From a Supervisor’s Perspective

Agnes Boots
Building your scientific future
Foundation: the candidate

- Passionate, enthusiastic and motivated
- Good research skills
- Independent thinker (connecting the dots)
- Hard worker
- Ambitious
- Good social skills
- Team player
I have asked HER to write a NWO GP application!!
Personal foundation

- **Motivated** → challenging master internship
- **Research skills** → independent trouble shooter
- **Connecting dots** → designing additional experiments
- **Hard worker** → cell experiments during weekends
- **Ambitious** → thought about her future already
- **Social skills** → good, clear communication both ways
- **Team player** → helped other (PhD) students
Bricks: the project

- Hot and scientifically relevant topic
- Within the scope of NUTRIM

- Highly appealing to YOU
- Conceived and designed by YOU
- Custom made, fits you like a glove

- Challenging yet feasible
- State of the art
Recent studies reveal a comorbidity of lung cancer within IPF. Both diseases are associated with high levels of oxidative stress leading to oxidative damage and chronic inflammation. Main pulmonary sources of oxidative stress are NADPH oxidases (NOXes). NOX4 is recently shown to be upregulated in IPF. NOX4 drives the lethal progression of IPF including IPF-related onset of lung cancer.
Cement: the supervisor

Giving you roots and wings

- Focused on your personal growth and development as researcher
- Interested in your career perspectives and wishes
- Expert within (part of) the topic of your project
- Elaborated scientific network at your disposal
Personal cement: the supervisors

- Prof. Dr. F.J. van Schooten  
  *carcinogenesis, genetic toxicology*
- Dr. A.W. Boots  
  *oxidative stress, pulmonary injury and repair, IPF*
- Prof. Dr. A. van Vliet  
  *NOXes, redox signaling*
- Prof. Dr. M. Drent  
  *ILD expert*
What to expect from NWO GP?
What to gain from NWO GP?

- **Obtaining your PhD**
  - enhancing your research skills
  - discovering your own “research niche”
  - strengthening your social skills
  - building your character

- **Networking**
  - at the NWO GP and NUTRIM seminars
  - during (inter)national conferences
  - connecting with other junior researchers within the NWO GP

- **Exploring your career options**
  - thinking out of the “typical career” box

- **Acquiring (inter)national grants**
How to design your NWO GP project?

• Ideally, you start with an EUREKA moment!

• If not, do not panic but follow these steps:
  → Read recent literature within your field(s) of interest
  → Filter the findings appealing to you
  → Combine these findings with your own interests to find your “niche”
  → Try to connect (most of) the dots
  → The empty spot(s) in that picture is your topic!
How to select your NWO GP supervisors?

- Expert in the field ≠ best possible supervisor
- **Personal click** with focus on what you both want and need within the project
- Providing room to **grow** and become **independent**
  - **courses**
  - **conferences**
  - **research stays abroad**

- **Knowledge** of topic and techniques
- Elaborated **network** to retrieve expertise from
- Known and **respected** within the field
- Multiple **collaborators**
Tips and tricks for future applicants

- Find out your own strengths and possible pitfalls
- Determine how you can benefit from your strengths and work on your pitfalls
- Think about where you want to be in 5 years from now (i.e. post-PhD time)
- Design your personal roadmap using this information
- Make sure you have an exciting alternative route in the back of your mind

**Do NOT** stop after one attempt!!
Welcome

Annemie Schols

Professor of Nutrition and Metabolism in Chronic Diseases
Scientific Director Research School NUTRIM
Multidisciplinary research lines

RL1
Metabolic Syndrome

RL2
Gut-liver homeostasis

RL4
Gene-environment interactions

RL3
Chronic inflammatory disease and wasting
Inter-organ cross-talk

Translational Metabolism & Nutrition

Cardiovascular

Contextual Neurosciences

Respiratory

Oncology

healthy living
Metabolic regulation

Metabolic profiling

Complex human experiments

Tailored interventions

Genetic epidemiology

Translational research
General Surgery
Respiratory Medicine
Internal Medicine
Gastrointestinal & liver diseases, Endocrinology, Rheumatology, Nephrology,
Pediatrics
Ophtalmology
Plastic Surgery
Principle investigators

quality of scientific publications
number and quality of PhD theses
Impact of scientific work: citation analysis, patents
earning power

All NUTRIM scientists: www.maastrichtuniversity.nl/nutrim
Modeling human performance

Whole body & interorgan metabolism: invasive & non-invasive

Imaging
e.g. brown fat, liver fat, muscle metabolism

Biomarkers
Cel/tissue function
e.g. endothelial/mitochondrial

Technology platform
tissue collection

Metabolic research Infrastructure

Human performance

Nutritional assessment
Maastricht Multimodal Molecular Imaging

- Nanoscopy
- Imaging mass spectrometry
Complexity of chronic diseases: systems approach

