

# Curriculum Vitae Martin de Borst

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Date of birth: March 23, 1980  
Nationality: Dutch  
Address: University Medical Center Groningen  
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Current positions: Consultant nephrologist, University Medical Center Groningen, The Netherlands  
Tenure track assistant professor, University of Groningen, The Netherlands

## Educational and professional experience

Aug 2014-present: Consultant nephrologist, Department of Internal Medicine, Division of Nephrology, University Medical Center Groningen  
Aug 2014-present: Tenure Track Assistant Professor, University of Groningen  
Feb 2012-Aug 2014: Nephrology resident, University Medical Center Groningen  
Apr 09-Aug 14 Post-doc Researcher/Principal Investigator, University Medical Center Groningen, Department of Medicine, Division of Nephrology  
Jun 09-Feb 12 Internal Medicine resident, University Medical Center Groningen  
2006-Oct 2007 Postdoctoral fellow, Mario Negri Institute for Pharmacological Research, Bergamo, Italy; involved in the European Renal Genome Project (EuReGene, [www.euregene.org](http://www.euregene.org)).  
2003-2007 MD/PhD track, University Medical Center Groningen (UMCG) / University of Groningen  
2007 PhD, University of Groningen, title: "Protein kinase signaling: intracellular messengers as potential targets for intervention in renal disease".  
2006 MD, University of Groningen  
2002 MSc (Medicine), University of Groningen

## Fields of interest

Mineral metabolism, kidney transplantation, chronic kidney disease

## Invited lectures

2016 Invited lecture, 61<sup>st</sup> Congress of the Japanese Society for Dialysis Therapy (JSDT), Osaka, Japan: "Fibroblast growth factor 23 and renal outcomes"

- 2016 Invited lecture, European Renal Association, European Dialysis and Transplantation Association (ERA-EDTA) symposium, Vienna, Austria: "Current and Emerging Options for Outpatient Treatment of Hyperkalemia"
- 2015 Keynote lecture, 4<sup>th</sup> European MD/PhD conference, Groningen: "Chronic kidney disease: from accelerated aging to healthy aging".
- 2014 Invited lecture, Annual Nephrology Course UNIFESP Sao Paulo, Brazil: "Calcium-phosphate homeostasis and cardiorenal outcomes in chronic kidney disease: fibroblast growth factor 23, Klotho and vitamin D".
- 2014 Invited lecture, 6<sup>th</sup> Rotterdam Course in Electrolyte and Acid-Base Disorders, 20 March 2014: "Phosphate".
- 2014 Invited lecture, ASN Review 2014, Utrecht: "Vitamin D meets RAAS in CKD: cardiovascular implications".
- 2013 Invited lecture, Symposium "New kids on the block", Academic Medical Center Amsterdam: "Vitamin D and progressive renal damage"
- 2013 Invited lecture at the 25<sup>th</sup> Internist Days, Maastricht, The Netherlands: "Meet the expert session: an update on calcium physiology"
- 2012 Keynote lecture, "Cross-talk between RAAS and Klotho-FGF23-vitamin D: two systems divided or sharing a common language?" at symposium entitled "Vitamin D and the Cardiorenal Nexus – A Silver Bullet?", Guy's Hospital, King's College, London, UK
- 2011 Invited lecture "Cross talk between the vitamin D-FGF-23-klotho axis and the renin-angiotensin-aldosterone system: possible implications for CKD", 17<sup>th</sup> Genzyme Consultants' Forum, Madrid, Spain.
- 2010 Invited lecture, "Possible renoprotective effects of vitamin D (analogues) in chronic kidney disease", Workshop Nephrology, Papendal, the Netherlands
- 2010 Invited lecture "Vitamin D: possible renoprotective effects beyond mineral metabolism", Hannover, Germany
- 2010 Invited lecture, "Vitamin D and the kidney", Annual Fall Meeting, Dutch Federation for Nephrology, Utrecht, the Netherlands

## Grants and Awards

- 2013 Veni grant for project entitled "Fibroblast growth factor 23: pouring salt into the wound of chronic kidney disease?" Netherlands Organization for Scientific Research (NWO/ZonMW grant no 016.146.014) (€ 250.000).
- 2011 Principal Investigator, consortium grant "The FGF23 – klotho – vitamin D axis as a new instrumental target to combat the cardiovascular risk of chronic kidney disease", Dutch Kidney Foundation (€ 1.500.000). Work Package leader WP5, grant no CP 10.11
- 2010 Innovation Grant for research project entitled "Renoprotection by autocrine activation of 25(OH) vitamin D in the kidney?" Dutch Kidney Foundation (€ 100.000), grant no IP.10.19
- 2010 Award for best Abstract & Presentation, 22<sup>nd</sup> Internist Days (NIV, Maastricht, the Netherlands): "A local vitamin D system in human podocytes: target for anti-proteinuric therapy?" (€ 500)
- 2010 Co-applicant, sysKID (Systems Biology towards Novel Chronic Kidney Disease Diagnosis and Treatment Project consortium), European Union FP7 (total budget €11.800.000, budget for UMCG € 620.000), project number 241544.
- 2008 Kolff Junior Postdoc grant for post-doctoral research project on vitamin D in chronic renal disease, Dutch Kidney Foundation (€200.000), grant no KJPB.08.07
- 2008 Mandema grant for post-doctoral research project on vitamin D in chronic renal disease, University Medical Center Groningen (€100.000)
- 2008 Award for best Abstract & Presentation, 20<sup>th</sup> Internist Days (NIV, Maastricht, the Netherlands): "The JNK pathway is involved in tubulo-interstitial inflammation in human and experimental renal disease" (€ 500)
- 2002 Winner of Public's Award and the First-year-student-Jury Award for oral presentation at the 9<sup>th</sup> Medical Student Conference (University of Groningen): "Blockade of MAP-kinase pathways protects the kidney against angiotensin II-induced damage"

