# A Centre for New Methods in Computational Diagnostics and Personalised Therapy

This EU H2020 'Teaming for Excellence' project develops a Business Case to establish in Poland a European centre of excellence for computational medicine.

### **Objectives**

- Health: Development of new computation-based solutions for diagnostics and therapy in daily healthcare.
- *Technology:* Systematic involvement of regional biomed businesses, specialising in technologies and services for personalised medicine, in high-profile research projects and clinical adoption of their outcome.
- *People:* Development of education initiatives to train knowledge workers with the skills in data analytics, simulation, and HPC/Big Data, to respond to the growing demand for skilled workforce in medical devices and bioengineering.
- Science: Strong advancement of algorithms, models and technologies involved in personalised medicine, including design of holistic, replicable, generic framework for simulation-based Decision Support Systems (DSS) creation.

### Impacts



# Methodology

#### Innovation: New in silico solutions for **Collaboration:** diagnostics and therapy in daily healthcare **Modellers + Healthcare Professionals** → identify "Early adopter" Patient Healthcare providers *in silico* opportunities deployment sites organisations **Opportunity**: **Clinical DSS Creation process** Outcome: disease or condition product Biomedical of high society impact modelling + community exploitation promising simulation strategy Market and exploitation process model Trials: mainly LEs **Business partners** Research State-of-the-art: funding Services: SMEs, spinoff (VC) (both SMEs and LEs) **Advancement of** algorithms, models and Education: knowledge transfer in health data technologies **Exploitation**: analytics, modelling, HPC **Regional biomed** Foster: young Entrepreneurs → businesses technical/commercial/financial skills

### Human Resources: Key to Success

International committees and management : excellence in talent acquisition	
Int. Scientific Committee : Chaired by Marco Viceconti	Foundation Council
13 members (UK, IT, DE, NL, US, PL)	5 reps of Teaming partners (UK, DE, PL)
Selects top candidates	Concludes employment contracts
Search Committee: 6 members (UK, DE, PL)	Centre's Management : Led by Scientific
Access to quality candidates	Affairs Director Marian Bubak

Top international candidates for the Directorship, and Laboratory Leaders



# **International Consortium and Environment**



# **National and Regional Opportunities**

Poland, and in particular Kraków, are well positioned to play a key role in computational medicine:

- Kraków scientific community educates large numbers of medical and IT professionals, and routinely engages in interdisciplinary research with Europe's world-leading *in silico* research community.
- There are many research hospitals in and around the city.



Access to local and international Candidates for Middle and Junior Researcher positions

• The life science companies have entered a phase of rapid growth.

The project is coordinated by Polish National Centre for Research and Development, and Małopolska (Kraków) region authorities are strongly involved in, to achieve adequate alignment of the Centre's goal with national and regional specialisations and development strategies.

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