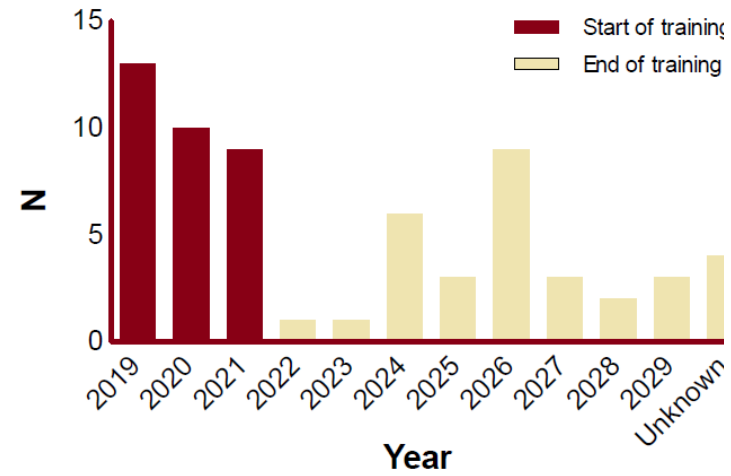
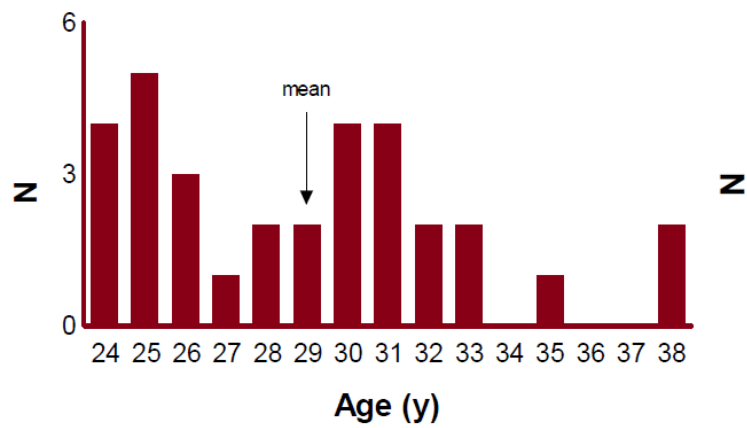


