NNOPrECISE

MESSAGE FROM THE COORDINATOR

As for all good things, also PrECISE project is coming to its end: the partners, in these last months, put all their effort in order to achieve the final goal of PrECISE, i.e. predicting the evolution of prostate tumor.

The PrECISE consortium demonstrated how it is committed to its objective, and the partners proved to collaborate effectively, setting up telcos and organizing visits to one another in order to bring the project towards the desired end.

We are positive, that the results and the new knowledge risen from PrECISE will bring to the European Union countless benefits, and that they will be as well a stable stone from which further researches can start.

Consortium
9 Partners (6 Countries)

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Project number	**731465**
Project website	**www.precise-project.eu**
Project start	**1st January, 2016**
Project duration	**3 years**
Total costs	**EUR 5,695,712.50**
EC contribution	**EUR 3,090,312.50**

LAST PROJECT UPDATES

WP1 (Regulatory network and clonality inference in prostate cancer tumours) saw the partners working closely together, in order to analyze the Chimaera results and intensively working on scalable inference algorithms, which can be used in several real-word datasets. In **WP2** (Identification of sub-clonal genomic alterations), oncoscan arrays were successfully obtained, thus enabling tumor classification, and the methodology to predict tumor clones was proved using public data as well.

Then, in **WP3** (Reconstruction of protein interaction networks from high-dimensional proteomic maps and IBM – Watson technology) the partners are strongly coordinating their efforts to integrate the inference algorithms in the COSIFER tool, while **WP4** (Linking genetic variation to protein expression) saw the deployment of open source services on IBM Cloud, which represents already a tangible outcome of the PrECISE project.

WP5 (Logic models of prostate cancer patients: predicting personalized drug therapies) updates regards mostly the use of data-tailored models to uncover interesting drug candidates, and **WP6** (Experimental validation of prognostic biomarkers and targeted drug predictions) is seeing almost all of the consortium joining forces to develop drug sensitivity models for prostate cancer.

The SmartBiobank in **WP7** (Graphical user interface) has been redesigned for an easier handling, and for a faster and a more stable communication.

The work in **WP8** (Dissemination, Communication, Exploitation and Training) went on, with regular updates on the website and on Twitter and LinkedIn accounts, as well as with uploads of papers, slides and posters on Zenodo.

The management of the project, carried out in **WP9** (Project, Risk and Innovation Management), is an ongoing process, and the consortium submitted an amendment in July.

PRECISE ACCEPTED PUBLICATIONS AND PRESENTATIONS 2018

- **LIN28 SELECTIVELY MODULATES A SUBCLASS OF LET-7 MICRORNAS**
  Ustianenko et al., Molecular Cell 71, pp 271-283, July 2018

- **MULTI-REGION PROTEOME ANALYSIS QUANTIFIES SPATIAL HETEROGENEITY OF PROSTATE TISSUE BIOMARKERS**
  Guo et al, Life Science Alliance 1, no2 (May 29, 2018):e201800042

- **DEPENDENT RELATIONAL GAMMA PROCESS MODELS FOR LONGITUDINAL NETWORKS**
  Sikun Yang, Heinz Koeppl ICML 2018 – International Conference on Machine Learning, July, 2018.

- **HOW TO FIND THE RIGHT DRUG FOR EACH PATIENT? ADVANCES AND CHALLENGES IN PHARMACOGENOMICS**
  Angeliki Kalamara, Luis Tobalina and Julio Saez-Rodriguez COSB – Current Opinion in Systems Biology, August, 2018.

- **PHYSIBOSS: A MULTI-SCALE AGENT BASED MODELLING FRAMEWORK INTEGRATING PHYSICAL DIMENSION AND CELL SIGNALLING**
  Letort et al., **BIOINFORMATICS JOURNAL,** August, 2018

- **BATCH EFFECTS IN LARGE-SCALE PROTEOMIC STUDIES: DIAGNOSTICS AND CORRECTION**
  Cuklina et al., **HUPO 2018,** October 2018.

