Introduction

CHIC proposes the development of a suite of tools and services in a secure infrastructure that will support accessibility and reusability of VPH mathematical and computational hypermodels, and will initially be tested in the cancer domain. The aim is that by executing such hypermodels clinicians will be assisted in selecting the most suitable therapy for each individual patient.

Motivation

The impressive rate of the generation of human biological data during the last decades has dictated the development of numerous statistical, computational and mathematical methods in order to extract, analyze and exploit the hidden wealth of information. Unquestionably systems biology has been established as a key player in this arena. Nevertheless, in order for models generally developed by different modelers or modeling groups to be reusable, there are a number of prerequisites that have to be satisfied. Models should be robust, reproducible and interoperable. This implies that standardization of model description and operation is a sine qua non if rational, coherent and comprehensive exploitation of the invaluable information hidden within human multiscale biological data is envisaged. CHIC is therefore motivated to responding to this imperative in the context of both the broad (VPH) initiative and the paradigmatic cancer domain, in order to ensure clinical relevance and foster clinical acceptance of hypermodeling in the future, the whole endeavor will be driven by the clinical partners of the consortium in practice. Cancer hypermodels to be collaboratively developed by the consortium cancer modelers will provide the framework and the testbed for the development of the CHIC technologies. Clinical adaptation and partial clinical validation of hypermodels and hypermodel oncosimulators will be undertaken.

Challenges and Highlights

The main challenge for the L3S Research Center is to set up an ethical and legal framework to guarantee compliance with existing rules governing the field of patients’ medical data. This framework will help partners to process data on valid legal grounds within the project, as well as provide a data security policy for the safeguard of the sensitive data involved. In addition, the L3S Research Center will clearly define the legal framework under which existing models and data sets from within and outside the consortium can be used, including adaptation of copyrighted works and licensing issues involved in amalgamation of models and creating of derivatives. This requires a deep analysis of the protectability of models in the field of copyright.

Project abstract:

CHIC proposes the development of clinical trial driven tools, services and infrastructures that will support the creation of multiscale cancer hypermodels (integrative models). CHIC aspires to make a breakthrough in multiscale cancer modeling through greatly facilitating multi-modeler cancer hypermodeling and its clinical adaptation and validation.

Logo:

Members:
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Project manager:
Iheanyi Nwankwo

Project duration:
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Project research areas:
Web Governance
E-Health

**Project type:**
ICT (FP7-ICT-2011.5.2) CHIC

**URL:**
http://www.chic-vph.eu/

**Research Area:**
Web Governance

**Status of the Project:**
Bibsonomy show project publications:
0
Bibsonomy use tabs to list publications:
0