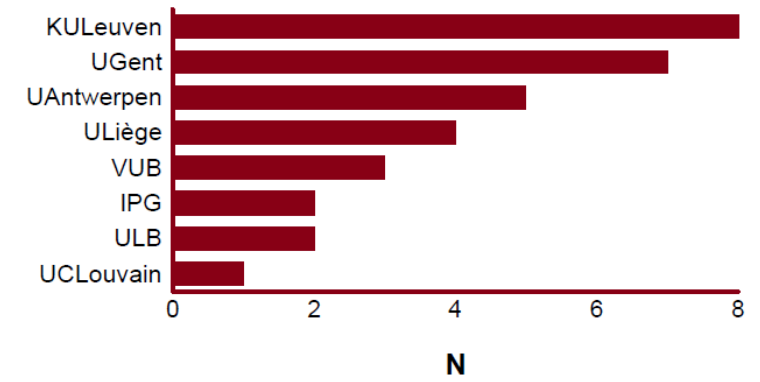
**Day 1 MANAMA**

# Who are we?

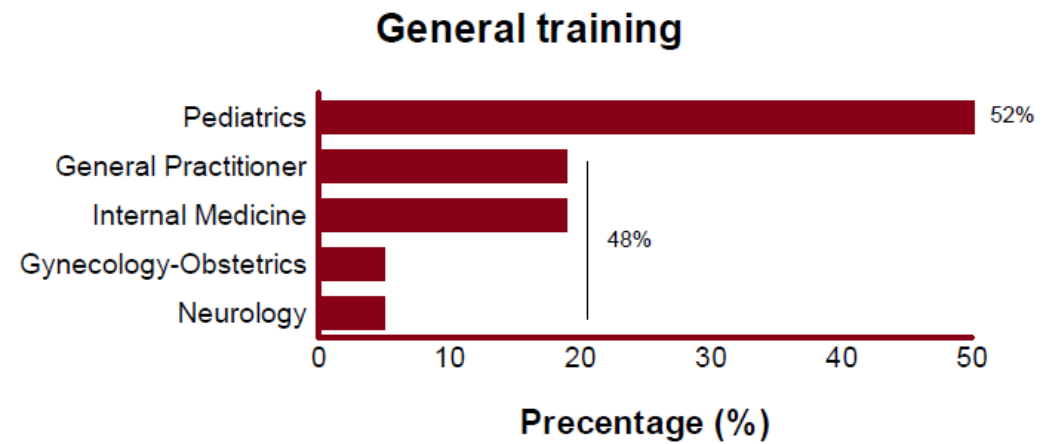
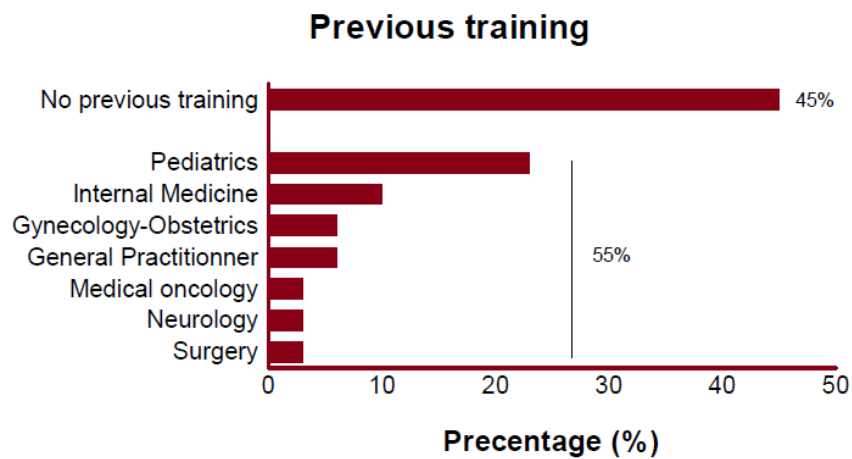
### Age distribution



### Affiliations

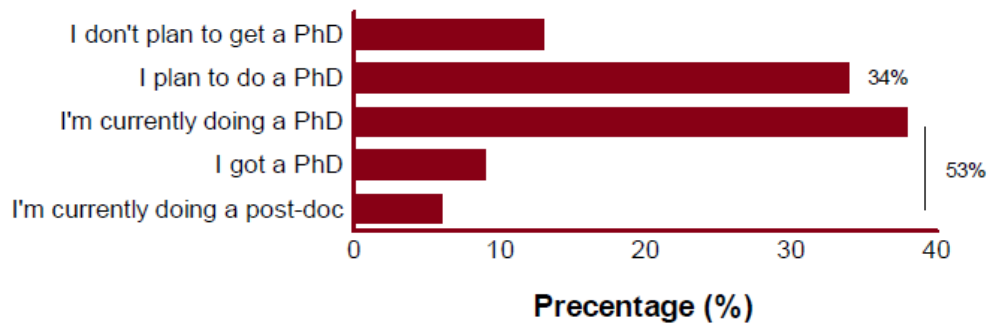


# What else did we do?

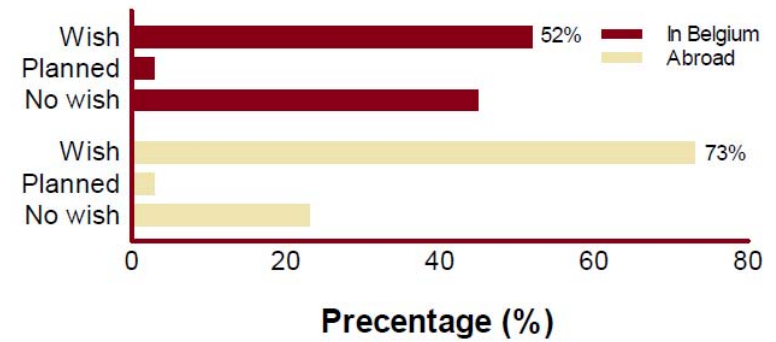


# PhD or not?

### About PhD ...



### About training outside the *alma mater* ...



# Joint Education

---

- Courses:
  - BeSHG course :
    - How long: 1 year
    - Happens only once every 2 y
  - MaNaMa
    - How long: 3 years (but can start at any time)
    - Day 1: Welcome Day
- Dysmorphology meetings
  - 6x/y
  - Friday mornings
- BeSHG congress: 1 x/y
  - Joint BeSHG - NVHG meeting: 1 x/ 3y
- ESHG congress: 1 x/y
- EuroDysmorpho
- European Examination of Medical Genetics and Genomics

