research, education, training and strategic development. The VPH NoE will lead the coordination of diverse activities within the VPH Initiative to help deliver: new environments for predictive, patient-specific, evidence-based, more effective and safer healthcare; improved semantic interoperability of biomedical information and contribution to a common health information infrastructure; facile, on-demand access to distributed European computational infrastructure to support clinical decision making; and increased European multidisciplinary research excellence in biomedical informatics and molecular medicine by fostering closer cooperation between ICT, medical device, medical imaging, pharmaceutical and biotech companies. The VPH NoE will connect the diverse VPH Initiative projects, including not only those funded as part of the VPH initiative but also those of previous EC frameworks and national funding schemes, together with industry, healthcare providers, and international organizations, thereby ensuring that these impacts will be realized. VPH NoE work packages and project structure The VPH NoE activities are divided between five main work packages (follow the links at the top of the page for more information on each). In brief, the focus of each work package is as follows: -Work package 1: Network Management -Work package 2: VPH NoE Exemplar Projects -Work package 3: VPH NoE ToolKit development -Work package 4: VPH NoE Training and Career Development -Work package 5: Spreading Excellence within the VPH NoE and VPH-I In view of its role as the networking action for the VPH Initiative, all VPH NoE activities have been designed to serve and interconnect not only the VPH NoE core members, but also the projects funded within the VPH call (VPH-I) and the wider research community. Key activities which the VPH NoE will pursue, in support of the development of a research environment which facilitates integrative, interdisciplinary and multilevel VPH research, are: -Support for integrative research -Training and dissemination activities -Networking activities Sponsors: VPH NoE is supported by The Directorate-General Research (DG RTD) and The Directorate-General Information Society and Media (DG INFSO).

Synonyms: VPH NoE

Resource Type: data or information resource, disease-related portal, job resource, portal, research forum portal, topical portal

Keywords: education, environment, european, biomedical, biotechnology, body, computational, development, device, diagnosis, disease, healthcare, human, imaging, industry, medical, model, molecular, patient, pharmaceutical, physiology, research, science, simulation, technology, treatment

Availability: Free, Freely available

Resource Name: Virtual Physiological Human Network of Excellence

Resource ID: SCR_002855

Alternate IDs: nif-0000-25315

Record Creation Time: 20220129T080215+0000

Record Last Update: 20260912T195547+0000

Ratings and Alerts

No rating or validation information has been found for Virtual Physiological Human Network of Excellence.

No alerts have been found for Virtual Physiological Human Network of Excellence.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 11 mentions in open access literature.

Listed below are recent publications. The full list is available at [kravitz2](#) .

Biglino G, et al. (2017) Computational modelling for congenital heart disease: how far are we from clinical translation? Heart (British Cardiac Society), 103(2), 98.

Kirchhof P, et al. (2014) The continuum of personalized cardiovascular medicine: a position paper of the European Society of Cardiology. European heart journal, 35(46), 3250.

Wang Y, et al. (2013) Effect of regulatory architecture on broad versus narrow sense heritability. PLoS computational biology, 9(5), e1003053.

Johnson D, et al. (2013) Dealing with diversity in computational cancer modeling. Cancer informatics, 12, 115.

Cook DL, et al. (2013) Representing physiological processes and their participants with PhysioMaps. Journal of biomedical semantics, 4 Suppl 1(Suppl 1), S2.

Rossi S, et al. (2012) microRNAs in colon cancer: a roadmap for discovery. FEBS letters, 586(19), 3000.

Wang Y, et al. (2012) Parameters in dynamic models of complex traits are containers of missing heritability. PLoS computational biology, 8(4), e1002459.

Rossi S, et al. (2011) p-Medicine: From data sharing and integration via VPH models to personalized medicine. Ecancermedicalscience, 5, 218.

Kohl P, et al. (2009) Systems biology and the virtual physiological human. Molecular systems biology, 5, 292.

Beard DA, et al. (2009) CellML metadata standards, associated tools and repositories. Philosophical transactions. Series A, Mathematical, physical, and engineering sciences, 367(1895), 1845.

Christie GR, et al. (2009) FieldML: concepts and implementation. Philosophical transactions. Series A, Mathematical, physical, and engineering sciences, 367(1895), 1869.