**Advances in Molecular Pathology**

Date 17 – 18 – 19 June 2019

Location lectures: STR. 2.106 and STR. 2.112

Course organized in collaboration with the CTO program of the Utrecht Graduate School of Life Sciences

**Day 1: Monday June 17, 2019, Next generation sequencing in pathology; brain and head&neck**

09:00 Opening, and course introduction (30min)*, Dr. W. de Leng / Dr. S. Willems*

09:30 NGS technology: Platforms and assays to detect mutations, structural variations and translocation

*Molecular Biologist: Dr. W.P. Kloosterman 45min*

10:15 NGS in regular cancer diagnostics

*Clinical Scientist in Molecular Pathology: Dr. W. de Leng 45min*

11:00 Coffee break +

Practical session: How to analyse a NGS file and its consequences

*Clinical Scientist in Molecular Pathology: Dr. J.W.J. Hinrichs and Clinical Scientist in Molecular Pathology in training :*

*Dr. A.M.L. Jansen / Senior technician NGS Pathology Dr. P.J.P. de Vree*

13:00 Lunch break

14:00 Multidisciplinary Expert Board: Evaluation of NGS results and clinical aspects, including digital microscopy

*Clinical Scientist in Molecular Pathology: Dr. J.W.J. Hinrichs / Pathologist: Dr. T.Q. Nguyen 45min*

15:00 Brain tumors (MGMT hypermeth/FGFR ampl)

*Clinician: Dr. F.Y.F.L. de Vos 30min / Pathologist: Prof. Dr. P. Wesseling 30min*

16:00 Tea break

16:15 Head and Neck Cancer new developments for therapy

*Clinician: Dr. L. Devriese 30min / Pathologist (Molecular): Dr. S.M. Willems 30min*

17:15 End

**Dag 2: Tuesday June 18, 2019, Ethical issues; Colorectal, mamma, pediatric and hematology**

09:00 Whole genome sequencing in diagnostics *Molecular Biologist: Prof. Dr. E.P.J.G. Cuppen 45min*

09:45 Molecular Pathology of Paediatric tumors (Neuroblastoma)

*Pathologist: Dr. R.R. de Krijger 30min / Molecular Biologist: Dr. J.J. Molenaar 30min*

10:45 Coffee break

11:00 Molecular approaches in Hematology

*Clinical laboratory geneticist: E. Waanders 30min / Hematologist: Dr. A. van Rhenen 30min*

12:00 Ethical issues: Unsolicited findings and informed consent

*Dr. R.H.P. Wouters, Julius Center Utrecht 60 min*

13:00 Lunch

13:45 Molecular aspects of Gastroenterology in relation to therapy

*Pathologist: Dr. M.M. Laclé 30min / Oncologist: Prof.dr. M. Koopman or Dr. J.M.L. Roodhart 30min*

14:45 Germline vs somatic alterations

*Clinical Geneticist: Dr. M.G.E.M. Ausems 30min / Clinical Scientist in Molecular Pathology: Dr. W. de Leng 30min*

15:45 Tea break

16:00 Mamma pathology

*Pathologist: Drs. M. de Boer (multihead, dept. Of Pathology) 30min*

16:30 Practical session: microscopy of Mamma carcinoma

*Pathologist: Drs. M. de Boer (multihead, dept. Of Pathology) 30min*

17:00 End

**Dag 3: Wednesday June 19, 2019, FISH analysis in pathology; lung oncology**

09:00 Targeted therapy in Lung cancer

*Pulmonologist in oncology: Dr. A.S.R. van Lindert 45min /*

*Clinical Scientist in Molecular Pathology in training : Dr. A.M.L. Jansen 45min*

10:30 Pathology diagnostics by FISH (translocations and copy number variations)

*Clinical Scientist in Molecular Pathology in training: Dr. R.W.J. Meijers 45min*

11:15 Coffee break

11:30 Practical session: FISH cases. *Dr. R.W.J. Meijers / T. Peeters 90min*

13:00 Lunch

14:00 Multidisciplinary Expert Board: FISH interpretation, including digital microscopy (*Multihead, dept. of Pathology)*

*Dr. S.M. Willems /T. Peeters 45min*

14:45 Liquid biopsies; in lung cancer (NGS + targeted)

*Clinical Chemist: Dr. D. van den Broek, AVL-NKI, Amsterdam 60min*

15:45 Tea break

16:00 Tumor mutational burden

*Pulmonologist: Dr. J.A. Burgers, AVL-NKI, Amsterdam 30 min/ Clinical Scientist in Molecular Pathology in training: Dr. A.M.L. Jansen 30min*

17:00 Course closure and evaluation*, Dr. W. de Leng / Dr. S. Willems*

17:15 End