# PhD or not?

---



# The different centers

---

- Antwerp
- ULB
- VUB
- IPG
- Gent
- UCL
- Leuven
- Liège



Centrum Medische  
Genetica Antwerpen





# Geneticists/Professors



**Prof. Dr. Bart Loeys**  
Head of department

- Cardiogenetics
- Connective tissue disorders



**Prof. Dr. Bettina Blaumeiser**

- Prenatal diagnosis/ PGT
- Huntington's disease
- Alopecia



**Dr. Jenneke van den Ende**

- Oncogenetics
- Hearing loss
- Eye disorders
- Neurofibromatosis



**Dr. Marjan De Rademaeker**

- ID/ dysmorphology/ congenital malformations
- Growth Disorders
- Prenatal diagnosis



**Prof. Dr. Marije Meuwissen**

- (Pediatric) neurogenetics
- ID/Dysmorphology/ congenital malformations



**Dr. Lynne Rumping**

- Neurogenetics
- Neurodegenerative disorders

# Trainees



**Ewa Sieliweczyk**

- Did 1 year in Internal Medicine
- Finishing PhD on Cardiogenetics (
- Started 1<sup>st</sup> year of Clinical genetics training



**Katleen Janssens**

- Did 2 years Internal Medicine
- Currently doing PhD in Oncogenetics (liquid biopsies in colorectal cancer)



**Jessica Rosenblum**

- Did 1 year of Paediatrics, and 1 year of Internal Medicine
- Did 1 year in Clinical genetics
- Starting PhD in neurogenetics (cortical migration disorders)



**Tessi Beyltjens**

- Paediatrician
- 3rd year in Clinical genetics training



**Merlijn Nemegeer**

- Currently doing PhD on genetics of intracranial aneurysms (year 2)



**Jonathan Michielsen**

- Started general training, pediatrics

# Typical Week in Training

Monday	Tuesday	Wednesday	Thursday	Friday
Clinical staff meeting Patient discussion	<b>Consultations</b> Rotation specific	Preparing/finishing consultations	<b>Consultations</b> Rotation specific	<b>Consultations</b> Rotation specific
	Perinatal staff meeting 1x /month			100 syndromes teaching
<b>Consultations</b> General genetics (own consultation, stays during entire training)	Lab meeting Rotation specific 1x /month	Preparing/finishing consultations	Preparing/finishing consultations	Prepare staff meetings/teaching sessions,...
On charge for advice by phone/bedside consultations @maternity ward/pediatrics/(N)ICU/... à 1/5 weeks				

# Rotation Chart

---

- 5x 4 months rotations in:
  - Dysmorphology/growth/congenital malformations
  - Neurogenetics
  - Cardiogenetics
  - Prenatal
  - Cancer Genetics
- General genetics
  - Continued, 1x /week during whole training
- Lab training integrated via:
  - Introductory stage: 3 months
  - Lab project: 9 months
- 2x 6 months for differentiation stage



