

Jos van Nijnatten

PHD CANDIDATE · FACULTY OF SCIENCE, UTS

University of Technology Sydney, 15 Broadway, Ultimo, NSW 2007

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Education

University of Technology, Sydney (UTS)

Sydney, Australia

PHD IN SCIENCE

May 2019 - December 2023

- Advisor: Dr. Alen Faiz
- Advisor: Prof. Dr. Brian Oliver

In collaboration with **University of Groningen (RUG)**. My PhD project was to elucidate the transcriptomics and epigenetics of (severe) COPD and to elucidate the effects of smoking or inhaled corticosteroid (ICS) usage on epigenetics in COPD. I used bioinformatical techniques to answer several questions in bulk RNA-seq, small RNA-seq, protein sequencing, and 850K methylation data. (Publications are listed below.)

University of Groningen (RUG)

Groningen, The Netherlands

PHD IN SCIENCE

May 2019 - December 2023

- Advisor: Dr. Maarten van den Berge
- Advisor: Dr. Corry-Anke Brandsma
- Advisor: Prof. Dr. Wim Timens

Breda University of Applied Sciences

Breda, The Netherlands

BASC BIOLOGY AND MEDICAL RESEARCH

September 2008 - June 2012

- (Major) Molecular Research
- (Minor) Bioinformatics

Radius College

Breda, The Netherlands

MICROBIOLOGICAL ANALYST

September 2004 - June 2008

Professional Experience

- 2023 **Teaching Assistant**, University of Technology, Sydney
- 2016-2019 **Software Engineer**, Centric (Software professionals, South)
- 2017-2019 **C#/.NET Software Developer**, Citrus Software
- 2016-2017 **C#/.NET Software Developer**, Philips Healthcare
- 2014-2016 **C#/.NET Software Developer**, SCT bv
- 2014 **C#/.NET Software Developer**, Young Capital
- 2012-2014 **Technical Engineer**, Synchron Lab Automation
- 2008-2012 **Microbiological analyst**, Alcontrol Food & Water
- 2011-2012 **Trainee bioinformatics**, Dept. of bioinformatics, Erasmus Medical University Hospital (EMC)
- 2010-2011 **Trainee**, Woolcock Institute/University of Sydney (USyd)

Publications

* (shard) first author; † (shared) last author; + mentored undergraduate

PUBLISHED

Jos van Nijmegen*, Alen Faiz, Wim Timens, Victor Guryev, Dirk-Jan Slebos, Karin Klooster, Jorine Hartman, Tessa Kole2, David F. Choy, Michele Grimaldeston, Carrie Rosenberger, Genentech partners, Huib Kerstjens, Corry-Anke Brandsma†, Maarten van den Berge†. 2023. *Unique differentially expressed genes in Bronchial Brushes in severe COPD and a potential biomarker in the nose*. European Respiratory Journal.

Nicolaas J. Bekker*, Alienke van Pijkeren, Justina C. Wolters, Alejandro Sánchez Brotons, Victor Guryev, Roy R. Woldhuis, Rainer Bischoff, Wynand Alkema, Peter Horvatovich, **Jos van Nijmegen**, Maarten van den Berge, Wim Timens, Corry-Anke Brandsma†. 2023. *A proteomics approach to identify COPD-related changes in lung fibroblasts*. American Journal of Physiology - Lung cellular and molecular physiology.