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PRECISE UPCOMING PUBLIC DELIVERABLES

D1.2 Final clone interference
BCM, *M36 – Refined clonality models and associated biomarkers.*

D1.3 Clonal classification of tumors
UZH, *M36 – Classification of tumours according to dominant clonal content*

D2.3 Targeted profiling of prospective cohort
UZH, *M34 – This report will provide profiles of selected biopsies and will be used to inform sample and assay selection in WP6.*

D2.4 A complete catalogue of targeted profiles
BMC, *M36 – This report will provide normalized molecular profiles, including DNA and protein-expression profiles, of all biopsies studied in WP2.*

D5.4 List of possible drug targets (intervention points), and of individual and combination of drugs
UKAACHEN, *M 36 - This deliverable provides a list of potential therapeutic targets and associated candidate drugs based on the analysis of each patient personalized logical model.*

D6.5 Generate cell line drug sensitivity/resistance validation assays
CI/ABT, *M36 – This deliverable will validate the drug predictions for prostatic cell lines inferred in WP5.*

D7.4 Integrate methods, including ACSN and Watson
IBM, *M36 – We will finalize dashboard implementation and interface with data access and depository, refactored methods, ACSN, and Watson. Integration of data and methods will be followed by extensive application testing.*

Already some of PrECISE public deliverables are available on the project website: **WWW.PRECISE-PROJECT.EU**

Moreover, on the project website it is possible to find all the **PUBLICATIONS** from the PrECISE partners as well as the **SERVICES AND TOOLS** offered by the PrECISE consortium.

Project Partners:

1 TECHNIKON
2 IBM
3 TECHNISCHE UNIVERSITÄT DARMSTADT
4 Joint Research Center for Computational Biomedicine | RWTH AACHEN UNIVERSITY
5 ETH zürich
6 University of Zurich UZH
7 Baylor College of Medicine
8 institut Curie
9 astridbio

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PAST EVENTS

PrECISE partners participated in the following international conferences and workshops throughout 2018:

32nd AAAI Conference
2nd- 7th February 2018
@New Orleans, USA

ECBT 2018
16th – 17th April 2018
@Barcelona, Spain

RECOMB 2018
21st -24th April 2018
@Paris, France

Swiss Text 2018
13th June
@Winterthur, Switzerland

THINK Discovery for Life Science & Health Care
20th June
@Zurich, Switzerland

ISMB 2018
6th – 10th July
@Chicago, USA

LSB 2018
13th July
@Lyon, France

ICML 2018
10th – 15th July
@ Stockholm, Sweden

ECCB 2018
8th – 12th September 2018
@Athens, Greece

IEEE MLSP 2018
17th – 20th September
@Aalborg, Denmark

HUPO 2018 conference
30th September – 3rd October
@Orlando, Florida

INCOME 2018
15th - 17th October
@ Bernried, Germany
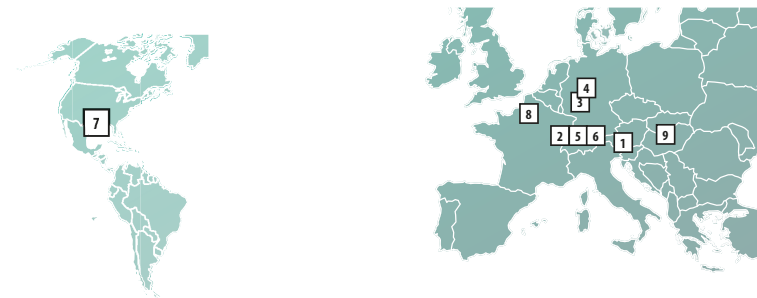
JBI2019
14th - 16th November
@ Granada, Spain

FUTURE EVENTS

IEEE ICDM 2018
17th – 20th November
@Singapore

NIPS 2018
3rd - 8th December
@Montréal, Canada