**H.U.B**

HÔPITAL UNIVERSITAIRE  
DE BRUXELLES  
ACADEMISCHE ZIEKENHUIS  
BRUSSEL



# Geneticists/Professors

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**Pr Guillaume Smits**

- Head of the department
- General genetics



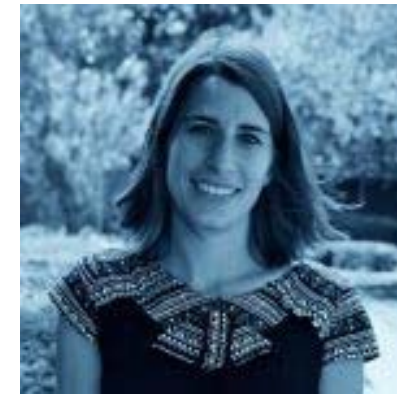
**Pr Catheline Vilain**

- Pediatrics
- Syndromology
- Neurogenetics



**Pr Isabelle Migeotte**

- General genetics



**Dr Isabelle Vandernoot**

- General genetics



**Dr Sandra Coppens**

- General genetics

# Geneticists/Professors

---



**Pr Antoine Bondue**

- Cardiogenetics



**Dr Daphné t'Kint de Roodenbeke**

- Oncogenetics

# Trainees

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**Thomas Delguste**

- Already did 1 year pediatrics and 1 year of internal medicine training
- Starting 1<sup>st</sup> year of genetics training



# Typical Week in Training (1st year)

---

Monday	Tuesday	Wednesday	Thursday	Friday
Preparing/ finishing consults	Staff meeting discussing cases / preparing consults	Oncogenetics/ General <b>consultations</b>	Laboratory training	Laboratory training
	Genetics internal seminar			
Adult genetics <b>consultations</b>	Adult genetics <b>consultations</b>	Oncogenetics/ General <b>consultations</b>	Laboratory training	Preparing/ finishing consults

# Rotation Chart

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- Possibility for future rotation/access to consultations in:
  - Cardiogenetics
  - Prenatal
  - Oncogenetics
  - Pediatric
- Lab training integrated during the first year (2 days/week)



VRIJE  
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BRUSSEL



Centrum voor  
Medische Genetica



# Geneticists/Professors

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**Prof. F. Hes**

- Staff



**Prof. K. Keymolen**

- Staff
- All round genetics
- PGT



**Dr. L. Pölsler**

- All round genetics
- PGT



**Prof. T. de Ravel**

- All round genetics

# Geneticists/Professors

---



**Dr. B. Dimitrov**

- All round genetics
- Prenatal & Preconceptual



**Dr. K. van Berkel**

- Prenatal & Preconceptual



**I. Slegers**

- Prenatal & Preconceptual



**Prof. J. De Grève**

- Oncogenetics



**Prof. M. Bonduelle**

- Oncogenetics
- PGT

# Trainees

---



**Sophie Uyttebroeck**

- 4th year of genetics
- Did 3 years of general surgery and pediatrics
- PhD on lysosomal storage diseases



**Stefanie Van de Voorde**

- 3th year of genetics
- Did 3 years of gynaecology and pediatrics
- Will start a PhD oct 2023



**Annelore Van Der Kelen**

- Did not start genetic training yet
- Did 2 years of gynaecology
- PhD on female infertility



**Nathalie Vanden Eynde**

- 1st year of genetics
- Did 5 years of pediatrics



**Boglarka Bansagi**

- Neuropediatrician
- PhD on distal hereditary motor neuropathy

# Typical Week in Training

Monday	Tuesday	Wednesday	Thursday	Friday
Prenatal <b>consultation</b> by trainee (8 patients)	Administration	Prenatal <b>consultation</b> with supervisor (8 patients)	Own <b>consultation</b> (4 families)	Administration
Multidisciplinary prenatal meeting	Own <b>consultation</b> (4 families)	Administrative work	Meetings	Administration
		In hospital <b>consults</b> (1-2/day) Phone consults		In hospital <b>consults</b> (1-2/day) Phone consults

# Rotation Chart

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- Is subdivided in different topics:
  - Dysmorphology
  - Neuro-developmental genetics
  - Oncogenetics
  - Prenatal genetics
  - PGT
  - General genetics
- Following consultation with a supervisor in a certain domain + your own consultation in a certain domain + your own general consultation
- 1 year of lab training: 3 months IN the lab, 9 months interpretation (subdivided into different topics)





