BTCURE

BE THE CURE

SUMMARY

New developments in our understanding of the pathology of Rheumatoid Arthritis (RA), a chronic disease affecting many patients, show how disease-inducing immune and inflammatory reactions develop from an asymptomatic phase with autoimmune reactions into a phase of non-specific symptoms and then further into the full-blown disease causing pain, joint destruction, functional deterioration.

The ultimate goal for therapeutic development is to identify the disease-causing molecular events early in the disease and then influence immunity and inflammation so that functional deterioration is halted, immunity is re-regulated and the disease is cured.

The work from groups within the BTCure consortium (and others) has recently shown that very different genetic, environmental and thus molecular events are needed to trigger different subsets of the disease. Our aim is to develop an understanding of the early process in arthritis subsets that will enable us to develop precise and eventually curative treatments to be used before irreversible destruction and loss of joint function and mobility have occurred in patients.

The BTCure project will develop new diagnostic methods to discover the early forms of RA and RA-like diseases and new tools to differentiate the different forms of RA and RA-like diseases, where different molecular mechanisms are involved and where different therapies may be required.

To achieve these goals, samples from biobanks will be analysed *in vitro* and models will be aligned with different variants of human arthritis. In addition, new models will be established using similar molecular pathways as the relevant human arthritis subsets, leading to the understanding of the etiology and early pathology of the disease for a program aimed at early and curative treatment of RA and RA-like diseases.

A major focus of these efforts will be to understand and subsequently alter the adaptive immune reactions in patients from a disease-inducing mode into either a protective mode against the disease or become asymptomatic. Advances made through initial research into the pathology of this group of diseases have been successful, given enough information available on the nature and regulation of disease-inducing and disease-protective immunity.

With these tools at hand, we will be able to use new understanding of aetiology and early pathology of human disease for a program aimed at early and ultimately curative treatment of human RA and RA-like diseases.

This project is funded by the Innovative Medicines Initiative, a public-private partnership between the European Union and the European Federation of Pharmaceutical Industries and Associations (EFPIA) **www.imi.europa.eu**

BTCURE

BE THE CURE

PARTICIPANTS

EFPIA MEMBER COMPANIES

- AstraZeneca AB, Sweden
- Boehringer Ingelheim International GMBH, Germany
- Bristol Myers Squibb EMEA sarl, USA
- CENTOCOR B.V., Netherlands
- F. Hoffmann-La Roche AG, Switzerland
- Merck, Germany
- NovoNordisk A/S, Denmark
- Pfizer Limited, UK
- UCB Pharma, SA,Belgium

UNIVERSITIES, RESEARCH ORGANISATIONS, PUBLIC BODIES & NON-PROFIT

- Alexander Fleming Biomedical Sciences Research Center, Greece
- AMC/University of Amsterdam, Netherlands
- Charité-University of Medicine, Berlin, Germany
- Diakonhjemmet Hospital, Norway
- Foundation for Research and Technology, Greece
- German Rheuma Research Centre Berlin, Germany
- Humanitas Foundation for Research, Italy
- Imperial College London, UK
- Karolinska Institute, Sweden
- King's College London, UK
- National Institute for Health and Medical Research (INSERM), France
- National University of Ireland, Dublin
- Phadia AB, Sweden
- Revmatologicky Institute, Czech Republic
- Spanish National Research Council, Spain
- Stichting Catholic University Netherlands
- University College Dublin, Ireland,
- University Hospital Centre, Montpellier, France
- University Hospital Leiden (LUMC), Netherlands
- University of Erlangen, Germany
- University of Glasgow, UK
- University of Leeds, UK
- University of Manchester, UK
- University of Zürich, Switzerland
- Wien University of Medicine, Austria

SMES

- TcLand Expression, France

STARTING DATE: 01/04/2011

DURATION: 60 months

FINANCING

IMI funding:	€ 16.137.872
Other contributions:	€ 7.807.923
EFPIA in kind contribution:	€ 14.172.302
TOTAL PROJECT COST:	€ 38.118.097

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PROJECT WEBSITE:

~Please note that the information in this fact sheet is subject to change. For the most up-to-date information please refer to the project website~

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DDMoRe

DRUG DISEASE MODEL RESOURCES

SUMMARY

Model based-drug development (MBDD) is accepted as a vital approach in understanding patient risk/benefit and attrition. At the core of MBDD lies Modelling and Simulation (M&S), a technology providing the basis for informed, quantitative decision-making.

