



# SAPHIRE

Securing Adoption  
of Personalised  
Health in Regions

## SAPHIRE workshop

# Best practice in personalised health

17<sup>th</sup> & 18<sup>th</sup> October 2019

Riddel Hall Belfast



## Workshop purpose

The Consortium for Securing the Adoption of Personalised Health\* in Regions (SAPHIRE) aims to structure the application and implementation of personalised medicine at regional level. Our activities include the establishment and support of networking between regions and interregional cooperation. The network will cover regional policy and decision makers, opinion leaders, regulatory agencies, regional development agencies, cluster organisations, patient organisations and regional knowledge institutions and healthcare actors. SAPHIRE will bring regional strengths, needs and barriers to the attention of national and European level.

This workshop brings together some of the leading figures in personalised health from across Europe. We have policy experts, as well as leading figures from government, the academic arena and the healthcare setting. It will be a chance to exchange experiences, to provide a forum for discussion of best practices, lessons learned, and to identify and assess approaches to improve implementation of personalised health.

## Workshop Aim

By showcasing working examples and discussing best practice in personalised health, SAPHIRE wants to provide a platform that facilitates the sharing of ideas and experiences between regions. We see this as an opportunity for interactive discussion, a chance to build new alliances, fresh collaborations and networks, to take home new ideas, to ask questions to leading experts in the field of policy, academia and healthcare.

By hosting this workshop SAPHIRE will gain an insight and overview into the current personalised health environment in European regions. At present, there are many ongoing personalised medicine initiatives across Europe, but the landscape is fragmented, with regions taking a somewhat individual approach. By gathering and disseminating best practice examples this will allow SAPHIRE to gain insight into the current state of play.

In order for a connected and interdisciplinary solution to current problems, regions need to communicate and interact in order to share policies, agendas and ideas; SAPHIRE will provide a platform to allow this to happen. The workshop will also provide an opportunity for SAPHIRE to begin to develop a set of recommendations for best practice in personalised health.

In the longer term, stratification of patients in terms of their health and well-being is essential. It will ensure that the right treatment is delivered at the right time, and to the right person. This is critical not only for the health and well-being of citizens, but also for our healthcare systems, as improved diagnosis and treatment will lead to cost savings in our already over-stretched health economy.

## Twitter

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### \*What is personalised health?

Personalised health builds further on the concept of personalised medicine; personalised health also focuses on the health and well-being of individuals. It comprises any predictive tests, treatments, interventions, medications, electronic and mobile applications and use of data that personalise approaches to improving health and well-being for individuals.

Day one: Thursday 17<sup>th</sup> October 2019

Time	Speaker(s)	Topic
11.30 – 12.45		Registration & lunch
12.45 – 12.55	Dr Janice Bailie	Welcome
12.55 – 13.05	Professor Ian Young	Personalised medicine in Northern Ireland: A policy and practice perspective
13.05 – 13.45	Professor Tony Bjourson	Personalised medicine: a disruptive driver of change for societal benefit
13.45 – 14.25	Dr Alan McNair	Scottish Government support for precision medicine
<i>Scotland</i>	Professor Andrew Biankin	Realising the promise of precision oncology
14.25 – 15.05	Henriette Hansen	Personalised medicine and the need for innovation in daily work; how to provide health professionals with skills and competences to deal with the challenges caused by new ways of working with person centered care and cure
<i>Southern Denmark</i>	Professor Henrik Ditzel	Precode: a precision medicine program in oncology in a region of Southern Denmark and its coordination with similar efforts at other Danish cancer units and the Danish National Genome Center
15.05 – 15.30		Coffee/tea
15.30 – 16.10	Dr Mairéad O’Driscoll	Steps towards the development of a national genomics strategy and Action Plan in Ireland and the issues under consideration
<i>Ireland</i>		

(cont'd on next page)

## Day one (cont'd): Thursday 17<sup>th</sup> October 2019

Time	Speaker(s)	Topic
16.10 – 16.50	Professor Sofie Bekaert	VIB Grand Challenges Program: towards improved societal impact
<i>Flanders</i>	Dr Evelyn Verlinde	emma.health - Towards a personalised lifestyle medicine society
16.50 – 17.15	Olivia Balagna	Enabling prescription-based health apps
<i>Autonomous Province of Trento</i>		
17.15 – 18.05	Round table discussions	Towards a set a of recommendations for best practice in personalised health
18.05		End day one