- Birth
- Twins
- COPD
- IBD
- Diabetes

Metabolism and nutrition

Social network

Disease network

-omics
bioinformatics
genetic epidemiology
Biology & behaviour

Prevention ---------------------- Integrated care
NUTRIM's network

Clinical Network
UMC Parelsoer

Top Institutes Industry

VLAG Nutrition and Health

University Vermont COPD (US)

UCL Gut-liver (UK)

Düsseldorf Diabetes Centre (Germany)

Richardson Centre Functional Foods (Canada)

University Birmingham Complex Genetics (UK)

St John's Research Institute Chronic Disease (India)

National Institute on Aging (US)

EPFL (CH) Metabolism (Switzerland)
Applying for a PhD position

within NUTRIM
From MSc to PhD
"classical pathway"

Grant Application

NWO
Nederlandse Organisatie voor Wetenschappelijk Onderzoek

Supervisor with brilliant idea

YES
From MSc to PhD
“classical pathway”

• Application process
  • Interviews with different candidates
  • Presentation
  • Consultation of other team members

Next…..
• Doing experiments
• Collecting data
• Writing papers

Finally...
• Writing thesis
• Defense
Monitoring progress by promotion team and PhD student coordinator

Welcome NUTRIM PhD candidates and supervisors
For questions about registration of PhD candidates, the PhD TRACK system or other practical questions, you can send an email to Wynne Bundecker, v.bundecker@maastrichtuniversity.nl or to the PhD-candidate coordinator, Dr. Roger Godschalk, r.godschalk@maastrichtuniversity.nl.

PhD candidates can seek peer contact with the PhD representatives (PhD student council) Rianne Fellen (TOXICO), Jan Hansen (HB), Stefan Gorissen (BW), Dorus Gevers (GIVCO), Natasha Broere (INTMED), René van der Loo (HB) or Lotte Smolders (HB): PhdCouncil.nutrim@maastrichtuniversity.nl

Some useful links:
NUTRIM website:
http://www.maastrichtuniversity.nl/web/showid-63651122tempid-42
PhD student guide can be downloaded from:
http://www.maastrichtuniversity.nl/web/files/ITM/ITM/NUTRIM/PhDStudents1.htm

Overall PhD performance
Status report for all active PhD programs based on last evaluation
- Good (24)
- Attention (1)
- Insufficient (10)
- Unspecified (26)
- None (49)

Recent
All recent activities
Activity | Date
--- | ---
Annual questionnaire FHML was created | 15/05/2016
Annual questionnaire FHML was submitted | 05/05/2015
Annual questionnaire FHML was created | 05/05/2015
Annual questionnaire FHML was submitted | 05/05/2015
Annual questionnaire FHML was created | 05/05/2015
Annual questionnaire FHML was submitted | 05/05/2015
Annual questionnaire FHML was created | 07/05/2015
Annual questionnaire FHML was submitted | 07/05/2015
Annual questionnaire FHML was created | 03/05/2015
Annual questionnaire FHML was submitted | 03/05/2015
Annual questionnaire FHML was created | 01/05/2015
Annual questionnaire FHML was submitted | 01/05/2015
Annual questionnaire FHML was created | 31/05/2015
Annual questionnaire FHML was submitted | 31/05/2015

Drawing 1 of 16 activities.
From Idea to Thesis
“classical pathway”

Supervisor

PhD student

Funding organization

“TOP-DOWN approach”
From Idea to PhD

“Classical pathway”
• Top-down approach

“Alternative pathway”
• Bottom-up approach
NUTRIM Graduate Programme

Bottom-up approach; PhD student in the lead
Procedure

Application

• Submit proposal (judged based on CV, scientific content (idea led by applicant and not by supervisors), collaboration, fitting within NUTRIM spearheads and optimal use of NUTRIM’s infrastructure & network

• External review and interview

Progress

• Annually (or more often if needed) evaluated not only by supervisory team but also by NUTRIM GP committee

Deadline application: April 11 2016
My Tips for the Proposal

- Plan as early as possible
- Find a supervisor(s) that is/are enthusiastic about and open to your ideas
- Discuss all your ideas with your supervisors, even the ones that you think are not possible
- Ask about and investigate potential collaborations
- Take the initiative
My Tips for the Proposal

- Consider how project costs will be funded
- Think about sample sizes, statistical analyses, and other study design considerations
- Be realistic in the time schedule planning of the project – don’t try to solve everything
- Ask other students for their help/advice
- Write the proposal for a non-specialist reader – the committee may not be familiar with the topic