M&S facilitates the continuous integration of available information related to a drug or disease into constantly-evolving mathematical models capable of describing and predicting the behaviour of studied systems to address the questions researchers, regulators and public health care bodies face when bringing drugs to patients. The full adoption of MBDD is perturbed by a lack of common tools, languages and ontologies for M&S, which often leads to inefficient reuse of data and duplication of effort by academic, industrial and regulatory stakeholders.

The Drug Disease Model Resources (DDMoRe) consortium's strategy will have standards as its core: a newly developed common definition language for data, models and workflows, along with an ontology-based standard for storage and transfer of models and associated metadata.

A drug and disease model library will be developed as a public resource. Its flexibility and power will be showcased by the addition of "proof of concept" drug and disease models from key therapeutic areas such as diabetes and oncology.

An open-source interoperability framework will be the backbone for the integration of M&S applications into seamless standardized but flexible workflows. Initially, currently-used tools (e.g. NONMEM, WinBUGS, Matlab, R) will be integrated into the framework.

From the outset resources will also be dedicated to new application development which will be steered by identified gaps in the M&S software ecosystem. The DDMoRe project's standards and tools – intended as the gold standard for future collaborative drug and disease M&S - will be supported by comprehensive training and will be made publicly accessible.

The DDMoRe consortium draws together its expert partners from across Europe including 5 SMEs and 9 academic partners who will be working together to accomplish the aims of the project with 10 EFPIA companies.

This project is funded by the Innovative Medicines Initiative, a public-private partnership between the European Union and the European Federation of Pharmaceutical Industries and Associations (EFPIA) **www.imi.europa.eu**

DDMoRe

DRUG DISEASE MODEL RESOURCES

STARTING DATE: 01/03/2011

DURATION: 60 months

FINANCING:

IMI funding:	€ 9.615.058
Other contributions:	€ 1.729.833
EFPIA in kind contribution:	€ 9.820.120
TOTAL PROJECT COST:	€ 21.165.061

PARTICIPANTS

EFPIA MEMBER COMPANIES

- AstraZeneca AB, Sweden
- Eli Lilly & Co Ltd, UK
- F. Hoffmann-la Roche AG, Switzerland
- GlaxoSmithKline Research & Development Ltd, UK
- Merck KGaA, Germany
- Novartis Pharma AG
- Novo Nordisk A/S, Denmark
- Pfizer Ltd, UK
- Servier International Institute of Research, France
- UCB Pharma SA, Belgium

UNIVERSITIES, RESEARCH ORGANISATIONS, PUBLIC BODIES & NON-PROFIT

- European Molecular Biology Laboratory, Germany
- Martin-Luther University Halle-Wittenberg, Germany
- National Institute of Research in IT Technology (NRIA), France
- National Research Council, Italy
- University of Leiden, Netherlands
- University of Navarra, Spain
- University of Pavia, Italy
- University of Uppsala, Sweden
- University Paris Diderot, France

SMEs

- Cyprotex Discovery Ltd, UK
- Interface Europe, Belgium
- Mango Business Solutions Ltd, UK
- Optimata Ltd, Israel
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PROJECT WEBSITE: www.ddmore.eu

~Please note that the information in this fact sheet is subject to change. For the most up-to-date information please refer to the project website~

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EHR4CR

ELECTRONIC HEALTH RECORDS SYSTEMS FOR CLINICAL RESEARCH

SUMMARY

Current medical needs, the growth of targeted therapies and personalized medicines and escalating R&D costs result in formidable cost pressures on healthcare systems and the pharmaceutical industry. Clinical research is also growing in complexity, labour intensity and cost.

There is a growing realization that the development and integration of Electronic Health Record systems (EHRs) for medical research can:

- enable substantial efficiency gains
- make Europe more attractive for R&D investment
- provide patients better access to innovative medicines and improved health outcomes.

EHRs can now be designed to seamlessly integrate with existing research platforms and healthcare networks to create opportunities for many stakeholders, including the pharmaceutical and bio-pharma industries.

However, key challenges are compliance with various ethical, legal and privacy requirements (and acceptance by the general public, patients, and medical professionals), providing a platform that works across many EHR systems and is sustainable within a scalable business model. A 4-year project, EHR4CR will involve a team of recognised European academic and industrial partners.

