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## **Carbon starvation in the filamentous fungus *Aspergillus niger***

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## ***Publications***

**Nitsche B.M.**, Jørgensen T.R., Akeroyd M. and Ram A.F.J. (2012) The carbon starvation response of *Aspergillus niger* during submerged cultivation: Insights from the transcriptome and secretome. *BMC Genomics*. 13:380

Carvalho N.D.S.P, Jørgensen T.R., Arentshorst M., **Nitsche B.M.**, van den Hondel C.A.M.J.J., Archer D.B. and Ram A.F.J. (2012) Genome-wide expression analysis upon constitutive activation of the HacA bZIP transcription factor in *Aspergillus niger* reveals a coordinated cellular response to counteract ER stress. *BMC Genomics*. 13:350

**Nitsche B.M.**, Ram A.F.J. and Meyer V. (2012) The use of open source bioinformatics tools to dissect transcriptomic data. *Methods Mol Biol*. 835:311-31

**Nitsche B.M.**, Crabtree J., Cerqueira G.C., Meyer V., Ram A.F.J. and Wortman J.R. (2011) New resources for functional analysis of omics data for the genus *Aspergillus*. *BMC Genomics*. 12:486

Jørgensen T.R., **Nitsche B.M.**, Lamers G.E., Arentshorst M., van den Hondel C.A.M.J.J. and Ram A.F.J. (2010) Transcriptomic insights into the physiology of *Aspergillus niger* approaching a specific growth rate of zero. *Appl Environ Microbiol*. 76(16):5344-55

Meyer V., Arentshorst M., Flitter S.J., **Nitsche B.M.**, Kwon M.J., Reynaga-Pena C.G., Bartnicki-Garcia S., van den Hondel C.A.M.J.J. and Ram A.F.J. (2009) Reconstruction of signaling networks regulating fungal morphogenesis by transcriptomics. *Eukaryot Cell*. 8(11):1677-91



## *Curriculum vitae*

Benjamin was born on 29<sup>th</sup> September 1979 in Berlin, Germany, where he graduated from high school in 2000. After one year of mandatory social service in the German city of Münster, Benjamin enrolled as a student of biotechnology at the Technische Universität Berlin, Germany. In 2006 he went to Japan for a period of six month to conduct his Master's research project in the Computational and Experimental Systems Biology Group at RIKEN Yokohama Institute. In 2007 he graduated from University and went to Leiden, the Netherlands, where he worked for nine month as a contract researcher in the biotech startup Hitexacoat under supervision of Prof. Dr. C.A.M.J.J. van den Hondel and Dr. A.F.J. Ram. In 2008 he started as a PhD student at the Universiteit Leiden in the Molecular Microbiology and Biotechnology group under supervision of Prof. Dr. C.A.M.J.J. van den Hondel and Dr. A.F.J. Ram. Since January 2012 he holds a researcher position at the Technische Universität Berlin in the Applied and Molecular Microbiology department of Prof. Dr. V. Meyer.



# *Acknowledgments*

From my point of view, time proceeded quickly during this PhD project, much quicker than initially expected. This is actually a good sign, I think. It is not because the mission is almost accomplished as I am writing these acknowledgments, on the contrary: it proves that this was an extremely nice period for me. There have been a multitude of reasons, circumstances and people involved and in the following I will try to express my deep gratitude. But, before doing so, let me first apologize in case that I forgot to acknowledge you or others below. I did not intend to do so. Importantly, there is no correlation between the order that people are mentioned here and the importance of their contributions, should they be scientific, social or financial.

So, let's start! Prof. van den Hondel, first of all I would like to thank you for your fantastic achievements in the field of filamentous fungal research and the scientific infrastructure that you have helped to establish in the Netherlands and abroad. I very much appreciate your creativity, friendliness and open-minded character. And, very astonishing for a German student, you remembered my name after our first meeting and greeted me with "Hi Benjamin!" the next day we met on the corridor. Instead of saying "Hello Prof. van den Hondel!", I was invited to just reply "Hi Cees!", marvelous!

Arthur, heel erg bedankt, hoor! You should realize that I am not able to express my gratitude properly here. You have always been my perfect supervisor. I have been learning lots and lots of things from you. I hope that one day I will be as patient with my students as you have always been. It's like you taught me to walk and now I am on my own in the country of science. I hope that our paths will mutually cross.

Vera, you have actually been "the link". I still remember reading your mail mentioning the possibility to do an internship in Leiden; the rest is history. But of course, you are not limited to be the linking person. You have an astonishingly positive attitude and an outstanding capability to help people find their way. I am looking forward to a prosperous period, thank you!

Thomas, we spent approximately half of the time of my PhD project working together in Leiden. This was great because I could learn lots and lots of things from you both as an expert in bioreactor cultivations and as a sharp-thinking and independent scientist, *mange tak!*

My dear colleagues from the IBL and MMB group, let me collectively thank all of you for the nice atmosphere, inspiring working environment and the fantastic *borrels*. Mark, Davy, Ellen, Sandra and Sandra, Gerda, Neuza, Angelique, Tim, Tabea, Gerben, Natascha, Anne-Marie, Min, Joohae, Trish and everybody I forgot. Special thanks go to my students, who did a lot of nice experiments: Tom, Crescel, Negin, Markus and Leonie! I also fondly remember the IOP

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Let me change gears to proceed with some private acknowledgments. I would like to thank all members of the Tendoryu Aikido Dojo in Den Haag for their enthusiasm and hospitality. I enjoyed sharing our experiences and learned many valuable things from all of you. Erwin, I am especially grateful for the nice lessons you gave. I hope that we will have many more opportunities for *ishin denshin*. Please stay just as you are. Peter, I really appreciate your help with all typesetting issues and your support during finalizing this thesis. Roslin, thanks for proof-reading the non-submitted parts of this thesis. Hoi Clarije, Simon, Cato en Siem - ik ben jullie niet vergeten! Bedankt voor de leuke tijd samen! Hopelijk gaat het nog lang zo door! Maarten and Beata, great that we incidentally met as you were among our first contacts in Leiden. Lena did not only take care of Tim, Marlene and Nils, but we could also frequently enjoy your hospitality, thank you.

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Berlin, Germany  
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