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***Fourth European Society of Human Genetics Training Course on Cardiogenetics***

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**April 27-30, 2019**

**Antwerp, Belgium**

*This course aims at delivering up-to-date knowledge on cardiogenetics to cardiologists, genetic counselors, clinical and molecular geneticists in training or certified.*

*It creates the best opportunity for interaction and discussion with experts from all over Europe. The faculty combines experts from many fields of cardiogenetics known for their didactic skills. Participants are encouraged to present a clinical or genetic case in a Poster format for on-site discussion.*

**Directors of the course:**

Bill Newman (United Kingdom) and Bart Loeys, Johan Saenen (Belgium)

**PROGRAM**

**Day 0 program: Saturday, April 27nd, 2019**

**THEME: *BASICS IN CARDIOGENETICS***

**18:00– 19:00 Genetic basics for Cardiologist** Maaike Alaerts – Dorien Schepers

 **Cardiology concepts for Geneticist** Johan Saenen – Emeline Van Craenenbroeck

**19:00 – 19:30** ***REFRESHMENT BREAK***

**19:30– 20:30 Genetic basics for Cardiologist** Maaike Alaerts – Dorien Schepers

 **Cardiology concepts for Geneticist** Johan Saenen – Emeline Van Craenenbroeck

***DAY 1 program: Sunday, April 28th, 2019***

**THEME: *BASICS IN CARDIOGENETICS***

**08:30 – 08:45 Course Introduction** Bill Newman & Bart Loeys

**08:45 – 09:15****A clinical geneticists’ approach to inherited cardiac disorders** Bart Loeys

**09:15 – 09:45 Counselling considerations in inherited cardiac disorders** Inge Goovaerts

**09:45 – 10:15****A patient perspective on cardiogenetics** Axel Verstrael

**10:15 – 10:45** ***COFFEE BREAK***

**THEME: *STRUCTURAL HEART and AORTIC DISORDERS***

**10:45 – 11:45****Hypertrophic and dilated cardiomyopathy** Matthias Schmitt & Bill Newman

**11:45 – 12:15****Arrhythmogenic Right Ventricular Cardiomyopathy** Pieter Koopman

**12:15 – 12:45 Aortopathies** Bart Loeys

**13:00 – 14:00 *LUNCH***

**14:00 – 15:00Key Note Lecture** ***The role of genetic screening in the management of hereditary arrhythmias: good, bad or indifferent.*** Silvia Priori

 **15:00 – 16:30****Pathology of inherited cardiac disorders with application of artificial intelligence**

Jan Lucas Robertus

**16:30 – 17:00 *COFFEE BREAK***

**17:00 – 18:30****Imaging workshop – echocardiography/Cardiac MRI**

 Matthias Schmitt -> cardiologist

 Caroline Van de Heyning -> genetics

**18:30 – 19:30** **Case Discussion** Bart Loeys/Bill Newman/Johan Saenen

**20:00 *WALKING DINNER in UZA***

***DAY 2 program: Monday, April 29nd, 2019***

**THEME:** ***PRIMARY ELECTRICAL DISORDERS***

**08:30 – 09:00 Developing an inherited cardiac service** Ed Blair

**09:00 – 09:00 Basic concepts in Ion channel disease** Johan Saenen

**09:30 – 10:00****Long & Short QT Syndromes** Johan Saenen

**10:00 – 10:30****Catecholaminergic polymorphic ventricular tachycardia** Pieter Koopman

**10:30 – 11:00** ***COFFEE BREAK***

**11:00 – 11:30****J-wave Syndromes** Dieter Nuyens

**11:30 – 13:00****Electrophysiology workshop – ECG/Ex ECG/Ajmalin/Adrenalin testing**

 Hein Heidbuchel/Pieter Koopman -> genetics

 Johan Saenen -> cardiologist

**13:00 – 14:00** ***LUNCH***

**14:00 – 14:30 Next generation sequencing – different approaches** Bart Loeys & Bill Newman

**14:30 – 15:00****Molecular autopsy**  Bill Newman

**15:00 – 16:30****Workshop/Quiz NGS interpretation**

 Lut Van Laer -> genetics

 Maaike Alaerts/Aline Verstraeten -> cardiology

**16:30 – 17:00** ***COFFEE BREAK***

**17:00 – 18:15****Case presentations by Participants**

 Bart Loeys/ Bill Newman/Johan Saenen

**18:15 Bus transfer to Hof Van Liere**

**19:00**  ***COURSE DINNER AT Hof Van Liere (faculteitsclub)***

***DAY 3 program: Tuesday, April 30th, 2019***

**THEME:** ***CONGENITAL HEART DISEASE***

**09:00 – 09:30 Heart embryology** Marco De Ruyter

**09:30 – 10:00****Genetics of Congenital Heart Disease**Bert Callewaert

**10:00 – 10:30****iPSC approaches to understand inherited cardiac disorders**Maaike Alaerts

**10:30 – 11:00** ***COFFEE BREAK***

**11:00 – 11:30****Syndromic inherited cardiac disorders** Marije Meuwissen

**11:30 – 12:00****Neuromuscular cardiomyopathy** Emeline Van Craenenbroeck

**12:00 – 12:30****Paediatric/neonatal diagnosis of cardiomyopathy (including metabolic)** Kay Metcalfe

**12:30 – 13:00****Management of inherited cardiac disorders in competitive and leisure athletes** Hein Heidbuchel

**13:00 – 14:00** ***LUNCH***

**14:00 – 15:00 Case presentation –** Bill Newman/Bart Loeys/Johan Saenen

**15:00** **END OF COURSE** Bart Loeys/Johan Saenen