# Geneticists/Professors

---



**Dr Karin Dahan**

- Inherited kidney disorders



**Dr Hendrica Belge**

- Inherited kidney disorders



**Dr Dominique Roland**

- Inborn errors of metabolism
- Inherited endocrine disorders



**Dr Julie Désir**

- Pediatrics
- Prenatal counseling



**Dr Colombine Meunier**

- Pediatrics
- Prenatal counseling



**Dr Aude Tessier**

- Foetopathology
- Prenatal counseling

# Geneticists/Professors

---



**Pr Isabelle Maystadt**

- Autism spectrum disorders
- Neuromuscular disorders



**Pr Christine Verellen-Dumoulin**

- Huntington's disease
- Neuromuscular disorders



**Dr Anne Destrée**

- Dysmorphology
- Intellectual deficiency



**Dr Damien Lederer**

- Epilepsy
- Kabuki syndrome



**Dr Stéphanie Moortgat**

- X-linked intellectual deficiency
- Deafness & growth disorders

# Paramedical team

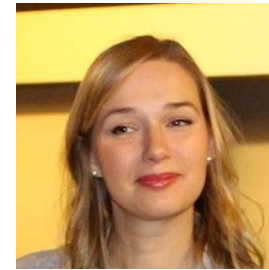
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**Mme Aude Lombard**  
• Genetic counsellor



**Mme Cécile Minet**  
• Social nurse



**Mme Stéphanie Dubruille**  
• Psychologist



**Mme Emilie Duchâteau**  
• Medical dietitian



**Mme Camille Rouyer**  
• Social nurse



**Mme Stéphanie Silly**  
• Psychologist

# External consultants

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**Dr Benoit Brasseur**

- Inflammatory diseases

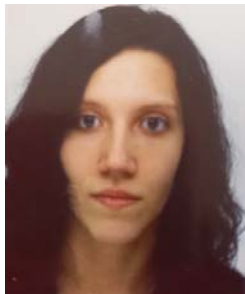


**Dr Claire Quaghebeur**

- Oncogenetics

# Trainees

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**Dr Gladys Battisti**

- Pediatrician
- Trainee in Medical Genetics (2<sup>nd</sup> y)
- Interest in neurogenetics, developmental disorder and dysmorphology
- IUD dysmorphology in 2021
- IUC BeSHG in 2021



**Dr Bourlard Laura**

- MD-PhD (non invasive Prenatal diagnosis and PGT)
- Did one year of pediatrics/internal medicine
- Trainee in Medical Genetics (2<sup>nd</sup> y)
- Interest in PGT, Prenatal and Reproductive Endocrinology
- IUC BeSHG in 2018
- IUD in Gynecology and Obstetrical US in 2019
- IUD in Dysmorphology (Paris) in 2019
- IUD in Reproductive and pediatric Endocrinology 2020

# Typical Week in Training

---

Monday	Tuesday	Wednesday	Thursday	Friday
Admin	External consultations with supervisor	Prenatal consultations with supervisor	Own consultation (4 new patients)	Clinical multidisciplinary staff meeting
	1x/month: « Mardi de la pédiatrie »		1x/month: meeting	Prenatal staff meeting
Lab work	Admin	Admin	Own consultation (2-3 patients: results)	Own consultation (3 new patients and 2 for results)



CENTRUM MEDISCHE  
GENETICA GENT \_\_\_\_\_





# Geneticists/Professors

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**Prof. Dr. Bruce Poppe**

- Head of the department
- Internal medicine
- Oncogenetics
- Rare diseases



**Prof. Dr. Olivier Vanakker**

- Pediatrics
- Dysmorphology
- Stroke
- PXE



**Prof. Dr. Bert Callewaert**

- Pediatrics
- Dysmorphology
- Nephrogenetics
- Cardiogenetics



**Prof. Dr. Sandra Janssens**

- Neurogenetics
- BeGECS, PND/PGT
- Otogenetics



**Prof. Dr. Bart Dermaut**

- Neurogenetics
- Rare diseases

# Geneticists/Professors

---



**Prof. Dr. Fransiska Malfait**

- Connective tissue



**Dr. Tim Van Damme**

- Internal medicine
- Nephrogenetics



**Dr. Robin de Putter**

- Oncogenetics



**Prof. Dr. Julie De Backer**

- Cardiogenetics



**Dr. Laura Muño Mosquera**

- Cardiogenetics

# Trainees

---



**Candy Kumps**

- PhD on neuroblastoma
- Last year genetics



**Nika Schuermans**

- 4<sup>th</sup> year genetics
- Currently finalizing PhD: neurodegenerative diseases