The project will build a platform to enable the use of EHR for more efficient medical research and run pilots (on interoperability, security, data quality, data storage solutions, organisational issues, accreditation and certification, etc) to demonstrate the viability and scalability of an EHR4CR business model.

The EHR4CR project supports the IMI strategic agenda with an information gateway solution to enhance clinical research efficiency and innovation. A key IMI aspect is the development of a knowledge management capability that can, for example, provide information management support for other research on personalized medicines, now an IMI 2010 call topic. EHR4CR also supports other IMI R&D projects by enabling the use (and reuse) of large amounts of health data – in an ethical and cost-effective way.

The EHR4CR project consortium draws its expert partners from academia, with 20 organisations and 4 SMEs working with 10 EFPIA companies and is an example of the scale of collaboration made possible through IMI.

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EHR4CR

ELECTRONIC HEALTH RECORDS SYSTEMS FOR CLINICAL RESEARCH

PARTICIPANTS

EFPIA MEMBER COMPANIES

- Amgen NV, Belgium
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- Bayer Schering Pharma AG, Germany
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- F. Hoffmann-La Roche Ltd, Switzerland
- GlaxoSmithKline Research & Development, UK
- Janssen Pharmaceutica NV, Belgium
- Merck KGaA, Germany
- Novartis Pharma AG, Switzerland
- Sanofi-Aventis Research and Development, France

UNIVERSITIES, RESEARCH ORGANISATIONS, PUBLIC BODIES & NON-PROFIT

- eClinical Forum Association, France
- European Association of Health Law, University of Edinburgh, UK
- European Institute for Health Records, France
- European Molecular Biology Laboratory, Germany
- European Platform for Patients' Oganisations, Science and Industry, Belgium
- Friedrich-Alexander University, Erlangen-Nürnberg, Germany
- Heinrich-Heine University, Düsseldorf (representing ECRIN), Germany
- King's College London, UK
- Medical University of Warsaw, Poland
- National and Kapodistrian University of Athens, Greece
- National Institute for Health & Medical Research (INSERM), France
- Public Service – Hospitals of Paris, France
- TMF - Technology, Methods, and Infrastructure for Networked Medical Research, Germany
- University College London, UK
- University Hospital of Geneva, Switzerland
- University of Dundee, UK
- University of Edinburgh, UK
- University of Glasgow, UK
- University of Manchester, UK
- University of Rennes 1, France
- Westfälische Wilhelms University, Münster, Germany

SMES

- Assero Limited (representing CDISC), UK
- Custodix NV, Belgium
- Data Mining International, Switzerland (sub-contracting partner)
- XClinical GmbH, Germany

STARTING DATE: 01/03/2011

DURATION: 48 months

FINANCING:

IMI funding:	€ 7.019.046
Other contributions:	€ 1.989.852
EFPIA in kind contribution:	€ 7.042.616
TOTAL PROJECT COST:	€ 16.051.514

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PROJECT WEBSITE: www.ehr4cr.eu

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ONCOTRACK

METHODS FOR SYSTEMATIC NEXT GENERATION ONCOLOGY BIOMARKER DEVELOPMENT

SUMMARY

The OncoTrack project will focus on its goal of identifying biological markers that will help our understanding of the variable composition of tumors and the relationship between biological heterogeneity and tumor variation in response to treatment. In particular, biomarkers for cancer of the colon will be analysed through the development and application of research techniques with unprecedented high sensitivity levels.

The research will allow the identification and qualification of biomarkers predictive of patient response as well as those useful for monitoring of therapeutic efficacy. The OncoTrack consortium will use an approach based on the "Virtual Patient" computer modelling system and state-of-art "omics" technologies and systems biology approaches to develop new generation biomarkers and diagnostics that can be used to implement personalized medicine.

The aim is to validate available and predicted biomarkers in large studies which will ultimately produce useable data in a suitable format for point-of-care diagnostic tools.

Oncotrack is coordinated by Bayer Healthcare Pharmaceuticals and Hoffmann La-Roche AG and the managing entity of IMI JU funding is the Max-Planck Society for the Advancement of Science, Germany.

In total there are 18 multidisciplinary partners -11 academic and SMEs and 7 from EFPIA spread across 6 European countries.