## Day two: Friday 18th October 2019

Time	Speaker(s)	Topic
9.00 – 9.25		Coffee/tea
9.25 – 9.30	Dr Janice Bailie	Welcome back
9.30 – 9.45	Dr Michael McBride	Key note address
9.45 – 10.15 <i>Extremadura</i>	Dr Jonathan Gomez- Raja	Digital health and precision medicine initiatives in Extremadura
10.15 – 10.50 <i>Wales</i>	Sian Corrin Rhian White	All Wales Medical Genomics Laboratory
10.50 – 11.20		Coffee/tea
11.20 – 11.45 <i>Västra Götaland</i>	Dr Per Sikora	Precision medicine in Sweden, challenges and opportunities
11.45 – 12.15 <i>Podlaskie</i>	Professor Mirosław Kwasniewski	Progress and challenges in personalised medicine implementation
12.15 – 12.45 <i>East Netherlands</i>	Karolien de Bruine	Smart Specialisation for prevention, prediction, personalised: TopFit!
12.45 – 13.00		Wrap-up/questions & answers
13.00 – 14.00		Lunch
14.00		End

## Speakers



### **Dr Janice Bailie**

Assistant Director, HSC Research & Development Division, Public Health Agency

Dr Janice Bailie completed a PhD in Biochemistry at Queen's University Belfast (QUB) in 1990, and post-doctoral research in Ophthalmology at QUB, and in the Radiation Science Group, Ulster University. From 1998-2005, she was Divisional Research & Development (R&D) Manager in Molecular Biology at Randox Laboratories Ltd.

Dr Bailie joined the HSC R&D Office as Programme Manager in January 2005, and has since managed a programme of infrastructure initiatives and funding awards such as the Northern Ireland Clinical Research Networks, the Northern Ireland Clinical Trials Unit, the Clinical Research Facility and the Northern Ireland Biobank. Janice was appointed to the role of Assistant Director of HSC R&D Division, Public Health Agency, in June 2013.



### **Professor Ian Young**

Chief Scientific Advisor to the Department of Health and Director of Research and Development for Health and Social Care

In addition to the above roles Ian is also Professor of Medicine at Queen's University Belfast, where he was also Director of the Centre for Public Health from 2008-2014, and Deputy Medical Director and Consultant Chemical Pathologist at Belfast Health and Social Care Trust.

Professor Young's main clinical and research interests are in biochemical aspects of nutrition, particularly in relation to disease prevention. He is author of over 350 published research papers and has obtained over £30 million in research income. He is Chair of the Scientific Division of the International Federation for Clinical Chemistry and Laboratory Medicine, the world's leading laboratory medicine organization, and Associate Editor of Clinical Chemistry, the journal of the American Association for Clinical Chemistry. He is a member of the UK Scientific Advisory Committee on Nutrition, and the Scientific Advisory Board of the National Institute of Biological Standards and Controls.



## **Professor AJ (Tony) Bjourson**

Director, Northern Ireland Centre for Stratified Medicine

Professor Tony Bjourson is Director of the Northern Ireland Centre for Stratified Medicine which he established at Altnagelvin (C-TRIC) in 2013 with an award of £11.5M. He is PI on a multicentre grant that established an €8.6M (EU SEUPB) Centre for Personalised Medicine Patient Safety and Clinical Decision Making. He was a Co-applicant on a jointly funded MRC award to Belfast City Hospital to establish a Northern Ireland Centre for Genomic Medicine. He is also Co-PI on a £0.7M Personalised Medicine Mental Health Project recently awarded.

He obtained his MSc in Molecular Biosciences from the University of Ulster and PhD from Queen's University Belfast. He has published extensively and has >30 years of research experience. Prior to joining Ulster in 2001, he established and managed genomic programmes for the Department of Agriculture and Rural Development Northern Ireland (DARDNI) and Queens University Belfast and participated in the first international eukaryotic genome project (EU Yeast Genome sequencing program 1994-1996). After joining Ulster he led the Pharmaceutical Biotechnology Research Group and subsequently established and led the Biomedical Genomics Research Group. He was founder and serves as a Director on the board of the Clinical Translation Research & Innovation Centre (C-TRIC) based in L/Derry aimed at translating biomedical research outputs from laboratory bench to patient bedside. He also served on the Board of Directors of the Ulster venture company Innovation Ulster Ltd. He is a Steering Committee member of the Northern Ireland Biobank, a Council Member of the Irish Society for Human Genetics.

He has personally secured in excess of £28M in research grants and has supervised >25 PhD students to successful completion. His own current research is focused on stratified and personalised medicine in the area of multi-morbid diseases with an inflammatory aetiology. He is currently leading the further expansion of an expanded £24M personalised medicine Health Research Institute funded by the UK Government City Deals (awarded to Derry City and Strabane District Council).



## Dr Michael McBride

Chief Medical Officer, Department of Health, Northern Ireland

Dr Michael McBride was appointed to the post of Chief Medical Officer for the Department of Health, in September 2006. Prior to joining the department he had been Medical Director at the Royal Group of Hospitals from August 2002.