**Hannes Syryn**

- 4<sup>th</sup> year genetics
- Currently started PhD: Disorders of sexual development



**Margot Callens**

- 1<sup>st</sup> year genetics
- Currently pediatrics training

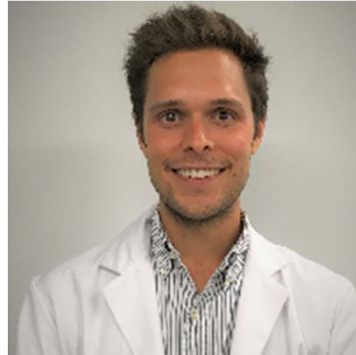
# Trainees

---



**Simon Tavernier**

- PhD on PID
- 3<sup>rd</sup> year genetics
- Currently doing post-doc



**Jo Soubron**

- PhD on Dravet syndrome
- 2<sup>nd</sup> year genetics
- Part-time post-doc



**Eva Vanbelleghem**

- 2<sup>nd</sup> year genetics
- Currently pediatrics

# Typical Week in Training

---

Monday	Tuesday	Wednesday	Thursday	Friday
Dysmorphology <b>consultations</b>	Neurogenetics or Cardiogenetic <b>consultations</b>	Gamete donor <b>consultations</b>	EDS intake <b>consultations</b>	Preparing/finishing consults
Staff meeting				
Preparing/finishing consults	Preparing/finishing consults	Preparing/finishing consults	Preparing/finishing consults	General or oncogenetics <b>consultations</b>

- Multidisciplinary schisis consultations 1 x/month
- Rotation for the requested consultations in the hospital (fetal/neonatal): 1 x/5 weeks



# UCLouvain



Cliniques universitaires  
**SAINT-LUC**  
UCL BRUXELLES

# Geneticists/Professors

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**Pr Anne DE LEENER**

- Prenatal, fertility
- Oncogenetics
- Neurodegenerative genetics
- Haematology malignancies
- Haemophilia and haemostasis



**Pr Nicole REVENCU**

- Syndromology, Pediatrics, Intellectual disability
- Multidisciplinary clinics (PW syndrome, Marfan, cleft lip and palate center)
- Vascular malformations



**Pr Yves SZNAJER**

- Prenatal
- Epilepsy genetics
- Cardiogenetics
- Deafness
- Neuromuscular
- Neurocutaneous

# Trainees

---



**Luigi Devis**

- Starting first year with training in clinical laboratory medicine
- No genetic training yet



**Audrey Guilmot**

- Did 3 years internal medicine
- Did 1 year gastro-enterology (3months) + genetic training (9months)
- Starting 6 months pediatric training



**Eric Olinger**

- Did 2 years internal medicine
- Did PhD in inherited kidney disease (UMOD)
- Did Post-doc in ciliopathy lab (UK)
- Starting first year of genetics training



**Eleonore Pairet**

- Did 2 years pediatrics
- Currently doing PhD on cleft lip/palate genetics
- No genetic training yet, except 1/2 day consults a week



# Typical Week in Training

---

Monday	Tuesday	Wednesday	Thursday	Friday
Pediatric Consultations	Oncogenetic consultations	Pediatric Consultations	Preparing the Antenatal staff meeting	Pediatric consultations or dysmorphology meeting
				Oncogenetic staff meeting
Admin or cardiogenetics consultations (1x/month)	Admin	Prenatal consultations	Antenatal staff meeting	Admin

# Rotation Chart

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- Lab work:
  - Will start with Sanger/MLPA of family mutations
  - Rest: to be determined (possibly 6 months entirely of lab work)



**UZ  
LEUVEN**



# Geneticists/Professors

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**Prof. Dr. Geert Mortier**

- Head of the department
- Skeletal dysplasias



**Prof. Dr. Koen Devriendt**

- Stagemester
- Prenatal
- NIPT
- Nephrogenetics
- DD, ...



**Prof. Dr. Hilde Van Esch**

- Neurogenetics
- MCA
- Developmental delay,  
...