This project is funded by the Innovative Medicines Initiative, a public-private partnership between the European Union and the European Federation of Pharmaceutical Industries and Associations (EFPIA) **www.imi.europa.eu**

ONCOTRACK

METHODS FOR SYSTEMATIC NEXT GENERATION ONCOLOGY BIOMARKER DEVELOPMENT

PARTICIPANTS

EFPIA MEMBER COMPANIES

- AstraZeneca AB, Sweden
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- Boehringer Ingelheim International GmbH, Germany
- F. Hoffmann La-Roche AG, Switzerland
- Janssen Pharmaceutica NV, Belgium
- Merck Serono, Germany
- Pfizer Ltd , UK

UNIVERSITIES, RESEARCH ORGANISATIONS, PUBLIC BODIES & NON-PROFIT

- Charité University of Medicine, Berlin, Germany
- Max-Planck Society for the Advancement of Science, Germany
- Medical University of Graz, Austria
- South Paris XI University, France
- Technical University, Dresden, Germany
- University College London, UK
- University of Uppsala, Sweden

SMES

- Alacris Theranostics GmbH, Germany
- EPO – Experimental Pharmacology & Oncology GmbH, Germany
- GABO MI Society for workflow management, Germany
- International Prevention Research Institute SAS, France

~Please note that the information in this fact sheet is subject to change. For the most up-to-date information please refer to the project website~

STARTING DATE:	01/01/2011
DURATION:	60 months

FINANCING:	
IMI funding:	€ 16.050.282
Other contributions:	€ 4.915.508
EFPIA in kind contribution:	€ 9.726.557
TOTAL PROJECT COST:	€ 30.692.347

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This project is funded by the Innovative Medicines Initiative, a public-private partnership between the European Union and the European Federation of Pharmaceutical Industries and Associations (EFPIA) **www.imi.europa.eu**

OPEN PHACTS

The Open Pharmacological Concepts Triple Store

SUMMARY

Drug discovery is data-hungry and all major pharmaceutical companies maintain extensive in-house instances of public data. Analysis and hypothesis generation for drug-discovery projects requires assembly, overlay and comparison of data from many sources and requiring shared identifiers and common semantics.

Expression profiles need to be overlaid with gene or pathway identifiers and reports on compound pharmacology. Alignment and integration of internal and public data and information sources requires a significant effort and the process is repeated across companies, institutes and academic laboratories. This represents significant waste and increases opportunity cost.

To address these challenges, the OpenPHACTS project will develop an *open access innovation platform*, called Open Pharmacological Space (OPS), via a semantic web approach. OPS will be comprised of data, vocabularies and infrastructure needed to accelerate drug-oriented research. The aim is to develop an enabling resource for drug discovery projects which is open to all users and freely available in the public domain.

This semantic integration hub will remove key bottlenecks in small molecule drug discovery:

- disparate information sources,
- lack of standards and common identifiers
- should be guided by well-defined research questions from drug discovery.

Workflows for:

- data capture,
- processing,
- interoperability,
- visualization,
- chemogenomics

will all be developed creating a comprehensive Systems Chemical Biology Analysis Network.

Security issues around proprietary data, shared via the nanopublication system and accessible for safe querying and reasoning, will be properly addressed with expert trusted parties.

The OpenPHACTS consortium comprises 14 European academic and SME partners, with leading experts in the fields of data mining, annotation, small molecule data storage and manipulation, target bioinformatics, RDF information handling, massive in silico reasoning and chemical biology. The 8 EFPIA members of OpenPHACTS will contribute drug discovery expertise, data sets, software engineering and programming capacity to the project.

