European CF Young Investigators' Meeting 2022

Wednesday, March 9th

1:00 – 1:30 pm	**Introduction:**
	A.H. Van Stuyvenberg-Neerincx (The Netherlands) & E. Lammertyn (Belgium)
1:30 – 2:20 pm	State of the art lecture **IMMUNOLOGY by M. Chanson** (Switzerland)
	State of the art lecture **MICROBIOLOGY by R. Voulhoux** (France)
2:20 – 2:35 pm	**Break (15 min)**
2:35 – 3:50 pm	State of the art lecture **GENETICS AND GENE THERAPY by M. Carlon** (Belgium)
	State of the art lecture **CELL BIOLOGY by I.Braakman**(The Netherlands)
	State of the art lecture **CLINICAL ISSUES by M. Stahl** (Germany)
3:50 – 4:05 pm	**Break (15 min)**
4:05-5:35 pm	**Workshop** *"How to communicate to a lay audience?"* by Belinda CUPID (United Kingdom)

Thursday, March 10th

09:00 – 9:10 am	Connection time
9:10-10:30 am	**POSTER PITCHES** *Discussion during the parallel sessions* *For the list of posters see appendix 1*
10:30 – 10:45 pm	**Break (15 min)**

✦ PARALLEL SESSIONS
10:45 - 12:15

SESSION: IMMUNOLOGY by M. Chanson (Switzerland) **& L. Guillot** (France)

CONDUTO DIAS MAIA	Ana Raquel	Could flagellin be an antibiotic adjuvant against Pseudomonas aeruginosa lung infection?
LEON ICAZA	Stephen Adonai	Patient-derived lung organoids for cystic fibrosis-driven respiratory infection modelling, e.g. Mycobacterium abscessus.
SLIMMEN	Lisa	Airway macrophages in early CF lung disease show signs of immune paralysis
THOMASSEN	Jan Christoph	Investigation of the CFTR-TGFβ1 interaction in inflammatory and fibrotic processes in healthy and CFTR-mutated human bronchial epithelial cells

Posters discussion

SESSION: MICROBIOLOGY by R. Voulhoux (France) **& T. Pressler** (Denmark)

GHASSANI	Aya	Susceptibility and Resistance Mechanisms of French Cystic Fibrosis Pseudomonas aeruginosa Strains to Murepavadin
MARTINET	Mark Grevsen	Evaluation of the presence of Pf1-like prophages in the genome of European Cystic Fibrosis Pseudomonas aeruginosa isolates and their effect on antibiotic and bacteriophage resistance

Posters discussion

SESSION: GENETICS AND GENE THERAPY by M. Carlon (Belgium) **& P. Harrison** (United Kingdom)

BULCAEN	Mattijs	Correction of drug-refractory CFTR mutations by Base and Prime editing.
METE	Vanessa	Cells from nasal brushings for the measurement of CFTR-function and mRNA-restoration of defect CFTR
NAJM	Matthieu	Identification of new therapeutic approaches for Cystic Fibrosis by systems biology
NERI	Alessia	ΔF508-CFTR IN COLLABORATIVE CROSS MICE AS A NEW MODEL TO INVESTIGATE THE ROLE OF GENETIC BACKGROUND IN CYSTIC FIBROSIS

Posters discussion

SESSION: CELL BIOLOGY by I. Braakman (The Netherlands) **& N. Pedemonte** (Italy)

COLOMER MARTINEZ	Rafael	Structural plasticity of the Nucleotide Binding Domain 1 (NBD1) of CFTR is linked to pathogenesis of Cystic Fibrosis.

HILLENAAR	Tamara	Are non-responding CFTR mutants truly non-responding?
SPELIER	Sacha	Functional Restoration of CFTR Nonsense Mutations in Intestinal Organoids
VINHOVEN	Liza	CFTR Lifecycle Map – A systems medicine model of CFTR maturation to predict possible active compound combinations

Posters discussion

SESSION: CLINICAL ISSUES by M. Stahl (Germany) **& E. de Wachter** (Belgium)

CHEN	Yuxin	The effect of inhaled hypertonic saline on lung structure as measured by chest computed tomography in preschool children with cystic fibrosis: a multicenter randomized controlled trail
MUILWIJK	Danya	Forskolin-induced Organoid Swelling is Associated with Long-term Cystic Fibrosis Disease Progression
STEINKE	Eva	Progression of CF lung disease is captured by magnetic resonance imaging and stresses the relevance of CF newborn screening
VALK	Anne	Defect distribution index: A novel metric for functional lung MRI in cystic fibrosis (https://doi.org/10.1002/mrm.28947)

Posters discussion

Back on the general session

12:15- 12:45 am **HUMAN AND SOCIAL SCIENCES**

LADUNE	Raphaelle	Perceptions of barriers to and facilitators of physical activity in adults with cystic fibrosis
PIEHLER	Linus	Relationship between patient-reported mental wellbeing and systemic inflammation in patients with cystic fibrosis

12:45 – 12:55 am **Closing session by A. Chansard** (France)

"The wonderful journey from CFTR gene discovery to CFTR modulators: A patient perspective"

