

Curriculum Vitae

Dr. Harm Maarsingh

Professional address: Department of Pharmaceutical Sciences
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ACADEMIC EDUCATION AND TRAINING

2001: **Master of Pharmacy** (Cum Laude), University of Groningen, The Netherlands.

2006: **PhD**, Department of Molecular Pharmacology, University of Groningen.
Thesis: *Arginase: a novel key enzyme in the pathophysiology of allergic asthma*.
Promotors: Prof. Dr. H. Meurs and Prof. Dr. J. Zaagsma.

2011: **Certified Pharmacologist**, Dutch Pharmacological Society

Certifications:

1998: Safe microbiological experimentation, providing legal status for experimentation at the ML-1 and ML-2 level.
2002: Animal experimentation course, providing legal status (art. 9) to ethically conduct animal experiments and to apply for research projects grants involving animal experimentation in the Netherlands.
2002: Radiological experimentation course, providing legal status to conduct experiments involving radioactivity at the 5B level.
2011: Certified Pharmacologist (awarded by the Dutch Pharmacological Society).
2016: Good Clinical Practice (awarded by Dr. Gizurarson, University of Iceland).
2018: Institutional Animal Care and Use Committee (IACUC) Training 101.

PROFESSIONAL EXPERIENCE

2013-present: Associate Professor in Pharmaceutical Sciences, Lloyd L. Gregory School of Pharmacy, Palm Beach Atlantic University, West Palm Beach, FL, USA.

2009-2012: Lecturer at the School of Pharmacy, University of Groningen (0.5 fte).

2008-2012: Post-doctoral fellow at the department of Molecular Pharmacology, University of Groningen on a research grant funded by the Schering-Plough Research Institute (later MSD). A part of this research was performed at the department of Physiology, University of Massachusetts Medical School (Worcester, MA, USA) in collaboration with Prof. Dr. M.J. Sanderson (0.5 fte from 2009).

2006-2008: Post-doctoral fellow at the department of Molecular Pharmacology, University of Groningen on a research grant funded by NV Organon, Oss (later Schering-Plough). Part of this research was performed at the department of Asthma, Allergy and Lung Biology, King's College London (UK) in collaboration with Prof. Dr. S.J. Hirst.

RESEARCH & SCHOLARSHIP

Main expertise is in airway pharmacology, specifically in relation to preclinical *in vivo*, *ex vivo* and *in vitro* models of asthma and COPD. Within this context, the role of the L-arginine metabolome, the cAMP signaling pathway and the vitamin D pathway in allergy, airway inflammation, hyperresponsiveness and remodeling is studied. An important strength is the integration of mechanistic *in vitro* and *ex vivo* studies with proof of concept *in vivo* studies, which enables not only the identification of new drug targets but also the mechanisms of action. In the area of Scholarship of Teaching and Learning, I am interested in assessing efforts aimed at improving the performance of PharmD students.

Research grants received:

The research grants that I received as main applicant and co-applicant were funded by patient organizations, pharmaceutical industry, governmental organizations and internal university grants and combined total more than **\$3,500,000**.

As main applicant

- Netherlands Asthma Foundation (NAF grant 3.2.12.083) – €250,000
- Netherlands Asthma Foundation (NAF grant 3.2.11.015) – €249,000
- Novartis, Horsham UK – 2 grants totaling €474,000
- Stichting Astmabestrijding – €19,300
- PBAU Quality Initiative – 3 grants totaling \$5,703
- Integra Connect grants – 2 grants totaling \$36,800

As co-applicant

- Netherlands Asthma Foundation (NAF grant 3.2.09.034) – €240,000
- Organon Oss, NV, The Netherlands – €250,000
- Schering-Plough – €250,000
- Boehringer-Ingelheim, Ingelheim, Germany – 3 grants totaling €621,000.
- Technology Foundation STW, The Netherlands - €850,000

List of publications:

According to Google Scholar (January 2020), my publications have been **cited over 2,600 times** with an **H-index of 27**.