Dr McBride graduated with Distinction from Queen's University Belfast in 1986 and completed his undergraduate and postgraduate training in Northern Ireland. In 1991 he attained a Research Fellowship at St Mary's

Medical School and Imperial College London, where he carried out research into new drug treatments for HIV.

Dr McBride has been a Consultant in the Health Service since 1994 when he was appointed Consultant Physician in HIV medicine at the Royal Group of Hospitals and has more than 10 years health service management experience.

He has a longstanding interest in continuing medical education and was Postgraduate Clinical Tutor in the Royal Group of Hospitals between 1996 and 2000 and Director of Education in the Royal Hospitals from 2000.

As Medical Director at the Royal Hospitals, he contributed to strategic change at trust, regional and national level. As the Trust lead for clinical and social care governance, he had responsibilities for all aspects of clinical quality and patient safety.

Dr McBride took up the post of Chief Medical Officer during a time of significant change for Health and Social Care in Northern Ireland with responsibilities for Policy and Strategy in relation to Public Health, Quality and Safety and Research and Development. He also provides strategic advice to Minister and other Government departments on health related matters. He has been closely involved in the development of the new Health and Social Care structures, post Review of Public Administration, including the establishment of the Public Health Agency. Dr McBride currently leads in the work to transform health and social services in Northern Ireland in line with Health and Wellbeing 2026 – Delivering Together.

At the request of the Health Minister Dr McBride took up the post of Chief Executive of Belfast Health and Social Care Trust from December 2014 to February 2017. He combined this role with Chief Medical Officer. As Chief Executive Dr McBride was head of an integrated health and social care Trust which provided hospital-based and social care services to the population of Belfast, as well as most of Northern Ireland's regional specialist services. He had responsibility for key Ministerial priorities, corporate responsibility for the Trust's 20,000 employees, and overseen the Trust's annual budget of almost £1.3bn.



## **Professor Andrew V Biankin**

Regius Chair of Surgery, Director of the Wolfson Wohl Cancer Research Centre, University of Glasgow; Chairman, Precision-Panc Therapeutic Development Platform; Executive Director, International Cancer Genome Consortium

Professor Andrew Biankin is the Regius Chair of Surgery at the University of Glasgow, a Cancer Research UK Clinician Scientist, a Wellcome Trust Senior Investigator, a Fellow of the Royal Society of Edinburgh and the Academy of Medical Sciences.

He is the Director of the Wolfson Wohl Cancer Research Centre which is focused on precision oncology. He plays leadership roles in national and international consortia in cancer genomics and therapeutic development. He has authored over 160 articles in major journals including seminal works on cancer, genomics and precision medicine.

His work is currently focused on implementing precision oncology practice in health systems internationally.



## **Dr Alan McNair**

Senior Research Manager, Chief Scientist Office Scotland

Dr McNair works within the Scottish Government's Chief Scientist Office. He holds policy responsibility for a number of areas including experimental and translational medicine research funding and infrastructure support.

He came to the Scottish Government from the University of Dundee, where he managed the Translational Medicine Research Collaboration programme. He has a background in molecular biology research, and has worked in a number of laboratories across Europe, including the Pasteur Institute and the University of Lausanne



## **Henriette Hansen**

EU Consultant, South Denmark European Office

Henriette has a MSc in Business administration and an MA in European Studies and has worked in the South Denmark European Office since 1999, and has in that period provided advice and counselling within the following areas; Social innovation, health, social inclusion and competence development.

A big part of her work has been to create ideas, build European consortia and write applications on behalf of South Danish local and regional actors, such as enterprises, local and regional authorities, university colleges and the university. On behalf of local and regional actors from the Region of Southern Denmark, she has worked as project manager for the last 20 years.

Since 2012 she has participated actively in the European Innovation Partnership on Active and Healthy Ageing on behalf of the Region of Southern Denmark, making sure that the region is constantly involved and that their interests are included. Since 2009 she has been actively involved in the ERRIN Network (European Regions Research and Innovation Network) and is leading the Health Working Group within the network.

Henriette also works as an external expert towards the European Commission in relation to the evaluation of project proposals and evaluation of interim and final reports.



## **Professor Henrik J Ditzel**

Professor of Precision Medicine, Senior Consultant and Head of Research at Department of Oncology, Odense University Hospital

Professor Ditzel is also Head of Research and Professor of Cancer and Inflammation Research, University of Southern Denmark, as well as Adjunct Professor at The Scripps Research Institute, La Jolla, CA, USA and Visiting Professor at Tianjin Cancer Hospital in China. Professor Ditzel heads a large research group focusing on early detection and individualised treatment of breast cancer, and plays a central role in a precision oncology programme at Odense University Hospital.