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www.imi.europa.eu

OPEN PHACTS

The Open Pharmacological Concepts Triple Store

PARTICIPANTS

EFPIA MEMBER COMPANIES

- AstraZeneca AB, Sweden
- Eli Lilly and Company Ltd, UK
- GlaxoSmithKline Research & Development Ltd, UK
- H. Lundbeck A/S, Denmark
- Laboratorios del Dr. Esteve S.A, Spain
- Merck, Germany
- Novartis Pharma, AG, Switzerland
- Pfizer Ltd, UK

UNIVERSITIES, RESEARCH ORGANISATIONS, PUBLIC BODIES & NON-PROFIT

- Christian Association for Higher Education, Research and Patient Care, Netherlands
- Barcelona Mar Parc Health Consortium, Spain
- Leiden University Medical Centre(LUMC), Netherlands
- National Centre for Cancer Research (CNIO), Spain
- Royal Society of Chemistry, UK
- Technical University of Denmark, Denmark
- University of Hamburg, Germany
- University of Maastricht, Netherlands
- University of Manchester, UK
- University of Santiago de Compostela, Spain
- University of Wien, Austria

SMES

- Academic Concept Knowledge Limited, UK
- BioSolveIT GmbH, Germany

STARTING DATE:	01/03/2011
DURATION:	36 months

FINANCING:	
IMI funding:	€ 9.988.867
Other contributions:	€ 2.265.938
EFPIA in kind contribution:	€ 4.142.649
TOTAL PROJECT COST:	€ 16.397.454

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PROJECT WEBSITE: www.openphacts.org

~Please note that the information in this fact sheet is subject to change. For the most up-to-date information please refer to the project website~

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PREDECT

NEW MODELS FOR PRECLINICAL EVALUATION OF DRUG EFFICACY IN COMMON SOLID TUMOURS

SUMMARY

The PREDECT project will permit the emergence of faithful models for target validation and beyond. Traditional preclinical discovery methods, particularly for target validation, poorly predict drug efficacy, causing a high attrition rate in pharmaceutical research and development.

The PREDECT consortium will focus on complex but transferable next generation *in vitro* and *in vivo* models for breast, prostate and lung cancers. Models will be investigated for their improved potential to validate novel therapeutic targets. Known targets, in canonical pathways, will be interrogated for induction of phenotypic, proteomic and transcriptomic changes using inhibitors.

A strategy of seeking a 'dynamic reciprocity' of concordance between the steady and perturbed states of *in vitro* complex cultures, tissue slices and *in vivo* tumour models will be pursued by systems biology analyses.

The project will develop and generate a repository of advanced complex models in 3 complementary areas:

- *in vitro* 2D/3D organotypic (co-)cultures, stirred bioreactor aggregates and tissue slice systems
- novel (orthotopic) grafts of human and mouse tumour samples
- genetically-engineered and mosaic mouse models.

PREDECT aims to produce results which will shift paradigms in target validation and so leading to greater predictivity of drug efficacy in drug trials.

PREDECT is coordinated by Servier and AstraZeneca and the managing entity of IMI JU funding is the University of Helsinki.

The team assembles world-class biologists, clinicians and computational scientists from 8 EU institutes, 3 SMEs and 8 EFPIA members who will work to develop and then critically assess new models for target validation.

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PREDECT

NEW MODELS FOR PRECLINICAL EVALUATION OF DRUG EFFICACY IN COMMON SOLID TUMOURS

PARTICIPANTS

EFPIA MEMBER COMPANIES

- AstraZeneca AB, Sweden
- Bayer Schering Pharma AG, Germany
- Boehringer Ingelheim International GmbH, Germany
- F. Hoffmann-La Roche AG, Switzerland
- Institut de Recherche Servier, France
- Orion Pharma, Finland
- Pfizer Ltd, United Kingdom (not confirmed)
- Sigma-Tau S.p.A., Italy

UNIVERSITIES, RESEARCH ORGANISATIONS, PUBLIC BODIES & NON-PROFIT

- Catholic University Foundation, Netherlands
- Erasmus University Medical Centre, Netherlands
- Institute of Cancer Research, United Kingdom
- Ecole Polytechnique Fédérale de Lausanne, Switzerland
- Robert Bosch Society for Medical Research mbH, Germany
- Technical Research Centre of Finland
- University of Helsinki, Finland
- University of Tartu, Estonia
- Weizmann Institute of Science, Israel

SMES

- Biomedicum Genomics Ltd, Finland
- Oncotest GmbH, Germany
- Institute of Experimental Biology and Technology, Portugal

~Please note that the information in this fact sheet is subject to change. For the most up-to-date information please refer to the project website~

STARTING DATE:	01/02/2011
DURATION:	60 months

FINANCING:	
IMI funding:	€ 8.100.509
Other contributions:	€ 2.532.789
EFPIA in kind contribution:	€ 7.066.607
TOTAL PROJECT COST:	€ 17.699.905

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PROJECT WEBSITE: www.predect.eu.