1. Zuo H, Trombetta-Lima M, Heijink IH, Van der Veen CHJT, Hesse L, Faber KN, Poppinga WJ, **Maarsingh H**, Nikolaev VO, Schmidt M. 2020; A-kinase anchoring proteins diminish TGF- β 1 / cigarette smoke-induced epithelial-to-mesenchymal transition. *Cells* 9(2). pii: E356.
Impact factor: 5.656
Times cited:
2. Meurs H, Zaagsma J, **Maarsingh H**, van Duin M. 2020; Reply to: "Arginase inhibitors: An alternative in treatment of obese asthma?" *Allergy* – In Press.
Impact factor: 6.771
Times cited:
3. Guirguis E, Sourial M, Jackson J, Bonfiglio M, Nornoo A, Maarsingh H. 2020. Developing a comprehensive APPE-readiness plan with a focus on skills, attitudes, and behaviors. *Curr Pharm Teach Learn*.
Impact factor: -
Times cited:
4. Meurs H, Zaagsma J, **Maarsingh H**, van Duin M. 2019; Recent Patents in Allergy/Immunology: Use of arginase inhibitors in the treatment of asthma and allergic rhinitis. *Allergy*. 74(6):1206-1208.
Impact factor: 6.771
Times cited: 1
5. Guirguis E, Grace Y, **Maarsingh H**, Tran TC, Tkachuk E. 2019; Vitamin C, Thiamine, and Steroids in the Sepsis Conquest: Replete to Defeat. *J Pharm Pract*. doi: 10.1177/0897190019851923.
Impact factor: -

Times cited:

6. Dougherty JA, Wynn RE, **Maarsingh H**. 2019; Unrecognized Drug Interaction: Ranolazine Adverse Effects Intensified by Darunavir-Cobicistat. *Ann Pharmacother*. 53:966-967.
Impact factor: 2.059
Times cited: 1
7. **Maarsingh H**, Bidan CM, Brook BS, Zuidhof AB, Elzinga CRS, Smit M, Oldenburger A, Gosens R, Timens W, Meurs H. 2019; Small airway hyperresponsiveness in COPD: relationship between structure and function in lung slices. *Am J Physiol Lung Cell Mol Physiol*. 316:L537-L546
Impact factor: 4.060
Times cited: 2
8. Liu Y, Bos IST, Oenema TA, Meurs H, **Maarsingh H**, Hirsch AKH. 2018; Delivery system for budesonide based on lipid-DNA. *Eur J Pharm Biopharm*. 130:123-127
Impact factor: 4.708
Times cited: 1
9. Tania NP, **Maarsingh H**, T Bos IS, Mattiotti A, Prakash S, Timens W, Gunst QD, Jimenez-Borreguero LJ, Schmidt M, van den Hoff MJB, Gosens R. 2017; Endothelial follistatin-like-1 regulates the postnatal development of the pulmonary vasculature by modulating BMP/Smad signaling. *Pulm Circ*. 7:219-231.
Impact factor: 2.283
Times cited: 8
10. Han B, Poppinga WJ, Zuo H, Zuidhof AB, Bos IS, Smit M, Vogelaar P, Krenning G, Henning RH, **Maarsingh H**, Halayko AJ, van Vliet B, Stienstra S, Graaf AC, Meurs H, Schmidt M. 2016; The novel compound Sul-121 inhibits airway inflammation and hyperresponsiveness in experimental models of chronic obstructive pulmonary disease. *Sci Rep*. 6:26928 .
Impact factor: 4.122
Times cited: 5
11. Kistemaker LE, Bos IS, Menzen HM, **Maarsingh H**, Meurs H, Gosens R. 2016; Combination therapy of tiotropium and ciclesonide attenuates airway inflammation and remodeling in a guinea pig model of chronic asthma. *Respir Res*. 4;17:13.
Impact factor: 3.829
Times cited: 22
12. Cernecka H, Kersten K, **Maarsingh H**, Elzinga CR, de Jong IJ, Korstanje C, Michel MC, Schmidt M. 2015; β 3-Adrenoceptor-mediated relaxation of rat and human urinary bladder: roles of BKCa channels and Rho kinase. *Naunyn Schmiedebergs Arch Pharmacol*. 388(7):749-59.
Impact factor: 2.058
Times cited: 16
13. Poppinga WJ, Heijink IH, Holtzer LJ, Skroblin P, Klusmann E, Halayko AJ, Timens W, **Maarsingh H**, Schmidt M. 2015; A-kinase-anchoring proteins coordinate inflammatory responses to cigarette smoke in airway smooth muscle. *Am J Physiol Lung Cell Mol Physiol*. 308(8):L766-75.
Impact factor: 4.060
Times cited: 16
14. Oldenburger A, Timens W, Bos IST, Smit M, Smrcka A, Laurant AC, Cao J, Hylkema M, Meurs H, **Maarsingh H**, Lezoualc'h F, Schmidt M. 2014; Epac1 and Epac2 are differentially involved in inflammatory and remodeling processes induced by cigarette smoke. *FASEB J*. 28(11):4617-28.
Impact factor: 5.391
Times cited: 26
15. Oldenburger A, van Basten B, Kooistra W, Meurs H, **Maarsingh H**, Krenning G, Timens W, Schmidt M. 2014; Interaction between Epac1 and miRNA-7 in airway smooth muscle cells. *Naunyn Schmiedebergs Arch Pharmacol*. 387(8):795-7.
Impact factor: 2.058
Times cited: 20
16. Ojo O, Lagan AL, Rajendran V, Spanjer A, Chen L, Sohal SS, Heijink I, Jones R, **Maarsingh H**, Hackett TL. 2014; Pathological changes in the COPD lung mesenchyme - Novel lessons learned from in vitro and in vivo studies. *Pulm Pharmacol Ther*. 29(2):121-8.
Impact factor: 2.406
Times cited: 28