Senani N.H. Rathnayake*, Benedikt Ditz*, **Jos van Nijmegen**, Tayyaba Sadaf, Philip M. Hansbro, Corry A. Brandsma, Wim Timens, Annemarie van Schadewijk, Peter S. Hiemstra, Nick H.T. ten Hacken, Brian Oliver, Huib A.M. Kerstjens, Maarten van den Berge†, Alen Faiz†. 2022. *Smoking induces shifts in cellular composition and transcriptome within the bronchial mucus barrier*. Respiriology, <https://doi.org/10.1111/resp.14401>

Elise M. A. Slob*, Alen Faiz*, **Jos van Nijmegen**, Susanne J. H. Vijverberg, Cristina Longo, Merve Kutlu, Fook Tim Chew, Yang Yie Sio, Esther Herrera-Luis, Antonio Espuela-Ortiz, Javier Perez-Garcia, Maria Pino-Yanes, Esteban G. Burchard, Uroš Potočnik, Mario Gorenjak, Colin Palmer, Cyrielle Maroteau, Steve Turner, Katia Verhamme, Leila Karimi, Somnath Mukhopadhyay, Wim Timens, Pieter S. Hiemstra, Mariëlle W. Pijnenburg, Margaret Neighbors, Michele A. Grimaldeston, Gaik W. Tew, Corry A. Brandsma, Vojko Berce, Hananeh Aliee, Fabian Theis, Don D. Sin, Xuan Li, Maarten van den Berge, Anke H. Maitland-van der Zee, Gerard H. Koppelman†. 2022. *Association of bronchial steroid inducible methylation quantitative trait loci with asthma and chronic obstructive pulmonary disease treatment response*. Clinical and Translational Allergy, <https://doi.org/10.1002/clt2.12173>

Mirjam P. Roffel*, Ilse M. Boudewijn, **Jos van Nijmegen**, Alen Faiz, Corneel J. Vermeulen, Antoon J. van Oosterhout, Karen Affleck, Wim Timens, Ken R. Bracke, Tania Maes, Irene H. Heijink, Corry-Anke Brandsma†, Maarten van den Berge†. 2022. *Identification of asthma-associated microRNAs in bronchial biopsies*. European Respiratory Journal, 59: 2101294, <https://doi.org/10.1183/13993003.01294-2021>

Jos van Nijmegen*, Corry-Anke Brandsma, Katrina Steiling, Pieter S. Hiemstra, Wim Timens, Maarten van den Berge†, Alen Faiz†. 2022. *High miR203a-3p and miR-375 expression in the airways of smokers with and without COPD*. Scientific Reports, <https://doi.org/10.1038/s41598-022-09093-0>

Hananeh Aliee*, Florian Massip*, Cancan Qi*, Maria Stella de Biase*, **Jos van Nijmegen***, Elin T. G. Kersten*, Nazanin Z. Kermani*, Basil Khuder*, Judith M. Vonk, Roel C. H. Vermeulen, U-BIOPRED study group, Cambridge Lung Cancer Early Detection Programme, INER-Ciencias Mexican Lung Program, Margaret Neighbors, Gaik W. Tew, Michele A. Grimaldeston, Nick H. T. ten Hacken, Sile Hu, Yike Guo, Xiaoyu Zhang, Kai Sun, Pieter S. Hiemstra, Bruce A. Ponder, Mika J. Mäkelä, Kristiina Malmström, Robert C Rintoul†, Paul A. Reyfman†, Fabian J. Theis†, Corry-Anke Brandsma†, Ian M. Adcock†, Wim Timens†, Cheng-Jian Xu†, Maarten van den Berge†, Roland F. Schwarz†, Gerard H. Koppelman†, M.C. Nawijn†, Alen Faiz†. 2021. *Determinants of expression of SARS-CoV-2 entry-related genes in upper and lower airways*. Allergy, <https://doi.org/10.1111/all.15152>

Saskia Hiltemann*, Elizabeth A. McClellan, **Jos van Nijmegen**, Sebastiaan Horsman, Ivo Palli, Ines Teles Alves, Thomas Hartjes, Jan Trapman, Peter van der Spek, Guido Jenster, Andrew Stubbs†. 2013. *iFUSE: integrated fusion gene explorer*. Bioinformatics, 29(13), 1700–17011, <https://doi.org/10.1093/bioinformatics/btt252>

IN REVIEW

Jos van Nijmegen*, Cornelis Joseph Vermeulen, Alen Faiz, Wim Timens, Maaike de Vries, Pieter Hiemstra, Corry-Anke Brandsma†, Maarten van den Berge†. *Differential methylation in bronchial biopsies between COPD patients and healthy subjects*.

