

EuroLife Summer School July 9-13, 2018

Molecular Mechanisms in Cancer - Translating Discoveries into Personalized Therapies

Organizing institution and location: Leiden University Medical Center LUMC, Albinusdreef 2, Leiden, the Netherlands

Organizers

Prof.dr. Peter ten Dijke, Leiden University Medical Center, Leiden, the Netherlands

Prof. dr. Arne Ostman, Karolinska University, Stockholm, Sweden

Mrs. Julia Theirlynck, Secretariat Cell and Chemical Biology LUMC

Programme outline

8 July

Arrival

18.00-20.00 Informal getting together in 'Paleijhs', main building of LUMC ground floor K-00-166

9 July

Lecture Hall 4: 1st floor K-01-84, route 762

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.dr. 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)

Paleijhs, K-00-166

10.20-10.50 Coffee/tea break

Lecture Hall 1, 1st floor K-01-103, route 768

10.50-11.50 Tumor microenvironment (Arne Ostman, Karolinska Institute, Stockholm, Sweden)

Lecture Hall 4: 1st floor K-01-84, route 762

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, meeting point: in front of Museum Volkenkunde, Steenstraat 1, Leiden (10 min walk from LUMC)

19.00 Dinner on your own

- 10 July** **Lecture Hall 4: 1st floor K-01-84, route 762**
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 (Alfred Vertegaal, Leiden University Medical Center, Leiden, the Netherlands)
- 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 Photo Session
- 15.15-17.30 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

- 11 July** **Lecture Hall 4: 1st floor K-01-84, route 762**
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
- 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

Lecture Hall 4: 1st floor K-01-84, route 762

- 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. Meeting point: Babbels, Boisoitkade 1, Leiden (25 min walk)

Lecture Hall 4: 1st floor K-01-84, route 762

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