He has published more than 160 scientific articles, most in the area of cancer and in very prestigious journals. He has received several awards and honors, including the Danish Society for Cancer Research Honorary prize in 2011, Research Result of the Year 2014, Knight of the Order of Dannebrog in 2015, and he was elected member of American Society of Clinical Investigation in 2003.



## **Dr Mairéad O'Driscoll**

Director of Research Strategy and Funding, Health Research Board

Dr Mairéad O'Driscoll is the Director of Research Strategy and Funding at the HRB, the lead funding agency in Ireland supporting health and social care research, and promoting its application in policy and practice. Before being appointed Director of Funding, she was Head of Policy, Evaluation and External

Relations at the HRB. She worked as a researcher in academia and the biotechnology industry before moving into policy research in the UK and South Africa.

She is a member of several national and international groups, including the Executive Committee of the International Consortium for Personalised Medicine (ICPerMed). She is a graduate of Trinity College, Dublin, and the University of London.



## **Professor Sofie Bekaert**

Manager, Translational Program, Flemish Interuniversity Institute for Biotechnology (VIB)

Professor Bekaert manages the translational program at the Flemish Interuniversity Institute for Biotechnology (VIB) where she coordinates the Grand Challenges Program. She is also a part-time senior lecturer at the Faculty of Medicine and Health Sciences at Ghent University.

Professor Bekaert was trained as a doctor in Applied Biological Engineering. After ten years of research, setting up a research platform on biological ageing, next generation sequencing and biomarkers, she became valorization and innovation manager at Ghent University. In 2010 she initiated the Clinical Research Center at Ghent University Hospital. As the head of Bimetra, she had the responsibility over a dedicated team for management and facilitation of different aspects of translational biomedical research (ethico-legal aspects, data management and monitoring of clinical trials, research and innovation management within the hospital, biobanking, big data).

Professor Bekaert is liaising with strategic translational initiatives concerning biobanking and clinical research and innovation, both at the regional and (inter)national level. She is past-president of the board of directors of the BBMRI.be, the Belgian node within the European biobank infrastructure network, is Councilor within the European Society for Biopreservation and Biobanking and she is involved in multiple societal valorization projects concerning stakeholder involvement and participation in research (e.g. Eupati, King Baudouin Foundation – multistakeholder dialogue for prioritisation of research).



## **Dr Evelyn Verlinde**

Scientific Health Expert at emma.health

Dr. Evelyn Verlinde has a PhD in Life Sciences and Medicine. During her medical studies she became interested in prevention rather than trying to find cures for diseases after they occur. Everything stands or falls with good health. She successfully focused on prevention, and promoting a healthy lifestyle tailored to each person for both healthcare professionals and lay people.

She designed a unique professional bachelor curriculum on health promotion at the University College HOWEST in Flanders. She worked as a lecturer, expert and researcher on health and lifestyle. Now she is part of the scientific backbone team with emma.health



## **Olivia Balagna**

Project Manager, Health and Social Policies Department, Office for Research and Innovation, Autonomous Province of Trento

As of today, Olivia takes care of five European projects all related to promotion and prevention in ehealth, healthy active ageing and personalised medicine (for example H2020, Interreg CE, Interreg Alpin Space & Erasmus +).

She has previous experience in European and international project management and institutional and international event coordination with the University of Trento, the OECD and private companies. She has a Master's degree in International Business Management (INSEEC Business School, Bordeaux, France).



## Dr Jonathan Gomez Raja

Scientific Coordinator at the Department of Health and Social Services at the Government of Extremadura

PhD in Microbiology from University of Extremadura (Spain) and Postdoc at the University of Minnesota (USA). Additionally, he is Master in International R&D programs management from the Polytechnic University of Madrid (Spain). He is an expert in Genetics and Molecular Biology and his research has been focused on human fungal diseases.

He has developed his career in the USA, India, Germany and Spain. Jonathan is author of several articles published in scientific journals as well as book chapters. He has participated as researcher and principal investigator in several research projects and coordinator in both national and international scientific activities. He has also received several postdoctoral fellowships and other awards by the Regional Government and the Federation of European Microbiological Societies; FEMS. He has been adjunct professor at the University of Extremadura and currently is Scientific Coordinator at FundeSalud (Regional Ministry of Health and Social Policies at Government of Extremadura).

His principal aim is to promote research, innovation and internationalisation in the health and social care system in the autonomous region of Extremadura.



## Rhian White

FRCPath, Consultant Clinical Scientist, All Wales Medical Genomics Laboratory

Rhian is a state registered Clinical Scientist at the All Wales Medical Genomics Laboratory. For the last 15 years she has specialised in cancer genomics and is now the lead Clinical Scientist for the Cancer Genetics Section of the All Wales Genetics Laboratory. This section encompasses the Haemato-oncology, Solid Tumour and Familial Cancer Sections.

