

## **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- $\beta$  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

- 11.00-12.00 Tumor cell metabolism (Boudewijn Burgering, Utrecht University, The Netherlands)
- 12.00-13.00 Translational cancer epigenetics (Elisabeth Hessman, University Medical Center, Gottingen, Germany)
- 13.00-13.30 Lunch
- 13.30-14.30 P53-based cancer therapy (Sonia Lain, Karolinska Institute, Stockholm, Sweden)
- 14.30-15.30 Targeting signaling pathways in tumor angiogenesis (David Baker, Leiden University Medical Center, The Netherlands)
- 15.30-17.30 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

**12 July      *New frontiers in cancer research and therapy***

- 8.15-8.30 Theme of the day introduction by moderator (Arne Ostman)
- 8.30-9.30 Cancer on a chip (Dik van Gent, Erasmus University, Rotterdam, The Netherlands)
- 9.30-10.30 Functional genomics and stratification of breast cancer patients (Catherine Tomasetto, University of Strasbourg, France)
- 10.30-11.00 Coffee/tea break
- 11.00-12.00 Dissecting pro-metastatic cancer - immune interactions utilizing genetically engineered mouse models of metastatic breast cancer (Karin de Visser, Netherlands Cancer Institute, The Netherlands)
- 12.00-13.00 Old drugs, novel ways out: drug resistance toward cytotoxic chemotherapeutics (Sjaak Neefjes, Leiden University Medical Center, Leiden, The Netherlands)
- 13.00-13.30 Lunch
- 13.30-15.00 Lab tour of genomics, proteomics, metabolomics and microscope core facilities (Peter van Veelen and others, Leiden University Medical Center, The Netherlands)
- 15.00-17.00 Pitch presentations by students (coffee/tea provided during this session)
- 17.00-17.30 General discussion on statements and reflection of the day
- 18.00 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, OcelLO 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**