APPENDIX 1

NAME	CATEGORY	ABSTRACT TITLE	POSTER NUMBER
BORN-BONY Maëlys	Immunology	MSDC ADOPTIVE TRANSFER MODULATES MICE RECOVERY AFTER PSEUDOMONAS AERUGINOSA LUNG INFECTION	1
SCHMIDT Henrijette	Immunology	CHARACTERISATION OF A. FUMIGATUS SPECIFIC T HELPER CELL RESPONSE IN CYSTIC FIBROSIS PATIENTS	2
COLAVOLPE Alice	Microbiology	IMPACT OF LONG-TERM TREATMENT WITH IVACAFTOR ON CLINICAL P. AERUGINOSA ISOLATES	3
KRESSIN Simon	Microbiology	SUSCEPTIBILITY TESTING OF ANTIBIOTIC COMBINATIONS FOR THE TREATMENT OF CHRONIC PULMONARY INFECTIONS WITH GRAM-NEGATIVE PATHOGENS TYPICAL IN CYSTIC FIBROSIS	4
MAGALLON Arnaud	Microbiology	ROLE OF RESISTANCE-NODULATION-DIVISION EFFLUX SYSTEMS IN ACQUIRED ANTIBIOTIC RESISTANCE IN ACHROMOBACTER	5
PUST Marie-Madlen	Microbiology	THE KEY ROLE OF LOW-ABUNDANT BACTERIA IN THE EARLY HEALTHY AND CF AIRWAY HABITAT	6
ROISIN Lolita	Microbiology	DIFFERENTIAL INFLAMMATORY RESPONSE OF BRONCHIAL EPITHELIAL CELLS TO ASPERGILLUS FUMIGATUS - STENOTROPHOMONAS MALTOPHILIA ISOLATES DERIVED FROM CF INDIVIDUALS	7
SEKAR Sharmila	Microbiology	COMPUTER MODELLING AND EXPERIMENTAL VALIDATION OF INTERACTIONS BETWEEN PSEUDOMONAS AERUGINOSA AND STAPHYLOCOCCUS AUREUS	8
THÖMING Janne Gesine	Microbiology	SYSTEMATIC SCREENING OF A LARGE COLLECTION OF CLINICAL PSEUDOMONAS AERUGINOSA ISOLATES UNCOVERS STRAIN- AND ANTIBIOTIC-SPECIFIC BIOFILM TOLERANCE PROFILES	9
KURSHAN Ashwini	Genetics and gene therapy	INVESTIGATING THE POTENTIAL OF LENTIVIRAL VECTOR TO MEDIATE LONG-TERM TRANSGENE EXPRESSION IN THE AIRWAY.	10
CUYX Senne	Cell biology	RESPONSE TO ORKAMBI, SYMKEVI, AND KAFTRIO IN RECTAL ORGANOIDS FROM F508DEL HOMOZYGOUS PATIENTS WITH CF	11
DELION Martial	Cell biology	INFLAMMATORY CYTOKINES INDUCE THE SECRETION OF THE CELLULAR PRION PROTEIN (PRPC): CONSEQUENCES ON THE CYSTIC FIBROSIS (CF) BRONCHIAL EPITHELIA BARRIERS.	12
ENSINCK Marjolein	Cell biology	NOVEL CFTR MODULATOR COMBINATIONS MAXIMIZE FUNCTIONAL RESCUE OF G85E AND N1303K IN RECTAL ORGANOIDS	13
LOPEZ-GALVEZ Raquel	Cell biology	CFTR-/- PIG: A MODEL FOR OLFACTORY DYSFUNCTION IN CYSTIC FIBROSIS	14
MITRI Christie	Cell biology	ALTERNATIVE APPROACH TO TREAT ALL PATIENTS WITH CYSTIC FIBROSIS	15
MOTTAIS Angélique	Cell biology	HUMANIZED F508DEL MOUSE MODEL: AN IMPROVED PRECLINICAL MODEL FOR CYSTIC FIBROSIS	16
BIERLAAGH Marlou	Clinical issues	EXTENDED OVERVIEW OF THE HIT-CF ORGANOID STUDY: FORKOLIN-INDUCED SWELLING RESPONSES TO THE TRIPLE THERAPY DIROCAFTOR/POSENACAFTOR/NESOLICAFTOR AND READTHROUGH AGENT ELX-02 IN PATIENT-DERIVED ORGANOIDS FROM PEOPLE WITH CF THAT BEAR ULRA-RARE MUTATIONS.	17
CORNET Matthieu	Clinical issues	PROFILING THE RESPONSE TO LUMACAFTOR-IVACAFTOR IN CHILDREN WITH CYSTIC FIBROSIS: NEW INSIGHT FROM A FRENCH-ITALIAN REAL-LIFE COHORT	18

DUCKSTEIN Franziska	Clinical issues	ASSESSMENT OF ABDOMINAL SYMPTOMS REDUCTION WITH THE CFABD-SCORE OVER 12 WEEKS OF TREATMENT WITH ELEXACAFTOR-TEZACAFTOR-IVACAFTOR – EARLY RESULTS	19
NG Christabella	Clinical issues	GASTROINTESTINAL FUNCTION AND TRANSIT, USING MAGNETIC RESONANCE IMAGING, IN CYSTIC FIBROSIS: THE GIFT-CF STUDY	20
WESTHÖLTER Dirk	Clinical issues	CFTR MODULATOR THERAPY ALTERS PLASMA SPHINGOLIPID PROFILES IN PEOPLE WITH CYSTIC FIBROSIS	21
WUCHERPFENNIG Lena	Clinical issues	MAGNETIC RESONANCE IMAGING DETECTS IMPROVEMENT IN UPPER AND LOWER AIRWAY ABNORMALITIES IN ADULTS WITH CYSTIC FIBROSIS TREATED WITH NOVEL CFTR-MODULATOR THERAPY	22