

SANO

Applied Research Centre for
New Methods in Computational Diagnostics and
Personalised Therapy

BONE INNOVATION
SUMMIT 2019

media docks Lübeck

13-14 February 2019

BFCC

Baltic Fracture Competence Centre

Kazimierz Murzyn, Lifescience Klaster Kraków
SANO Teaming for Excellence Consortium



INSIGNEO

Institute for *in silico* Medicine



The
University
Of
Sheffield.



SANO – the Centre for New Methods in Computational Diagnostics and Personalised Therapy

The applied research centre and the collaboration platform for...

- the identification, development and implementation of new techniques for *in Silico Medicine*,
- adoption of integrated in silico systems to automate the uniform provision of predictive healthcare,
- sustained industrial success through constant innovation, intellectual property, practical healthcare developments, higher education programmes and professional training.



Centre will be established as a Foundation in Krakow, Poland by:

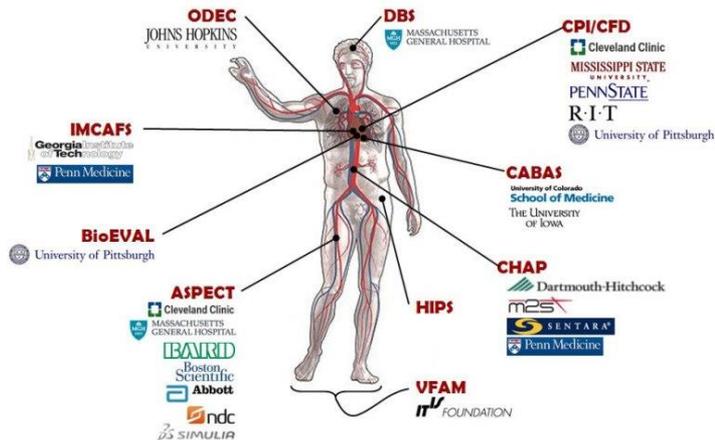


In Silico Medicine: the concept

The direct use of computer simulation
in the diagnosis, treatment and prevention of disease

The Virtual Physiological Patient – The Idea

A collection of models and data for developing and evaluating
medical devices (cardiovascular, orthopaedic, ...)



The framework to enable investigation of the
human body as a single complex system:

- Personalised healthcare
- Preventative approach to combatting disease
- Holistic *multi-morbidity* medical treatments
- Reduced need for animal experiments
- Industrial partnerships: New products & systems

Centre objectives and competences ...

- the development of new technologies for prevention, diagnosis and therapy;
- integration of existing and novel preventive, diagnostic and therapeutic solutions to increase clinical objectivity and improve outcomes for patient benefit;
- acceleration of regulatory and certification processes for clinical usage of computational technologies;

- Clinical Decision Support Systems (CDSS)
- Clinical Trial Simulation (CTS)
- Automated Clinical Data Analysis
- In silico device development
- In silico drug development

Computational models of human physiology

- Conceived in response to clinical need
- Built in the context of related diseases
- Intended to provide medical (analytical, preventive, diagnostic, and therapeutic) solutions.

Centre research areas

**Cardiac/
Cardiovascular**

Neuroscience

Oncology

**Metabolic
bone**

Clinical specialties

Centre for Computational Diagnostics and Personalised Therapy

**Healthcare
Informatics**

**Data
Science**

**Algorithmic
decision
science**

***In silico*
techniques**

**Modelling
and
Simulation**

**Computer
Science and
HPC**

IRAP Research areas

IRAP= International Research Agenda Program,



Centre stakeholders and value proposition

The Centre will support public and private organisations in development and implementation of advanced programs aimed at solving specific clinical problems through computational methods



Opportunities for Clinical R&D Cooperation

Actual: Clinical partners have proposed research programs of interest

Beginning 2020: Workshop programme begins, call for (joint) research projects

- **Flexible opportunity** - three levels of clinical partnership: **Informed, Participating or Contributing Partner**
- **Engagement at many stages** throughout the clinical trials process
 - Conceptual Development
 - Initial R&D
 - Early Clinical Prototyping
 - Regulatory Processes
 - Clinical trials planning and implementation

Clinical collaboration, driven by...

- practical application of scientific and clinical concepts
- funds awarded to the Centre to support R&D projects
- co-supervision (secondment) of PhD students to address research interests

Opportunities for Industrial Cooperation

Actual: Industrial partners engaged in the planning, and guided SANO strategy

Beginning 2020: Collaboration and joint research projects begin, to bring concrete results

- **Flexible opportunity**, three levels of industrial partnership as **Contributing, Supporting or Preferred Partner**.
- **Engagement at many stages** throughout the R&D cycle
 - Conceptual Development
 - Initial R&D
 - Early Clinical Proving
 - Commercial Development
 - Regulatory Processes
 - Market Exploitation

Industrial collaboration, driven by...

- Intellectual Property creation, across multiple domains
- Commercial development and integration around international healthcare standards
- A disciplined academic environment delivering a trained workforce



Life
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OPEN
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THE INTERDISCIPLINARY
CONFERENCE DEDICATED
TO CONNECTING LIFE SCIENCE
AND INNOVATION

What Do You Do for Health and Quality of Life? Present your partnering offer on Digital Health session

- **Cooperations:** 150+ presentations of R&D and business opportunities, incl. scenes for *StartUps* and *Carriere*
- **Inspirations:** the best from *cooperations* as well as intellectual and emotional boost followed with life music and lesson of tango argentino (not to mention the vine tasting)
- **Partnering:** direct, pre-scheduled face-2-face meetings arranged to support StartUp, Open Innovation and Carriere
- **Perspectives:** the World Cafe session led by top thinkers with active participation of participants, devoted to complex health issues to be solved only through systemic approach and collaboration.

Save the date: 26-27 Nov 19 Krakow, Poland

Follow us on: www.lifescienceopenspace.pl

Eager to connect?



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