**Prof. Dr. Annick Vogels**

- Child psychiatrist/geneticist
- PWS
- Huntington



**Prof. Dr. Sascha Vermeer**

- Coach
- Ataxia
- Ophthalmogenetics

# Geneticists/Professors

---



**Prof. Dr. Eric Legius**

- Oncogenetics
- RASopathy (in particular NF1, NF2 and Legius syndrome)



**Prof. Dr. Griet Van Buggenhout**

- Oncogenetics
- Williams
- Down



**Prof. Dr. Ellen Denayer**

- Fertility
- PGT



**Prof. Dr. Hilde Peeters**

- Autism
- Developmental delay



**Prof. Dr. Jeroen Breckpot**

- Cardiogenetics
- Prenatal
- Noonan, ...

# Trainees



**Mathilde Geysens**

- 4th year of genetics
- 1 year of pediatrics @ UCL
- 2<sup>nd</sup> year of PhD



**Miel Theunis**

- 4th year of genetics
- 2020-2021: internal medicine @ Ronse

*Long Read Sequencing for the detection of cryptic structural variation and methylome changes in patients with developmental disorders.*



**Marie De Borre**

- 4th year of genetics
- 1 year of PhD before genetics
- Finishing PhD

*Stability of DNA methylation changes*



**Laurens Hannes**

- 4th year of genetics
- 3rd year of PhD (6 months of genetics before starting phd)

*Study of variable phenotypical expression of inherited likely pathogenic genetic variants through deep phenotyping and whole genome sequencing*

# Trainees

---



**Michiel Vanneste**

- 3th year of genetics
- 1st year of PhD (did 3 months of genetics before starting PhD)

*3D craniofacial phenotypes in genetic diagnostics*



**Mio Aerden**

- 2nd year of genetics
- Started PhD 2022-2023

*cfDNA methylome analysis: novel applications*



**Nathalie Veyt**

- 2nd year of genetics
- Starting PhD 2023-2024?



**Sien Van Daele**

- 1st year of genetics (started 01/2022)
- Finished 7 year neurology residency including 4 year PhD

*genetic determinants of motor neuron vulnerability*

# Typical Week in Training

Monday	Tuesday	Wednesday	Thursday	Friday
General genetics clinic (ASO consultations)	Extramuros	Preparing consults/prenatal, NIPT reporting to gynaecologists	Oncogenetic consultations	Oncogenetic Consultations / (extramuros) /prenatal, NIPT reporting to gynaecologists
	Extramuros		Staff meeting 1h: discussing organization 1h discussing cases	(extramuros)
Preparing/finishing consults	extramuros	KUL manama lesson	2 weekly Lab meeting lab/clinicians Journal club	Preparing/finishing consults/ (extramuros)





# Medical Team

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**Pr Bours Vincent**

- Head of Department
- Oncogenetics



**Dr Bulk Saskia**

- Prenatal counseling
- Cardiogenetics, Neurology, Dysmorphology



**Pr Debray François-Guillaume.**

- Inborn errors of metabolism
- Sensory disorders



**Dr Docampo Elisa**

- Collagenopathie (TAADs & Ehler-Danlos)
- Oncogenetics

# Medical Team

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**Dr Harvengt Julie**

- Inherited endocrine disorders
- Skeletal dysplasia
- Dysmorphology



**Dr Martin Marie**

- Oncogenetics
- Cardiogenetics



**Dr Jacquinet  
Adeline**

- Prenatal counseling
- Inherited kidney disorders
- Dysmorphology

# Medical Team – Other specialists

---



**Dr Weekers Laurent**

- Nephrologist
- Inborn errors of metabolism
- Inherited kidneys disorders



**Dr Dadoumont  
Caroline**

- Pediatrician
- Inborn errors of metabolism



**Dr Alkan Serpil**

- Pediatric  
Neurologist
- Dysmorphology

# Medical Team – Other specialists

---



**Dr Van Casteren  
Lieve**

- Cardiologist -  
Electrophysiologist



**Dr Schrouff  
Isabelle**

- Orthopedic  
Surgeon
- MaRGOS



**Dr Bethlen Sarah**

- Revalidation
- MaRGOS



**Dr Jedidi Zayd**

- Neurologist

# Paramedical Team

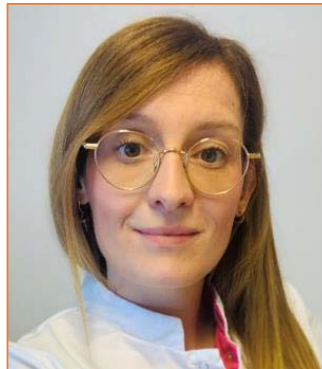
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**Mme Kukor Léna**  
Genetic Counsellor