17. Pera T, Zuidhof AB, Smit M, Menzen MH, Klein T, Flik G, Zaagsma J, Meurs H, **Maarsingh H**. 2014; Arginase inhibition prevents inflammation and remodeling in a guinea pig model of COPD. *J Pharmacol Exp Ther.* 349(2):229-238.
Impact factor: 3.706
Times cited: 47
18. Oldenburger A, Poppinga WJ, Kos F, de Bruin HG, Rijks W, Heijink I, Timens W, Meurs H, **Maarsingh H**, Schmidt M. 2014; A-kinase anchoring proteins contribute to loss of E-cadherin and bronchial epithelial barrier by cigarette smoke. *Am J Physiol Cell Physiol.* 306(6):C585-C597.
Impact factor: 3.553
Times cited: 36
19. Smit M, Zuidhof AB, Bos SI, **Maarsingh H**, Gosens R, Zaagsma J, Meurs H. 2014; Bronchoprotection by olodaterol is synergistically enhanced by tiotropium in a guinea pig model of allergic asthma. *J Pharmacol Exp Ther.* 348(2):303-310.
Impact factor: 3.706
Times cited: 23
20. Oenema TA, **Maarsingh H**, Smit M, Groothuis GMM, Meurs H, Gosens R. 2013; Bronchoconstriction induces TGF- β release and airway remodelling in guinea pig lung slices. *PLoS One* 8(6):e65580.
Impact factor: 2.776
Times cited: 63
21. Schmidt M, Dekker FJ, **Maarsingh H**. 2013; Exchange protein directly activated by cAMP (Epac): a multidomain cAMP mediator in the regulation of diverse biological functions. *Pharmacol Rev.* 65(2):670-709.
Impact factor: 18.964
Times cited: 209
22. West AR, Sytyong HT, Siddiqui S, Pascoe CD, Murphy TM, **Maarsingh H**, Deng L, Maksym GN, Bossé Y. 2012; Airway contractility and remodeling: links to asthma symptoms. *Pulm Pharmacol Ther.* 26:3-12.
Impact factor: 2.406
Times cited: 43
23. Wright D, Sharma P, Ryu MH, Rissé PA, Ngo M, **Maarsingh H**, Koziol-White C, Jha A, Halayko AJ, West AR. 2012; Models to study airway smooth muscle contraction in vivo, ex vivo and in vitro: Implications in understanding asthma. *Pulm Pharmacol Ther.* 26:24-36.
Impact factor: 2.406
Times cited: 36
24. Meurs H, Dekkers BG, **Maarsingh H**, Halayko AJ, Zaagsma J, Gosens R. 2013; Muscarinic receptors on airway mesenchymal cells: Novel findings for an ancient target. *Pulm Pharmacol Ther.* 26:145-55.
Impact factor: 2.406
Times cited: 81
25. Oldenburger A, **Maarsingh H**, Schmidt M. 2012; Multiple Facets of cAMP Signalling and Physiological Impact: cAMP Compartmentalization in the Lung. *Pharmaceuticals* 5: 1291-1331.
Impact factor: 4.90
Times cited: 24
26. Oldenburger A, Roscioni SS, Jansen E, Menzen MH, Halayko AJ, Timens W, Meurs H, Schmidt M, **Maarsingh H**. 2012; Anti-inflammatory role of the cAMP effectors Epac and PKA: implications in chronic obstructive pulmonary disease. *PLoS ONE.* 7(2):e31574.
Impact factor: 2.776
Times cited: 68
27. Wisastra R, Poelstra K, Bischoff R, **Maarsingh H**, Haisma HJ, Dekker FJ. 2011; Antibody-free Detection of Protein Tyrosine Nitration in Tissue Sections. *ChemBioChem.*12:2016-20.
Impact factor: 2.641
Times cited: 27
28. Ghizzoni M, Haisma HJ, **Maarsingh H**, Dekker FJ. 2011; Histone acetyltransferases are crucial regulators in NF- κ B mediated inflammation. *Drug Discov Today* 16:504-11.
Impact factor: 6.880
Times cited: 107
29. Roscioni SS, Prins AG, Elzinga CR, Menzen MH, Dekkers BG, Halayko AJ, Meurs H, **Maarsingh H**, Schmidt M. 2011; Protein kinase A and the exchange protein directly activated by cAMP (Epac) modulate phenotype plasticity in human airway smooth muscle. *Br J Pharmacol.* 164:958-69.
Impact factor: 6.583
Times cited: 38

