Eurolife Summer School July 9-13, 2018

Molecular Mechanisms in Cancer - Translating Discoveries into Personalized Therapies

Organizing institution and location: Leiden University Medical Center, Leiden, The Netherlands

Organizers: Prof. Dr. Peter ten Dijke, Leiden University Medical Center, Leiden, The Netherlands, Prof. Dr. Arne Ostman, Karolinska University, Stockholm, Sweden and Prof. Dr. Lucas Huber, Medical University of Innsbruck, Austria

Programme outline:

8 July Arrival
Evening Informal getting together in the Hotel of the participants

9 July The basics of cancer biology and the unmet clinical need
8.45-9.00 Registration
9.00-9.10 Opening remarks by the Dean of medical faculty (Prof. Pancras Hogendoorn)
9.10-9.20 Theme of the day introduction by moderator (Peter ten Dijke)
9.20-10.20 The hallmarks of cancer (Anne-Marie Cleton-Jansen, Leiden University Medical Center, The Netherlands)
10.20-10.50 Coffee/tea break
10.50-11.50 Tumor microenvironment (Arne Ostman, Karolinska Institute, Stockholm, Sweden)
11.50-12.50 Drug resistance: a recurrent theme in cancer therapy (Judith Kroep, Leiden University Medical Center, The Netherlands)
12.50-13.30 Lunch
13.30-14.30 Practical: cancer pathology (Arantza Farina Sarasqueta and Hans Morreau, Leiden University Medical Center, The Netherlands)
14.30-17.00 Breakout session in small groups with assignment: defining the challenges and unmet clinical need in (clinical) cancer research with plenary discussion thereafter
17.00-18.30 Social Activity/ Guided tour through city of Leiden
19.00 Dinner on your own

**10 July**  
*Emerging technologies and their application*

8.15-8.30 Theme of the day introduction by moderator (Arne Ostman)

8.30-9.30 Imaging hallmarks of cancer and signaling pathways in living mice (Laila Ritsma, Leiden University Medical Center, Leiden, The Netherlands)

9.30-10.30 Organoids and Crispr-cas9-mediated gene editing; creating new in vitro cancer models (Jarno Drost, Princess Maxima Center, Utrecht, The Netherlands)

10.30-11.00 Coffee/tea break

11.00-12.00 Single cell analysis – investigating intratumor heterogeneity (Lennart Kester, Hubrecht Institute for Developmental Biology and Stem Cell Research, Utrecht, The Netherlands)

12.00-13.00 Signal transduction proteomics – towards personalized cancer treatment (Lukas Huber, Medical University of Innsbruck, Austria)

13.00-13.30 Lunch

13.30-14.30 **Keynote lecture** Drug therapy: Exploiting synthetic lethality to improve cancer therapy (Rene Bernards, Netherlands Cancer Institute, Amsterdam, The Netherlands)

14.30-15.00 Discussion on career choices, mentorship, advice to master and PhD students with Keynote lecturer Rene Bernards

15.00-18.30 Pitch presentations by students (coffee/tea provided during this session)

17.30-18.00 General discussion on statements and reflection of the day

18.00 Dinner on your own

**11 July**  
*Targeting signaling pathways*

8.15-8.30 Theme of the day introduction by moderator (Lukas Huber)

8.30-9.30 TGF-β signaling in invasion and metastasis (Peter ten Dijke, Leiden University Medical Center, Leiden, The Netherlands)

9.30-10.30 Wnt signaling in cancer stem cells (Madelon Maurice, Utrecht University, The Netherlands)

10.30-11.00 Coffee/tea break
Tumor cell metabolism (Boudewijn Burgering, Utrecht University, The Netherlands)

Translational cancer epigenetics (Elisabeth Hessman, University Medical Center, Gottingen, Germany)

Lunch

PS3-based cancer therapy (Sonia Lain, Karolinska Institute, Stockholm, Sweden)

Targeting signaling pathways in tumor angiogenesis (David Baker, Leiden University Medical Center, The Netherlands)

Pitch presentations by students (coffee/tea provided during this session)

General discussion on statements and reflection of the day

Dinner on your own

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12 July  New frontiers in cancer research and therapy

Theme of the day introduction by moderator (Arne Ostman)

Cancer on a chip (Dik van Gent, Erasmus University, Rotterdam, The Netherlands)

Functional genomics and stratification of breast cancer patients (Catherine Tomasetto, University of Strasbourg, France)

Coffee/tea break

Dissecting pro-metastatic cancer - immune interactions utilizing genetically engineered mouse models of metastatic breast cancer (Karin de Visser, Netherlands Cancer Institute, The Netherlands)

Old drugs, novel ways out: drug resistance toward cytotoxic chemotherapeutics (Sjaak Neefjes, Leiden University Medical Center, Leiden, The Netherlands)

Lunch

Lab tour of genomics, proteomics, metabolomics and microscope core facilities (Peter van Veelen and others, Leiden University Medical Center, The Netherlands)

Pitch presentations by students (coffee/tea provided during this session)

General discussion on statements and reflection of the day

Social activity/Boat trip and dinner
13 July  | Bringing discoveries into clinical practice and academic-industry partnerships
8.15-8.30 | Theme of the day introduction by moderator (Peter ten Dijke)
8.30-9.30 | Proof-of-concept studies in the preoperative window period (Onno Kranenburg, UMC Utrecht Cancer Center, The Netherlands)
9.30-10.30 | Implementing new discoveries into clinical practice (Neeltje Steeghs), Netherlands Cancer Institute, Amsterdam, The Netherlands)
10.30-11.00 | Coffee/Tea break
11.00-12.00 | Clinical drug development (Geert Jan Groeneveld, CHDR, Leiden, The Netherlands)
12.00-13.00 | Start-ups and spin-offs/Entrepreneurship, and Intellectual property rights (Rob Mayfield, LURIS, Leiden University Medical Center, The Netherlands)
13.00-13.30 | Lunch
13.30-15.00 | Pitches from two small biotechnology companies: Henriette Lanz, Mimetas, Leiden; Leo Price, OcellIO 3D Screening, Leiden; The Netherlands and they will challenge students to come up with plans for possible start-ups
15.00-15.20 | Closing remarks and presenting of certificates to students
| Departure