

VPH Newsletter January 2013 Issue

VPH Newsletter

Monthly newsletter of the Virtual Physiological Human Institute for Integrative Biomedical Research & The Digital Patient News

-January 2013-

Dear colleagues:

I do not know if you had the opportunity to watch the video of the plenary lecture that our President, Prof Denis Noble, gave to the World Congress of Physiology. If not you can find it here:

<http://vph-institute.org/vph-videos>

Denis' presentation, entitled "**Physiology and the revolution in Evolutionary Biology**" is as usual brilliant and enlightening! For the first time I had the sense that the integrative revolution is not a dream anymore, but a fact everyone in the field must deal with. The battery of references that Denis cited to support his arguments are impressive, most published in the last couple of years.

The inheritance of stroke patterns, an acquired behaviour, and the intermediate phenotype of interspecies fish hybrid grown from an egg of one species loaded with the DNA of only the other species, are very strong evidences that the legend of organisms being their DNA and everything around is just package, is indeed a legend.

Why this is important for the VPH community? Because the new biology that emerges from this revolution is a brave new world of incredible complexity, where everything depends on everything else, and where I believe we all feel is easy to get lost. In this computer simulation is our best hope to tame such complexity, and to continue to leverage in the incredible power of reductionism in our investigations, using computer simulations to re-integrate the fragments of knowledges reductionist investigations produce.

Thomas Kuhn, the author of *The Structure of Scientific Revolutions*, would be proud of us, I guess. This is a true revolution indeed, and it is largely due to the courage of people like Denis who presented and defended these ideas in times where no one would want to listen them.

To us, humble engineers and technologists, the humble duty to make all this possible. A lot of



work in front of us, I guess. What can I say? To use Marcus T. Cicero words "The greater the difficulty, the greater the glory".

All the bests

Marco Viceconti

VPH at large

News of general interest for the VPH Research community

VPH Institute position statement on animal experimentation

Can we use computer simulations to replace (at least partially) animal experiments? The answer is YES! We believe that the principles of virtual modelling technologies provided by the VPH can be applied to animal experimentation and help reducing the number of animals used.

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ERC funds 60 innovative projects to bring 'blue sky' research towards market

The European Research Council (ERC) has today announced the outcome of the latest round of its top-up funding scheme 'Proof of Concept'. Worth up to €150,000 each, these grants provide funding for researchers, who are already ERC grantees, to bridge the gap between their research and marketable innovation. In this call, a total of 60 grants have now been awarded, of which the final 27 were made public today. The first 33 grants were announced in September 2012.

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Physiology and the revolution in Evolutionary Biology

The President of the VPH Institute, Denis Noble, has recently delivered a lecture to a large Congress in China with the title Physiology and Evolution. The video is available.

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Collection of electronic resources for the VPH community

The VPH Institute has established a collection of electronic resources of relevance for the VPH community. Help us in including any missing documents.

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"Integrative approaches to computational biomedicine"

A new issue of the Journal of the Royal Society Interface Focus will be published soon. The issue will be dedicated to the Virtual Physiological Human.

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Commission launches renewed calls for experts for Horizon 2020

On 24 January 2013, the European Commission launched a call for expression of interest asking experts from a variety of scientific fields to participate in shaping the agenda of Horizon 2020, the European Union's 8th funding framework for research and innovation. This marks the first time that the Commission has launched such a call for its research programme.

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Draft Transatlantic eHealth/health IT Cooperation MoU Roadmap

The European Commission has published a draft transatlantic eHealth/health IT Cooperation Roadmap to facilitate cooperation between the US and the EU in these fields.

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Council of Ministers' Priorities for Chronic Diseases

In March 2010, the Council of the European Union, called on the European Commission and the Member States to launch a reflection process on the subject of chronic diseases.

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Entrepreneurship 2020 Action Plan launched

On 09 January 2012, European Commissioner for Industry and Entrepreneurship Antonio Tajani published a Communication on the "Entrepreneurship 2020 Action Plan: Reigniting the entrepreneurial spirit in Europe"

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Commission announces new digital priorities for 2013-2014

The European Commission has published a Communication on the Digital Agenda for Europe: Driving European Growth Digitally which outlines digital priorities for 2013-2014.

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Storage capacity through EUDAT

EUDAT sites are currently offering about 9PB aggregated offline (tape) storage and about 1PB of integrated online (disk) storage.

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Available in open source the proceedings of the 2012 5th International Advanced Research Workshop on In Silico Oncology and Cancer Investigation

The workshop took place in Athens on the 22-23 October 2012. The event was technically co-sponsored by IEEE-EMBS and funded by the European Commission through the Transatlantic TUMOR Project in the Framework of the Virtual Physiological Human (VPH) Initiative.

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Watch the oncosimulator video

This video, created within the framework of the ACGT (Advanced Clinico-Genomic Trials on cancer) project, shows a 4D top-down multiscale simulation of tumor response to two clinically applicable radiation treatment schemes based on discrete mathematics.

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DISCIPULUS News

Dear Colleagues,

The Digital Patient roadmap is starting to take shape. We now have the first draft, and a big thank you to all the editors from all over Europe that lent us their expertise and took the time to write the various chapters of the roadmap. The next step is to make the draft available to the public so that it can be refined to the final version.

During this period, anyone will be able to suggest changes to the document, including the chapter editors. This open period will last till around the first few weeks of spring, after which the content will be closed. Modifications to the draft following this period will be made, depending on the feedback.

We will be making announcements about specific dates for the consultation, which will appear on the DISCIPULUS website (www.digital-patient.net).

A provisional date for submission of the revised and final version of the roadmap to the European Commission will also be announced.

Discipulus team

DISCIPULUS: Capturing Key Moments of the Second Consultation Meeting

Of course the roadmap would not have been possible without your invaluable contribution to the recent Second Consultation Meeting. Your thoughts and ideas on the scientific and technical challenges that needed to be overcome in order to realise the Digital Patient made the event, truly energetic and engaging!

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DISCIPULUS

Forthcoming events

Smarter Data for a Healthier Society

Tuesday, February 12, 2013 1:00 PM - 2:00 PM CET, Webinar

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Delivering Innovative Healthcare & Well Being

13-15 May 2013, Dublin

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UK e-Infrastructure Academic User Community Forum

15 April 2013, UCL, London

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ICCS 2013 "Computation at the Frontiers of Science"

June 5 - 7, 2013, Barcelona

[View full details...](#)

Second International Conference on Radiation and Dosimetry in Various Fields of Research (RAD 2014)

27th – 30th May, 2014, Nis, Serbia

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Virtual Physiological Human Institute for Integrative Biomedical Research
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