As well as her clinical role, she is one of two deputies of the laboratory. Rhian has a national role within the profession as a member of the Workforce Development Committee of the Association of Clinical Genomic Science.



## Sian Corrin

FRCPath, Consultant Clinical Scientist, All Wales Medical Genomics Laboratory

Sian is a state registered Clinical Scientist at the All Wales Medical Genomics Laboratory (AWMGL) and the lead Clinical Scientist for the Constitutional Section, which encompasses the Developmental Disorders, Prenatal & Screening and Specialised Services sections.

As well as her clinical role, Sian is one of two deputies of the laboratory and has a national role within the profession as a member of the Scientific Committee of the Association of Clinical Genomic Science.



## Dr Per Sikora

Head Bioinformatician, Sahlgrenska and Head of Facility, SciLifeLabs translational research facility Clinical Genomics Gothenburg

Per Sikora has a Masters of Engineering in Biotech from Chalmers University of Technology and a PhD in Molecular Biology with focus on bioinformatics from the University of Gothenburg.

He has previously worked within the Public Health Agency of Sweden before moving to Sahlgrenska University Hospital. He is now Head Bioinformatician

at Sahlgrenska and Head of Facility for the SciLifeLabs translational research facility Clinical Genomics Gothenburg as well as Chair of Informatics and Infrastructure for the national precision medicine project Genomic Medicine Sweden.



## Professor Miroslaw Kwasniewski

Associate Professor, Head of the Centre for Bioinformatics and Data Analysis, Medical University of Bialystok, Poland.

Professor Kwasniewski is a geneticist and bioinformatician. He is an expert in genomic analysis and annotation for personalised medicine and in large-scale genomic data analysis; currently aiming at the implementation of standardised bioinformatics pipelines to support research activities at the Medical University of Bialystok and at the development of a reliable decision support system for clinicians.



## Karolien de Bruine

EU liaison for Th!nk East Netherlands

In the East Netherlands 24 partners work together to strengthen the regional economy sustainably, by stimulating regional innovation and European cooperation. The provinces Gelderland and Overijssel, together with the regions, universities, applied universities, cluster organisations and intermediaries such as the employers' organisation and the regional development agency have developed an innovation profile. One of the

flagships is "Concepts for a healthy life" in which the following themes are determined: Personalised Health and Nutrition, Health Technology & Delivery Systems, and Healthy Brain. As liaison Karolien connects European institutions and European partners to the region. She is active in several European networks, such as the S3 platform on Industrial Modernisation in Personalised Medicine. East Netherlands is co-lead of this platform.

## Day 1: Presentations

### Key note presentation

### Northern Ireland

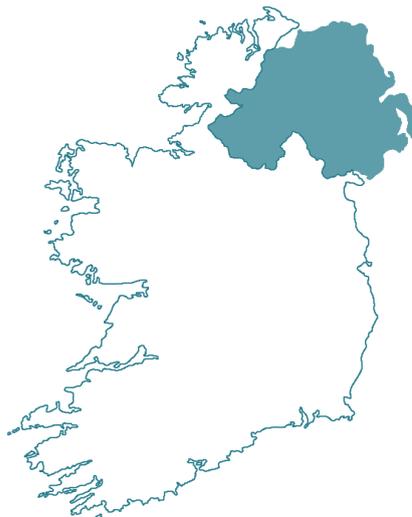
#### **Personalised Medicine: a disruptive driver of change for societal benefit**

**Professor Tony Bjourson, Director, Northern Ireland Centre for Stratified Medicine**

Patient and societal benefit is the core focus of personalised medicine objectives through the identification of clinical and molecular features for the development of better clinical decision tools capable of more precisely subclassifying disease endotypes that can provide better diagnostic tools.

It also involves the development of more precise tools to inform what interventions may avoid or delay the onset of specific diseases, and predict the optimal specific intervention type, drug therapeutic dose, and optimal timing of each intervention. This requires the integration of multiple technologies, across multiple disciplines, in multiple sectors and presents major data management, healthcare policy and economic challenges.

The challenges faced by research organisations, commercial companies, policy makers, and patients in implementing the personalised medicine paradigm to maximally translate the opportunities to clinical utility and integration into routine care pathways will be discussed. The presentation will provide a summary of the key multi-stakeholder sectors, infrastructure and capability within Northern Ireland, with specific examples of personalised medicine research and development at the Ulster University, Northern Ireland Centre for Stratified Medicine, Centre for Personalised Medicine & Clinical Decision Making.



## Scotland

### Realising the promise of precision oncology

**Professor Andrew Biankin, Regius Chair of Surgery and Director of the Wolfson Wohl Cancer Research Centre, University of Glasgow**

There is substantial excitement concerning the potential of precision medicine, particularly for cancer. Whilst conceptually the promise is substantial, the pathway of how we get there is not clear. Existing systems are not adept at facilitating precision medicine strategies, and are difficult to change.

