Draft Programme

Time	What	Who
9.00 – 9.10	Opening words	*Moderator t.b.a.*
9.10 – 9.20	ERACoSysMed: Systems Medicine calls and awareness	Dr. Rob Diemel, PhD (ZonMw, NL)
9.20 – 9.40	Introduction to the CASyM roadmap for implementing Systems Medicine in Europe	Prof. David Harrison, MD (Univ. St.Andrews, UK)
9.40 – 10.10	*Showcase 1: 'Cancer pathology as a moving target: how little do we need to know?'*	
10.10 – 10.25	Matchmaking	
10.25 – 10.55	*Showcase 2: 'Dynamic maps for systems medicine in metabolic diseases'*	Prof. Hans Westerhoff, PhD (Univ. Amsterdam, NL & Univ. Manchester, UK)
10.55 – 11.10	Matchmaking	
11.10 – 11.30	*Coffee break*	
11.30 – 12.00	*Showcase 3: 'Systems medicine for predictive and individualised medicine in inflammation and lung disease'*	Prof. Mikael Benson, MD (Univ. Linköping, SE)
12.00 – 12.15	Matchmaking	
12.15 – 12.45	*Showcasing patient perspective: 'A personal reflection on the potential of Systems Medicine in practice: The importance of patient expectation, education and engagement'*	David Supple (Asthma UK)
12.45 – 14.00	*Lunch*	
14.00 – 14.30	*Showcase 4: 'Systems Medicine in Rheumatology: aiming on clinical impact'*	Prof. Timothy Radstake, MD (UMC Utrecht, NL)
14.30 – 14.45	Matchmaking	
14.45 - 15.15	*Showcase 5: 'Advantages of computational modelling in cancer treatment'*	Prof. Lodewyk Wessels, PhD (NKI, NL)
15.15 - 15.30	Matchmaking	
15.30 – 16.00	Questions from the audience	All speakers
16.00 – 17.30	*Networking reception*	

Accreditation

An application for accreditation has been filed for:
- 'Nederlandse vereniging voor medische oncologie'
- 'Nederlandse Vereniging voor Reumatologie'
- 'Nederlandse vereniging voor gasteroenterologie'
- 'Nederlandse vereniging van artsen voor longziekten en tuberculose'

Location
- Utrecht, Grandhotel Karel V, www.karelv.nl/en/home/

Summary of presentations

Dr. Rob Diemel, PhD (ZonMw, NL)
'Systems Medicine calls and awareness'
ERACoSysMed and CASyM aim to better understand diseases by application of systems medicine and stimulate the collaboration between clinicians, systems biologists and patients. CASyM has formulated a road map for the implementation of Systems Medicine in Europe. CASyM is a network comprising hospitals, academia, industry, patients and policy. ERACoSysMed is a network of funding agencies organising awareness events for various stakeholder groups and launching Systems Medicine calls aiming for interdisciplinary and transnational collaboration.

Prof. David Harrison, MD (Univ. St.Andrews, UK)
'Cancer pathology as a moving target: how little do we need to know?'
Understanding cancer improves all the time, with the advent of genetic testing, predictive algorithms, liquid biopsy, and new small molecule and immune therapies. But we are lagging behind in assimilating these varied approaches and deciding how best to combine them. Starting with the biopsy we will explore the challenges of predictive medicine in oncology and how systems medicine can help plot the course ahead, drawing out themes important for other disease areas.

Prof. Hans Westerhoff, PhD (Univ. Amsterdam, NL & Univ. Manchester, UK)
'Dynamic maps for systems medicine in metabolic diseases'
The presentation will discuss the nature of human disease and build the case that they are all multifactorial, although the various extents. It will show that network diseases require systems biology approaches in diagnosis and therapy. The aspect of complexity will be addressed by showing two examples where systems medicine is becoming feasible by strategic dissection of the human metabolic networks. A further integration of data into predictive models should further enable systems medicine into a truly individualized medicine.

Prof. Mikael Benson, MD (Univ. Linköping, SE)
'Systems medicine for predictive and individualised medicine in inflammation and lung disease'
We combine -omics, bioinformatics, functional and clinical studies of T cell associated diseases for predictive and individualised medicine. T cells constantly patrol the body for early detection of disease and are therefore ideal targets for early and individualised diagnostics in most diseases. This is supported by our studies of inflammatory (including asthma), malignant and metabolic diseases.

David Supple (Asthma UK)
'A personal reflection on the potential of Systems Medicine in practice: The importance of patient expectation, education and engagement'
Although systems medicine is growing in definition and practical application, there is much to gain, but also much to deliver to ensure equitable patient access and clinical pathway transformation. This presentation will reflect on personal experiences in diagnosis and treatment of paediatric asthma and allergy and how a systems medicine approach could potentially benefit both, as well as examining some of the patient hurdles yet to overcome before this approach can achieve mainstream adoption.

Prof. Timothy Radstake, MD (UMC Utrecht, NL)
'Systems Medicine in Rheumatology: aiming on clinical impact'
Key measures of success in Rheumatology are early treatment, T2T and also, knowing when to stop treatment when disease remission is achieved. Using a multi-omics strategy followed by computational modelling our groups aims a patients re-stratification to optimise clinical trials, to achieve re-purposing of drugs and to predict response to therapy. Recently, using this approach, we were able to predict long-term disease remission on patients who stopped TNFa antagonists in the Poeet Study.

Prof. Lodewyk Wessels, PhD (NKI, NL)
'Advantages of computational modelling in cancer treatment'
We have developed a computational framework to integrate protein expression, mutation and gene expression data to model the response of cancer cell lines to anti-cancer therapy. I will show how we used this framework to explain the response of 30 breast cancer cell lines to 6 targeted therapies and to discover new mechanisms that improve our prediction of response to therapy. I will also show how these models can be employed to develop better strategies to treat cancer patients.