Tatiana Karp*, Alen Faiz, **Jos van Nijmegen**, Huib A M Kerstjens, Ilse M Boudewijn, Monica Kraft, Judith M Vonk, Martijn C Nawijn, Irene H Heijink, Bianca Beghé, Klaus F Rabe, Alberto Papi, Chris E Brightling, Dave Singh, Thys van der Molen, Salman Siddiqui, Stephanie A Christenson, Victor Guryev†, Maarten van den Berge†. *Nasal epithelial gene expression identifies relevant asthma endotypes in the ATLANTIS study*.

IN PREP

Jos van Nijmegen*, Kathy Phung*, Wim Timens, Pieter Hiemstra, Corry-Anke Brandsma, Maarten van den Berge, Alen Faiz. *Methylation affected by inhaled corticosteroids in patients with COPD*.

Niek Bekker*, **Jos van Nijnatten***, Maarten van den Berge, Alen Faiz, Wim Timens, Roy Woldhuis†; Corry-Anke Brandsma†. *Characterisation of three differentially expressed microRNAs in severe early-onset COPD.*

Presentations

* presenting author; † (shared) last author; * mentored undergraduate

CONTRIBUTED PRESENTATIONS

Jos van Nijnatten*, Alen Faiz, Wim Timens, Cornelis Joseph Vermeulen, Maaïke de Vries, Rosa Faner, Maarten van den Berge†, Corry-Anke Brandsma†. 2023. *Differential methylation in COPD bronchial biopsies*. Poster presentation: ERS, Milan, IT.

Jos van Nijnatten*, Alen Faiz, Pieter S. Hiemstra, Wim Timens, Cornelis Joseph Vermeulen, Maaïke de Vries, Rosa Faner, Maarten van den Berge†, Corry-Anke Brandsma†. 2023. *Differential DNA Methylation Associated with COPD and COPD Severity*. Oral presentation: TSANZSRS, Christchurch, NZ.

Jos van Nijnatten*. 2022. *Title tbd*. Oral presentation: NAME, Sydney, AU.

Jos van Nijnatten*. 2022. *Title tbd*. Poster presentation: ASMR, Sydney, AU.

Jos van Nijnatten*. 2022. *Title tbd*. Oral presentation: TSANZ, Sydney, AU.

Jos van Nijnatten*. 2022. *Title tbd*. Poster presentation: ERS, Sydney, AU.

Jos van Nijnatten*. 2022. *Title tbd*. Poster presentation: ???, Groningen, NL.

Jos van Nijnatten*, Corry-Anke Brandsma, Pieter Hiemstra, Wim Timens, Maarten Van Den Berge, Alen Faiz†. 2020. *Changes in DNA methylation after corticosteroids treatment in COPD patients*. Poster presentation: ERS, Online. <https://doi.org/10.1183/13993003.congress-2020.4783>

Jos van Nijnatten*. 2019. *Title tbd*. Oral presentation: NAME, Sydney, AU.

Jos van Nijnatten*. 2019. *Title tbd*. Oral presentation: TSANZ, Sydney, AU.

Teaching Experience

Fall 2023 **Human genetics and precision medicine**, Teaching Assistant UTS

Fall 2023 **Human Pathophysiology**, Teaching Assistant UTS

Mentoring

2023 **Kathy Phung**, BSc (Honours), University of Technology Sydney UTS

2021-2022 **Douwe Metselaar**, BSc, Van Hall Larenstein University of Applied Sciences UMCG

2020 **Rinze Pieter Jonker**, BSc, Hanze University of Applied Sciences UMCG

Outreach & Professional Development

PROFESSIONAL MEMBERSHIPS

European Respiratory Society

Thoracic Society Australia & New Zealand

Australian Society for Medical Research

Australian Bioinformatics and Computational Biology Society