We must build the systems that allow us to deliver precision medicine, including enabling molecular testing for all people at point of care, the ability to flexibly deliver new treatments and efficiently accrue robust clinical data, and share these data globally to aggregate the large datasets that we will need.

This presentation identifies the current systemic challenges, and offers potential solutions.

### Scottish Government support for precision medicine

**Dr Alan McNair, Senior Research Manager, Chief Scientist Office Scotland**

The Scottish Government recognises the potential of precision medicine to positively impact health conditions of major importance in Scotland, including diseases that disproportionately impact on those at risk of socioeconomic disadvantage. The role of government in developing an ecosystem for precision medicine is discussed.



## Southern Denmark

**Personalised medicine and the need for innovation in daily work; how to provide health professionals with skills and competences to deal with the challenges caused by new ways of working with person centered care and cure**

**Henriette Hansen, EU Consultant, South Denmark European Office**

The presentation will show how the Region of South Denmark works with on-the-job training to make health professionals innovation ready and positive towards the use of new technologies.

**Precode: A precision medicine program in oncology in a region of Southern Denmark and its coordination with similar efforts at other Danish cancer units and the Danish National Genome Center**

**Professor Henrik Ditzel, Senior Consultant and Head of Research at the Department of Oncology, Odense University Hospital**

Professor Henrik Ditzel will present the precision medicine program in oncology in Odense and how this initiative is coordinated with related efforts at other Cancer units in Denmark.

A National Genome Center in Denmark was recently established, which will provide a common infrastructure with capacity for genome sequencing and a national genome data base. An update on these efforts will also be presented.



## Ireland

### **Steps towards the development of a national genomics strategy and Action Plan in Ireland and the issues under consideration**

**Dr Mairéad O'Driscoll, Director of Research Strategy and Funding, health Research Board**

The presentation will discuss steps towards the development of a national genomics strategy and Action Plan in Ireland and the issues under consideration. There will also be an overview of the important strategic developments at European level in relation to personalised medicine.



## Flanders

### VIB Grand Challenges Program: towards improved societal impact

**Sofie Bekaert, Manager, Translational Program, Flemish Interuniversity Institute for Biotechnology (VIB)**

The Grand Challenges Program (GCP) from VIB is a program of reverse translational research: starting from the societal challenges, thereby creating new knowledge and opportunities, which will depend on multidisciplinary collaboration with skilled teams outside VIB (hospitals, SOCs, etc.) to realise preset goals in delivering high impact solutions. The VIB-GCP projects are, by default, induced by 'reverse' translational (applied research) questions and issues which are triggered in daily practice. These projects are, so to speak, developed 'backwards', starting from the patient or crop and leading to new insights and applications. The VIB-GCP projects involve an iterative process in which new observations are translated into new testable hypotheses and validated solutions. Throughout the process, VIB expertise is used with the aim to impact pertinent challenges in healthcare and agriculture, framed within the United Nations Sustainable Development Goals.

The final purpose of the VIB-GCP is to leave a positive mark on a better future for the world and on society, help stakeholders to be, think, and live better with VIB innovations, by thinking about practical applications based on VIB's research and excellence areas. The goal is not just funding (societal and economical) valorization, but shifting where the funding is going, supporting innovative new approaches, addressing societal need gaps, and bringing the right solutions to the places where they are most needed in a dialogue with all stakeholders. Thus far 6 projects have been selected in distinct disease areas and focusing on improved diagnosis and/or prediction, innovative and/or targeted treatments.

### emma.health - Towards a personalised lifestyle medicine society

**Dr Evelyn Verlinde, Scientific Health Expert at emma.health**

"EMpower people through Medical Autonomy" that is what emma.health stands for. emma.health does not focus on sickness, she focuses on keeping YOU healthy.

A GP only has a limited amount of time to assess your health. So they have to make choices and prioritise the symptoms and find a cure. The time for prevention of chronic diseases is very limited. This is where emma.health can make a difference. emma.health combines the personalised approach of the GP with the intelligence of a computer. We use subjective data (questionnaires) and combine these with objective data (biomarkers). The result is an accurate assessment of your health and a personalised call to action by means of lifestyle changes, referrals, additional check-up and follow-up.

The algorithms and advices emma.health uses are evidence based and medically validated. We also add mathematical correlations, so that we can make increasingly better predictions based on the growing number of users. Everything is always double-checked by a team of doctors. The results of emma.health are directly transferred to the electronic patient file of the persons GP. In this way the patient and GP can team up and work towards better health.