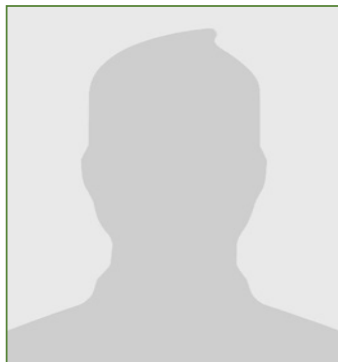
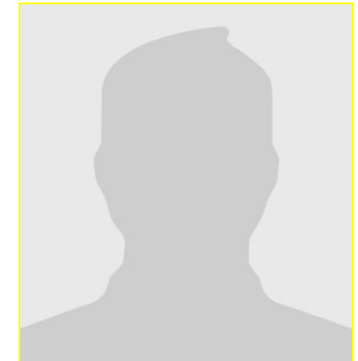
**Mme Bertoli Sabrina**  
Genetic Counsellor



**Mme Crevecoeur Julie**  
Genetic Counsellor

## **Dietetician**

Mme Caris A



## **Social Workers**

- Mme Clément E.
- Mme Leroi T
- Mme Ronson E

## **Mme Palmaricciotti**

**Valérie**

Psychologist



## **Psychologists**

- Mme Constant Caroline
- Mme Luthors Julie

# Trainees

---



**Dr Laterre Marie**

- Gynecologist
- Trainee in medical genetics (6th year)



**Dr Chatelain Camille**

- Did 1.5 years pediatrics and 6 months neonatology
- Starting first year of genetics training



**Dr Fouquet Claire**

- Did 1 year internal medicine (oncology) and 1 year pediatrics
- Starting first year of genetics training



**Dr Mouraux  
Charlotte**

- 2<sup>nd</sup> year in Neurology



**Dr Collin Sybille**

- Starting 1<sup>st</sup> year of pediatrics

# Example of a Week in Training

Monday	Tuesday	Wednesday	Thursday	Friday
General consultations	Pediatrics /neurogenetics consultations	Preparing/finishing consultations	Dysmorphology consultations	Preparing/finishing consultations /Cardiogenetics consultations
Labo AM/PM	Labo AM/PM	Labo AM/PM	Labo AM/PM	Labo AM/PM
Fetal medicine conference				
Preparing/finishing consultations	Pediatrics /neurogenetics consultations	Preparing/finishing consultations	Dysmorphology consultations	Oncogenetics meeting

Camille / Claire



# Rotation Chart

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To be determined

A rotation will be organized through :

- Prenatal / Pediatrics (Dysmorphology, General Genetics ...)
- Adults (oncogenetics, cardiogenetics ...)
- Laboratory training

# **Group Discussions**

# What came out during the discussions

- 100 syndromes
- Journal Clubs between trainees
- Psychologist giving courses
- Courses on reimbursement
- Staff members giving a lesson
- Starting with lab work or not?
- Having the « on call » phone to reply to genetic questions by other hospital staff or even GPs that call

# Questions for the presidents

- **European Examination of Medical Genetics and Genomics**

- Will it be the final exam for this course? for our traineeship?
- Does everyone have/can to take it ?
- When is the best time to do it (second last year in order to have a "legally-obliged" 2nd attempt in case of failure)?
- Who will pay?
- Does this decision depend on the university or commission?
- Experience from Sophie, Candy and Dr Bulk

- **Experience in other genetic centers**

- Is it possible for us to gain experience in other genetic centers in Belgium?
- How can we organise this to validate this with our respective commissions?
- Will there be issues in who pays who?
- Is it also possible to gain experience abroad, in and outside Europe ?
- What criteria is necessary for a center/experience to be validated by the commissions ?

- **Questions by other students**