30. Pera T, Zuidhof A, Valadas J, Smit M, Schoemaker RG, Gosens R, **Maarsingh H**, Zaagsma J, Meurs H. 2011; Tiotropium inhibits pulmonary inflammation and remodelling in a guinea pig model of COPD. *Eur Respir J*. 38:789-96.
Impact factor: 12.242
Times cited: 123
31. **Maarsingh H**, Dekkers BG, Zuidhof AB, Bos IS, Menzen MH, Klein T, Flik G, Zaagsma J, Meurs H. 2011; Increased arginase activity contributes to airway remodelling in chronic allergic asthma. *Eur Respir J*. 38:318-28
Impact factor: 12.242
Times cited: 83
32. Wisastra R, Ghizzoni M, **Maarsingh H**, Minnaard AJ, Haisma HJ, Dekker FJ. 2011; Isothiazolones; thiol-reactive inhibitors of cysteine protease cathepsin B and histone acetyltransferase PCAF. *Org Biomol Chem*. 21:1817-22.
Impact factor: 3.490
Times cited: 20
33. Roscioni SS, Dekkers BGJ, Prins AG, Menzen MH, Meurs H, Schmidt M, **Maarsingh H**. 2011; cAMP inhibits modulation of airway smooth muscle phenotype via the exchange protein activated by cAMP (Epac) and protein kinase A. *Br J Pharmacol*. 162:193-209.
Impact factor: 6.583
Times cited: 48
34. Roscioni SS, **Maarsingh H**, Elzinga CRS, Schuur LJ, Menzen MH, Halayko AJ, Meurs H, Schmidt M. 2011; Epac as a novel effector in airway smooth muscle relaxation. *J Cell Mol Med* 15:1551-63.
Impact factor: 4.658
Times cited: 73
35. North ML, Meurs H, Zaagsma J, Scott JA, **Maarsingh H**. 2010; Arginase in asthma – recent developments in animal and human studies. *The Open Nitric Oxide Journal* 2:20-36.
Impact factor: -
Times cited: 15
36. Vonk JM, Postma DS, **Maarsingh H**, Bruinenberg M, Koppelman GH, Meurs H. 2010; Arginase 1 and arginase 2 variations associate with asthma, asthma severity and beta2 agonist and steroid response. *Pharmacogenet Genomics* 20:179-86.
Impact factor: 2.693
Times cited: 68
37. Dekkers BGJ, **Maarsingh H**, Meurs H, Gosens R. 2009; Airway structural components drive airway smooth muscle remodeling in asthma. *Proc Am Thorac Soc* 6:683-92.
Impact factor: 4.023
Times cited: 164
38. **Maarsingh H**, Zaagsma J, Meurs H. 2009; Arginase: a key player in the pathophysiology of allergic asthma opening novel therapeutic perspectives. *Br J Pharmacol* 158:652-664.
Impact factor: 6.583
Times cited: 125
39. **Maarsingh H**, Bossenga BE, Bos IST, Volders HH, Zaagsma J, Meurs H. 2009, L-Arginine deficiency causes airway hyperresponsiveness after the late asthmatic reaction. *Eur Respir J* 34:191-199.
Impact factor: 12.242
Times cited: 44
40. **Maarsingh H**, Zuidhof AB, Bos IS, van Duin M, Boucher JL, Zaagsma J, Meurs H. 2008; Arginase inhibition protects against allergen-induced airway obstruction, hyperresponsiveness, and inflammation. *Am J Respir Crit Care Med* 178(6):565-73.
Impact factor: 16.494
Times cited: 110
41. **Maarsingh H**, Pera T, Meurs H. 2008; Arginase and pulmonary diseases. *Naunyn Schmiedebergs Arch Pharmacol* 378:171-84.
Impact factor: 2.058
Times cited: 127
42. **Maarsingh H**, Zaagsma J, Meurs H. 2008; Arginine homeostasis in allergic asthma. *Eur J Pharmacol* 585:375-84.
Impact factor: 3.170
Times cited: 66