## Autonomous Province of Trento

### Enabling prescription-based health apps

**Olivia Balagna, Project Manager, Health and Social Policies Department, Office for Research and Innovation, Autonomous Province of Trento**

The presentation will cover an innovative framework for prescription of personalised health apps by integrating Personal Health Records (PHR) with disease-specific mobile applications for managing patient's conditions, and the communications with clinical professionals.

The prescribed apps consider medical aspects of the patients, such as existing conditions and medical history enriched with innovative features such as integration with medical monitoring devices and wellbeing trackers to provide patients and clinicians with a personalised support on disease management.

We will present this system based on our existing PHR ecosystem called TreC used by over 120,000 patients in Trentino.



## Day 2: Presentations

### Extremadura

#### Digital health and precision medicine initiatives in Extremadura

**Dr Jonathan Gomez-Raja, Scientific Coordinator at the Department of Health and Social Services. the Government of Extremadura**

The Regional Ministry of Health and Social Services at the Government of Extremadura manages the services for Healthcare (SES; Regional Healthcare System) and Elderly and Dependency care (SEPAD; socio-sanitary field) in the autonomous region of Extremadura (Spain). Extremadura

Healthcare Service (SES) involves 14 hospitals with around 3000 beds, 113 Community Health Centers, 420 Primary care Centers and over 18000 professionals. SES is managed by a powerful Healthcare Information System (JARA) that provides 100% electronic prescription and an integrated medical record (primary and specialized care). In addition, SES is very active in developing different tele-care and mHealth programs in order to cover all the population in Extremadura (over a million of people), which is very aged and dispersed. SEPAD is the service that promotes actions to prevent and manage situations of dependency that affect the most vulnerable groups of the population. It covers functions of administration and management services, developing and coordinating social policies about disabled and elderly people. The functions of SEPAD are related to care dependent people and promote different actions focused on healthy lifestyle for senior people. SEPAD involves Nursing Homes, Day Care Centers, Senior Centers and other aged-friendly resources. This service has been acting as a perfect living lab for validation of different approaches and processes, providing also the end-users for product validation in the different projects.

FundeSalud is the Public Foundation (non-profit) instrument and part of the Regional Ministry that manages both research and training programs at SES and SEPAD. In addition, FundeSalud works in collaboration with UEx (University of Extremadura) and other public or private research centers, providing resources, staff and facilities to develop any biomedical research activity in Extremadura.



## Wales

### All Wales Medical Genomics Laboratory

**Sian Corrin, Consultant Clinical Scientist, All Wales Medical Genomics Laboratory;**

**Rian White, Consultant Clinical Scientist, All Wales Medical Genomics Laboratory**

The Genomics for Precision Medicine Strategy for Wales was launched in July 2017 by Vaughan Gething, Cabinet Secretary for Health, Well-being and Sport. The strategy set out the Welsh Government's ambitious plan "to create a sustainable, internationally-competitive environment for genetics and genomics to improve health and healthcare provision for the people of Wales". Delivery of the strategy is managed by the Genomics Partnership Wales (GPW) who facilitate a united approach to genomics in Wales and represent a number of organisations across several disciplines coming together to deliver a programme of work that will enable the ambition and commitment laid out in the Genomics Strategy to be realised. These organisations include the All Wales Medical Genomics Service (AWMGS), Wales Gene Park, Public Health Wales, Cardiff and Vale University Health Board and Higher Education Institutions in Wales.

The All Wales Medical Genomics Laboratory delivers genomic services for precision medicine on an all Wales basis, with an emphasis on providing equitable access for patients across Wales. Following the recent reconfiguration of genomic services in England and the publication of the Genomic England Test Directory, the All Wales Medical Genomics Laboratory has been supported by Welsh Government to provide an equitable service to patients in England by uplift in funding. This additional funding is enabling the laboratory to expand the provision of precision medicine services for patients in Wales. One such example is the recent implementation of a 'Pan-Cancer' next generation sequencing multi-gene panel to provide molecular analysis of over 30 somatic genetic markers used for diagnosis, prognosis and treatment of solid tumour cancers.



## Västra Götaland

### Precision medicine in Sweden, challenges and opportunities

Dr Per Sikora, Head Bioinformatician, Sahlgrenska and Head of Facility at SciLifeLabs translational research facility Clinical Genomics Gothenburg

Genomic Medicine Sweden is a collaborative effort between seven university hospital regions and seven universities aimed at creating a cohesive implementation of precision medicine within Swedish healthcare. The project ranges from introducing and expanding new laboratory techniques into routine healthcare to help with patient diagnostics to structuring and organising healthcare data to further outcomes, health economics and medical research.