This project is funded by the Innovative Medicines Initiative, a public-private partnership between the European Union and the European Federation of Pharmaceutical Industries and Associations (EFPIA) **www.imi.europa.eu**

QUIC-CONCEPT

QUANTITIVE IMAGING IN CANCER: CONNECTING CELLULAR PROCESSES WITH THERAPY

SUMMARY

The QuIC-ConCePT project aims to deliver a significant contribution to progress in standardization and qualification of Imaging Biomarkers (IBs) for use in oncology drug development. The objective is to provide tools to the drug developers to reliably demonstrate the modulation of key pathologic processes in tumours in patients in realistic trials. Looking further into the future, therapies for, and biomarkers of, the processes of invasion and metastasis will be of increasing importance, because in most cases it is metastasis, not the primary tumour, which kills the patient.

IBs are fundamental in the diagnosis, research and treatment in cancer. They are also key tools to show which drugs are active for which patients even before clinical benefit is evident. More importantly a good IB allows drug developers to better focus their resources on the most promising areas of cancer research and minimises unsuccessful investigational treatments.

Currently available IBs illuminate only a small proportion of the tumour pathologies so there is a pressing need to develop measures of proliferation, apoptosis and necrosis into biomarkers which can reliably support both positive and negative decisions.

Through a portfolio of highly innovative approaches to devise, evaluate and introduce IBs of invasion and metastasis, the QuIC-ConCePT vision for January 2016 is that drug developers can incorporate these IBs for decision-making in Phase I trials of investigational therapies that can be readily deployed in multiple cancer centres in a robust, consistent, ethical, and cost-effective way acceptable to patients. The results of the QuIC-ConCePT work should have utility in cancer research and in patient management in a very wide range of other important settings.

The managing entity European Organisation for Research and Treatment of Cancer (EORTC) is already a world leader in the qualification of IBs and the consortium includes some of the world's most productive and innovative physicians and scientists in cancer imaging.

The QuIC-ConCePT project will work in close collaboration with the newly approved FP7 project Euro-BioImaging “Research infrastructure for imaging technologies in biological and biomedical sciences” coordinated by EIBIR and EMBL. EORTC will ensure the link between the two projects fostering cross-fertilization and preventing duplication.

The QuIC-ConCept consortium partners consist of 14 academic organisations combined with 1 SME working with 7 EFPIA companies over 5 years.

This project is funded by the Innovative Medicines Initiative, a public-private partnership between the European Union and the European Federation of Pharmaceutical Industries and Associations (EFPIA) **www.imi.europa.eu**

QUIC-CONCEPT

QUANTITIVE IMAGING IN CANCER: CONNECTING CELLULAR PROCESSES WITH THERAPY

PARTICIPANTS

EFPIA MEMBER COMPANIES

- Amgen NV, Belgium
- AstraZeneca AB, Sweden
- Eli Lilly and Company Ltd, UK
- F. Hoffmann-La Roche AG, Switzerland
- GlaxoSmithKline R&D Ltd, UK
- MERCK KgAA, Germany
- Sanofi-Aventis R&D, France

UNIVERSITIES, RESEARCH ORGANISATIONS, PUBLIC BODIES & NON-PROFIT

- Cancer Research, UK
- Radboud University Nijmegen Medical Center, Catholic University Foundation, Netherlands
- Christian Association for Higher Education, Research and Patient Care, Netherlands
- Erasmus University Medical Center, Netherlands
- European Organisation for Research and Treatment of Cancer, Belgium
- Imperial College of Science Technology and Medicine, UK
- Institute of Cancer Research-Royal Cancer Hospital, UK
- King's College London, UK
- Maastricht Radiation Oncology Clinic, (Maastro Clinic), Netherlands
- University Paris Diderot, National Institute of Health and Medical Research (INSERM), France
- Swiss Federal Institute of Technology (ETH), Switzerland
- University Hospital Antwerpen, Belgium
- University of Manchester, UK
- European Institute for Molecular Imaging at the Westfaelische Wilhelms University Münster, Germany

SMEs

- Keosys S.A.S, France

STARTING DATE:	01/04/2011
DURATION:	60 months

FINANCING:	
IMI funding:	€ 7.000.000
Other contributions:	€ 2.062.520
EFPIA in kind contribution:	€ 8.053.206
TOTAL PROJECT COST:	€ 17.115.726