43. **Maarsingh H**, Leusink J, Zaagsma J, Meurs H. 2006; Role of the L-citrulline/L-arginine cycle in iNANC nerve-mediated nitric oxide production and airway smooth muscle relaxation in allergic asthma. *Eur J Pharmacol* 546:171-176.
Impact factor: 3.170
Times cited: 23
44. Gosens R, Grootte Bromhaar MM, **Maarsingh H**, Ten Damme A, Meurs H, Zaagsma J, Nelemans SA. 2006; Bradykinin augments EGF-induced airway smooth muscle proliferation by activation of conventional protein kinase C isozymes. *Eur J Pharmacol* 535:253-262.
Impact factor: 3.170
Times cited: 12
45. **Maarsingh H**, Leusink J, Bos IST, Zaagsma J, Meurs H. 2006; Arginase strongly impairs neuronal nitric oxide-mediated airway smooth muscle relaxation in allergic asthma. *Respir Res* 7:1.
Impact factor: 3.829
Times cited: 111
46. **Maarsingh H**, Tio MA, Zaagsma J, Meurs H. 2005; Arginase attenuates inhibitory nonadrenergic noncholinergic nerve-induced nitric oxide generation and airway smooth muscle relaxation. *Respir Res* 6:23.
Impact factor: 3.829
Times cited: 61
47. **Maarsingh H**, De Boer J, Kauffman H, Zaagsma J, Meurs H. 2004; Heparin normalizes allergen-induced nitric oxide deficiency and airway hyperresponsiveness. *Br J Pharmacol* 142(8):1293-1299.
Impact factor: 6.583
Times cited: 27
48. Meurs H, **Maarsingh H**, Zaagsma J. 2003; Response to Ricciardolo: The functional significance of arginase in asthma is supported by gene expression. *Trends Pharmacol Sci* 24:450-455.
Impact factor: 11.523
Times cited: 3
49. Meurs H, **Maarsingh H**, Zaagsma J. 2003; Arginase and asthma: novel insights into nitric oxide homeostasis and airway hyperresponsiveness. *Trends Pharmacol Sci* 24:450-455.
Impact factor: 11.523
Times cited: 221
50. Meurs H, McKay S, **Maarsingh H**, Hamer MAM, Macic L, Molendijk N, Zaagsma J. 2002; Increased arginase activity underlies allergen-induced deficiency of cNOS-derived nitric oxide and airway hyperresponsiveness. *Br J Pharmacol* 136(3):391-398.
Impact factor: 6.583
Times cited: 159