## Podlaskie

### Progress and challenges in personalised medicine implementation

**Professor Mirosław Kwasniewski, Associate Professor, Head of the Centre for Bioinformatics and Data Analysis, Medical University of Białystok Poland**

In our practice at the Medical University of Białystok (MUB) we have found a number of significant challenges to the integration of personalised medicine into healthcare practice. We have gained our experience mostly by carrying out a multidisciplinary research project “Development of Personalized Diagnostic of Malignant Tumors based on tumor heterogeneity and integrated genomic, transcriptomic, metabolomic and imaging PET/MRI analysis. Getting Ready for Individualized Therapy”. MOBIT.

We have found issues related to the management of clinical information, integration of genomic data within electronic health records, communication between clinicians and bioinformaticians/biologists or education of stakeholders about the value of genomic services. Consequently, dedicated actions have been initiated to overcome these issues.



## East Netherlands

### Smart Specialisation for prevention, prediction, personalised: TopFit!

Karolien de Bruine, EU liaison for Th!nk East Netherlands

In preparation of the new Multi Annual Framework the region of Eastern Netherlands is updating its regional Smart Specialisation Strategy. In the domain of health the focus will continue to be on prevention. With the iconic project TopFit the region aims to be “one step ahead”. What does this mean in the different fields of healthcare? And how does this focus contribute to the uptake and implementation of new health care products and services? The case of Diabetes type II will be discussed.



## Additional information

Presenter	Website	Description
Dr Janice Bailie	<a href="https://research.hscni.net/">https://research.hscni.net/</a>	HSC Research & Development
Professor Ian Young	<a href="https://research.hscni.net/">https://research.hscni.net/</a>	HSC Research & Development
Professor Tony Bjourson	<a href="https://www.ulster.ac.uk/research/institutes/biomedical-sciences/research/northern-ireland-centre-for-stratified-medicine">https://www.ulster.ac.uk/research/institutes/biomedical-sciences/research/northern-ireland-centre-for-stratified-medicine</a>	Northern Ireland Centre for Stratified Medicine
	<a href="https://www.ulster.ac.uk/research/institutes/biomedical-sciences/research/centre-for-personalised-medicine">https://www.ulster.ac.uk/research/institutes/biomedical-sciences/research/centre-for-personalised-medicine</a>	Centre for Personalised Medicine - Clinical Decision Making and Patient Safety (CPM)
Professor Andrew Biankin	<a href="https://www.precisionpanc.org/">https://www.precisionpanc.org/</a>	Precision –Panc website
Dr Alan McNair	<a href="https://www.cso.scot.nhs.uk/">https://www.cso.scot.nhs.uk/</a>	Chief Scientist Office Scotland
Henriette Hansen	<a href="http://www.southdenmark.com/">http://www.southdenmark.com/</a>	South Denmark European Office
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	<a href="https://eng.ngc.dk/">https://eng.ngc.dk/</a>	Danish National Genome Centre
	<a href="https://www.sdu.dk/en/om_sdu/institutter/centre/immolekylaermedicin/forskning/cancerinflammation/forskere+og+forskningsgrupper/henrik+ditzel">https://www.sdu.dk/en/om_sdu/institutter/centre/immolekylaermedicin/forskning/cancerinflammation/forskere+og+forskningsgrupper/henrik+ditzel</a>	University of Southern Denmark, Ditzel Group
Dr Mairéad O'Driscoll	<a href="https://www.hrb.ie/">https://www.hrb.ie/</a>	Health Research Board
	<a href="https://www.icpermed.eu">https://www.icpermed.eu</a>	International Consortium for Personalised Medicine (ICPerMed)

<b>Presenter</b>	<b>Website</b>	<b>Description</b>
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Sian Corrin Rian White	<a href="http://www.wales.nhs.uk/sites3/page.cfm?oqId=525&amp;pid=25837">http://www.wales.nhs.uk/sites3/page.cfm?oqId=525&amp;pid=25837</a>	All Wales Medical Genetics Service
Dr Per Sikora	<a href="https://www.scilifelab.se/facilities/clinical-genomics-goteborg/">https://www.scilifelab.se/facilities/clinical-genomics-goteborg/</a>	Clinical Genomics Göteborg
	<a href="https://www.sahlgrenska.se/">https://www.sahlgrenska.se/</a>	Sahlgrenska University Hospital
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Karolien de Bruine	<a href="https://www.eu-opportunities.eu/">https://www.eu-opportunities.eu/</a>	East Netherlands Development Agency
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Professor Sofie Bekaert	<a href="http://www.vib.be/en/research/Pages/VIB%20Grand%20Challenges%20Program.aspx">http://www.vib.be/en/research/Pages/VIB%20Grand%20Challenges%20Program.aspx</a>	VIB Grand Challenges Program
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An online version of this programme is available at <https://www.saphire-eu.eu/services>



# SAPHIRE

Securing Adoption  
of Personalised  
Health in Regions

Securing Adoption of Personalised Health in Regions (SAPHIRE)  
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