CONTACTS

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RAPP-ID

DEVELOPMENT OF RAPID POINT-OF-CARE TEST PLATFORMS FOR INFECTIOUS DISEASES

Summary

Excellent care for people with suspected infections involves rapid diagnosis and treatment. For instance, administering the correct antibiotic as soon as possible to patients with blood infections, dramatically improves their chances of survival. Equally so, using antibiotics when they do not benefit patients exposes them unnecessarily to side effects and potential antibiotic resistance. In this modern age, we still do not have the technology available that can quickly diagnose what kind of infection and what treatment is needed. Even the best of the currently available diagnostic methods are too slow to help clinicians.

The challenge is to produce a trustworthy rapid Point-of-Care Test (POCT). Exciting technologies, developed with tremendous potential to improve rapid diagnostics need to be integrated to have clinically-useful POCTs and this is now a realistically achievable goal. However this has to be achieved in the context of clinical reality: too many tests have been produced that are miracles of bioengineering but have not provided clinicians with what they require for optimal care.

RAPP-ID aims to provide an integrated solution that addresses the technological challenges to enhance clinical decision-making and improve the quality of care and clinical outcomes for the people of Europe and worldwide.

The project will develop a POCT for rapid detection of bacteria, tuberculosis bacteria, fungi, as well as viruses and patients' markers of infection by combining novel specific probes, novel methods of sample preparation, and demonstrated ultra-high sensitive detection methods in hospital patients in less than 2 hours and for outpatients in less than 30 minutes. The platforms will also determine resistance to the most commonly used antibiotics.

The research will focus on the pathogens and markers of infection involved in:

- Blood infections,
- Lower respiratory tract Infections, including community-acquired pneumonia and ventilator-associated pneumonia,
- Tuberculosis

Detection of bacteria, fungi and antibiotic resistance will mainly involve Nucleic Acid tests, whereas viral and markers of infection detection will mainly involve selective immunobinding with a probe or with a sensor surface.

The diagnostic tests will consist of four functional modules: sample collection and interfacing; upconcentration and extraction; signal and/or sample amplification; and detection. RAPP-ID will integrate the modules required for each disease/syndrome in a matrix to be used with an instrument that reads the results, also developed within the project. The diagnostic platform will be validated on well-characterised clinical samples and compared with the best reference standards and other currently available diagnostic tests.

The RAPP-ID consortium draws its expertise from across Europe and includes 10 academic partners, 4 SMEs and 5 EFPIA companies who will work together over a 5-year period.

This project is funded by the Innovative Medicines Initiative, a public-private partnership between the European Union and the European Federation of Pharmaceutical Industries and Associations (EFPIA) **www.imi.europa.eu**

RAPP-ID

DEVELOPMENT OF RAPID POINT-OF-CARE TEST PLATFORMS FOR INFECTIOUS DISEASES

STARTING DATE: 01/04/2011

DURATION: 60 months

FINANCING:

IMI funding:	€ 6.828.438
Other contributions:	€ 1.771.853
EFPIA in kind contribution:	€ 5.848.470
TOTAL PROJECT COST:	€ 14.448.761

PARTICIPANTS

EFPIA MEMBER COMPANIES

- GlaxoSmithKline Research and Development LTD, UK
- Johnson & Johnson -Tibotec-Virco Virology, Belgium
- Merck, USA
- Novartis Vaccines and Diagnostics Srl, Italy
- Sanofi-Aventis Research and Development, France

UNIVERSITIES, RESEARCH ORGANISATIONS, PUBLIC BODIES & NON-PROFIT

- University of Cardiff, UK
- IMEC, Belgium
- KUL- Catholic University of Leuven, Belgium
- KTH – Royal Institute of Technology, Sweden
- University of Cambridge, UK
- University of Geneva, Switzerland
- University of Antwerp, Belgium
- University of Gent, PBM Group, Belgium
- University of Twente, Netherlands
- University of Uppsala, Sweden

SMES

- LIONEX, Germany
- microfluidic ChipShop, Germany
- Mobidiag Ltd, Finland
- Q-linea, Sweden

~Please note that the information in this fact sheet is subject to change. For the most up-to-date information please refer to the project website~

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