Contributions to books:

1. Meurs H, **Maarsingh H**, Zaagsma J. Nitric oxide and nitrogen oxides. In: *Encyclopedia of Respiratory Medicine*. Ed: Laurent GF, Shapiro SD, Academic Press 2006: 161-169

Patents:

1. Meurs H, Zaagsma J, **Maarsingh H**, Van Duin M. Use of arginase inhibitors in the treatment of asthma and allergic rhinitis.
International Publication Numbers: WO 2008/061612 A1
International Publication Date: 29 May 2008.
Patent applications: US20150164930A1, CA2669300A1, EP2083812B1, ES2633094T3, JP2010510257A, MX2009005370A

Invited lectures:

1. 3rd International Young Investigators' Symposium on Smooth Muscle, Epithelium, and Airways Inflammation, 2003, Vancouver (Canada). Title of the presentation: *Modulation of GPCR-induced ASM contraction by epithelial and neurogenic nitric oxide synthases and arginase*.
2. 2nd Joint Meeting of the Italian and Dutch Pharmacological Societies, 2005, Lunteren (NL). Title of the presentation: *Role of arginase in neuronal nitric oxide production and airway smooth muscle relaxation induced by inhibitory nonadrenergic*.

3. Annual Congress of the European Respiratory Society, 2004, Glasgow (UK). Title of the presentation: *Role of arginase in allergen-induced iNANC nerve activity.*
4. 5th International Young Investigators' Symposium on Smooth Muscle, Epithelium, and Airways Inflammation, 2005, Malmö (Sweden). Titles of the presentations: *Involvement of arginase and peroxynitrite in age-related development of airway hyperresponsiveness in guinea pigs* and *Importance of the citrulline/arginine cycle in iNANC nerve-induced NO generation and ASM relaxation – role in airway hyperresponsiveness.*
5. Annual International Conference of the American Thoracic Society, 2006, San Diego (USA). Title of the presentation: *Role of the L-citrulline/L-arginine cycle in neuronal nitric oxide-mediated airway smooth muscle relaxation and airway hyperresponsiveness.*
6. FIGON Dutch Medicine Days, 2007, Lunteren (NL). Title of the presentation: *Arginase: a novel key enzyme in the pathophysiology of allergic asthma.*
7. International Symposium in the honour of Prof. J. Zaagsma, 2008, Groningen (NL). Title of the presentation: *Arginase and the respiratory system.*
8. Meeting of the Federation of European Pharmacological Societies, 2008, Manchester (UK). Title of the presentation: *Arginase – a novel key enzyme in asthma.*
9. 105th International Meeting of the American Thoracic Society, 2010, New Orleans (USA). Title of the presentation: *Arginase inhibition protects against allergen-induced airway remodeling, hyperresponsiveness and inflammation in chronic asthma.*
10. University of Aachen (Germany), 2010. Title of the presentation: *Arginase: a novel master switch in allergic asthma?*
11. 8th International Drug Discovery Science and Technology meeting, 2010, Beijing (China). Title of the presentation: *Arginase, master switch in allergic asthma?*
12. COST action TD09/05, 2011, Split (Croatia). Title of the presentation: *HATs: regulators of airway inflammation and steroid sensitivity in asthma.*
13. BPS focused meeting – Novel cAMP signaling paradigms: new insights into the development and progression of chronic inflammatory disease, 2011, London (UK). Title of the presentation: *Epac and PKA inhibit human airway smooth muscle modulation.*
14. Novartis Pharmaceuticals UK, 2011, Horsham (UK). Title of the presentation: *Arginase as a novel target in respiratory diseases.*
15. Spring meeting of the Dutch Pharmacological Society, 2012, Rotterdam (NL). Title of the presentation: *Targeting the L-arginine metabolome to treat airway inflammation.*
16. Symposium regarding the Thesis defense of Anouk Olderburger, 2014, University of Groningen, Groningen (NL). Title of the presentation: *Precision cut lung slices: A unique technique to study airway function in health and disease.*
17. UPM Pharmaceuticals, 2015, Bristol, TN (USA). Title of the presentation: *Experimental models for asthma and COPD: pathophysiology and drug discovery.*
18. Florida Pharmacist Association, 2016, Miami, FL (USA). Title of the presentation: *Biologics and Biosimilar: The Wave of the Future?*
19. International Symposium on the occasion of the retirement of Prof. Dr. H. Meurs, 2016, University of Groningen, Groningen (NL). Title of the presentation: *Arginase on its way to therapy.*
20. Florida Pharmacist Association, 2018, Kissimmee, FL (USA). Title of the presentation: *Biologics and Biosimilar: The Wave of the Future?*
21. Interdisciplinary Research Conference, Palm Beach Atlantic University, 2019, West Palm Beach, FL (USA). Title of the presentation: *Implementing Electronic Patient Health Records in Rural Uganda Improves the Patient Care Process.*

Scholarships and prizes:

1. International Trainee Travel Award - granted by the American Thoracic Society (2006).
2. Thesis Award - granted by the Netherlands Society for Pharmaceutical Sciences for the best thesis in the field of Pharmaceutical Sciences defended in 2006 (awarded 2007).
3. International Trainee Travel Award - granted by the American Thoracic Society (2010).
4. Gregory School of Pharmacy Teacher of the Year – selected by the students (2017).
5. Gregory School of Pharmacy Dean's Award for Faculty Innovation (2019).

(Co)promotor/Thesis advisor

In collaboration with Prof. Dr. Martina Schmidt (Department of Molecular Pharmacology, University of Groningen), I was (co)promotor of the following PhD students:

1. Sara Silvia Roscioni
Thesis entitled: *Epac as a novel regulator of airway smooth muscle phenotype and function.*
Successfully defended on December 17, 2010.
2. Hana Cernecka
Thesis entitled: *β 3-Adrenoceptor detection and signal transduction: focus on antibody validation and urinary bladder.*
Successfully defended on October 24, 2014.
3. Anouk Oldenburger
Thesis entitled: *New avenues for Epac in inflammation and tissue remodelling in COPD.*
Successfully defended on October 31, 2014.
4. Wilfred Poppinga
Thesis entitled: *Compartmentalized signaling in the lung: A-kinase anchoring proteins as novel drug targets for chronic obstructive pulmonary disease.*
Successfully defended on December 2, 2016.
5. Bing Han
Thesis entitled: *Novel strategies in the treatment of COPD: Focus on oxidative stress and a-kinase anchoring proteins.*
Successfully defended on December 12, 2016.
6. Navessa Padma Tania
Thesis entitled: *Developmental and pathophysiological roles of BMP/follistatin-like 1 in the lung.*
Successfully defended on October 6, 2017.

TEACHING:

My current teaching responsibilities within the PharmD program of the Gregory School of Pharmacy focus mainly on pharmacology, physiology and pathophysiology of various diseases in foundational courses (P1 and P2 year) and in the pharmacotherapy series (P2 and P3 year). For some of these courses, I also serve(d) as the course coordinator (PRX2145, PRX2152, PRX 2213, PRX2264). In addition, I precept rotation students in Advanced Pharmacy Practice Experience (APPE) rotations related to Biomedical and Pharmaceutical Research projects and Medical Missions in the P4 year and supervise P1-P3 students in research projects during the summer.

List of current and past courses at, Palm Beach Atlantic University, Gregory School of Pharmacy

P1 courses:

PRX 1103 Principles of Drug Action I (2013-current)
PRX 1203 Principles of Drug Action II (2013-current)
PRX 1223 Integrated Anatomy, Physiology and Pathophysiology II (2020-current)

P2 courses:

PRX 2145 Cardiovascular Pharmacotherapy (2013-current)
PRX 2152 Respiratory, HEENT and Dermatological Pharmacotherapy (2017-current)
PRX 2213 Immunology, Biotechnology and Pharmacogenomics (2013-2019)
PRX 2253 Gastrointestinal, Hepatic, and Renal Pharmacotherapy (2014-2019)
PRX 2264 Endocrine/Musculoskeletal Pharmacotherapy (2014-current)

P3 courses:

PRX 3152 Special Topics in Pharmacotherapy (2014-2016)
PRX 3263 Hematologic, Oncologic, and Immunologic Pharmacotherapy (2014-2017, 2020-current)

P4 courses:

PHR 4512 Advanced Pharmacy Practice Experience – International Pharmacy Missions (2016-current)
PHR 4524 Advanced Biomedical and Pharmaceutical Research - Advanced Pharmacy Practice Experience I
PHR 4534 Advanced Biomedical and Pharmaceutical Research - Advanced Pharmacy Practice Experience II

List of past courses at the University of Groningen, University Center for Pharmacy

1999-2001 Pharmacological Practicum
2002-2012 Supervisor for Master Research projects
2009-2012 Coordinator and Supervisor for Bachelor Research projects
2009-2012 Coordinator and Supervisor for Bachelor Thesis
2009-2012 Tractus Circulatorius
2011 Physiology & Pharmacology
2012 Biomedical Research (developed this new course)

SERVICE:

I have served on various scientific and academic committees and taskforces.

Scientific committees and memberships:

- 2010-2012: Chairman of the Program Committee of the Dutch Pharmacological Society (2010-2012)
- 2009-2012: Member of the Scientific Committee of the FIGON Dutch Medicine Days (2009-2012).
- 2010-2012: Member of the Core Group and Management Committee of the European Union COST Action 'Epigenetics: bench to bedside' (TD0905) (2010-2012).
- 2010-2012: Chairman of the COST working group 'Functional consequences of epigenetics'
- 2011-2013: Co-organizer of the 8th International Young Investigators Meeting on airway smooth muscle and fibroblasts, Groningen 2013.
- 2007-2009: Grant reviewer for the British Lung Foundation and the Czech Science Foundation.
- 2005-current: Regular reviewer of multiple international scientific journals in the field of Pharmacology and Respiratory Medicine.

Attendee of various (inter)national scientific meetings on Pharmacology, Drug Discovery, Respiratory Medicine, Medical Missions and Pharmacy Education with podium or poster presentations.

Academic committees:

Gregory School of Pharmacy

- 2013-2015: Curricular and Academic Policies Committee
- 2013-2015: Taskforce to develop a new curriculum for the School of Pharmacy
- 2013-2019: Faculty Recruitment Committee (co-chair)
- 2013-2017: Research Resources Committee (chair from 2014-2017)
- 2014-2017: Spiritual Council to the Dean (chair)
- 2014-2015: Taskforce for Development of OSCEs (Objective Structurel Clinical Examinations)
- 2015: Belle Glade Medical Misssion
- 2015-2016: Member of the Strategic Plan Committee
- 2015-2017: Evaluation and Assessment Committee
- 2016: Faculty Workload Taskforce
- 2016-current: Uganda Medical Mission (trip leader)
- 2017-2019: Student Affairs Committee (chair)
- 2019-present: Assessment Committee (chair)

Palm Beach Atlantic University

- 2014-2016: Faculty Research Committee
- 2013-2015: Member of Joint Taskforce of the Faculty Research Committee and the Faculty Development Committee to advice on Sabbaticals and Course load reductions
- 2016-present: Faculty Evaluation Committee
- 2018-current: PBA Faculty Senate