## **Patents**

- 2015            New biomarkers to estimate the risk of allograft failure and patient mortality after organ transplantation; IPC8 Class: AG01N3368FI; Patent application number: 20150153352
- 2015            Use of vitamin K to decrease allograft failure and patient mortality after organ transplantation; IPC8 Class: AA61K31122FI; Patent application number: 20150141386 (European Patent Office patent no 12170756.6-2123)

## **Editorial Board memberships**

- 2014-present    Associate Editor, Nephron Clinical Practice
- 2013-present    Academic Editor, *PLOS ONE*
- 2009-2014       Editorial Advisory Board member, *Current Signal Transduction Therapy*

## **Ad hoc reviewer**

Peer reviewer for several international journals: The Lancet, British Medical Journal, Journal of the American Society of Nephrology, Kidney International, Clinical Journal of the American Society of Nephrology, Nephrology Dialysis Transplantation, Journal of Pathology, Diabetologia, PLOS ONE, Journal of Pharmacology and Experimental Therapeutics, Laboratory Investigation, Current Medicinal Chemistry, Journal of Thrombosis and Haemostasis, Pharmacology Research, European Journal of Pharmacology.

## Publications

My h-index (Google scholar): 20

1. Humalda JK, Keyzer CA, Binnenmars SH, Kwakernaak AJ, Slagman MC, Laverman GD, Bakker SJ, **De Borst MH**, Navis GJ. Concordance of dietary sodium intake and concomitant phosphate load: Implications for sodium interventions. *Nutr Metab Cardiovasc Dis*. 2016 Apr 27. pii: S0939-4753(16)30044-8. doi: 10.1016/j.numecd.2016.04.012. [Epub ahead of print]
2. De Jong MA, Mirkovic K, Mencke R, Hoenderop JG, Bindels RJ, Vervloet MG, Hillebrands JL, van den Born J, Navis G, **De Borst MH**; NIGRAM consortium. *Nephrol Dial Transplant*. 2016 May 24. pii: gfw105. [Epub ahead of print]
3. Moers C, Pol RA, **De Borst MH**. Tumor Necrosis Factor  $\alpha$  Blockade to Ameliorate Renal ischemia Reperfusion Injury: Potential Implications for Kidney Transplantation. *Transplantation*. 2016 May 10. [Epub ahead of print]
4. **De Borst MH**, Navis G. Sodium intake, RAAS-blockade and progressive renal disease. *Pharmacol Res*. 2016 May;107:344-51
5. Adema AY, van Ittersum FJ, Hoenderop JG, **De Borst MH**, Nanayakkara PW, Ter Wee PM, Heijboer AC, Vervloet MG; NIGRAM consortium. *PLoS One*. 2016;11(1):e0144121
6. **De Borst MH**. The Complement System in Hemodialysis Patients: Getting to the Heart of the Matter. *Nephron*. 2016;132(1):1-4
7. Riphagen IJ, van der Molen JC, van Faassen M, Navis G, **De Borst MH**, Muskiet FA, de Jong WH, Bakker SJ, Kema IP. Measurement of plasma vitamin K1 (phylloquinone) and K2 (menaquinones-4 and -7) using HPLC-tandem mass spectrometry. *Clin Chem Lab Med*. 2016 Jul 1;54(7):1201-10
8. Humalda JK, Riphagen IJ, Assa S, Hummel YM, Westerhuis R, Vervloet MG, Voors AA, Navis G, Franssen CF, **De Borst MH**; NIGRAM Consortium. Fibroblast growth factor 23 correlates with volume status in haemodialysis patients and is not reduced by haemodialysis. *Nephrol Dial Transplant*. 2015 Nov 24. pii: gfv393. [Epub ahead of print]
9. International Genetics & Translational Research in Transplantation Network (iGeneTRaiN). Design and Implementation of the International Genetics and Translational Research in Transplantation Network. *Transplantation*. 2015;99(11):2401-12
10. Keyzer CA, Lambers-Heerspink HJ, Joosten MM, Deetman PE, Gansevoort RT, Navis G, Kema IP, de Zeeuw D, Bakker SJ, **de Borst MH**; PREVEND Study Group. Plasma Vitamin D Level and Change in Albuminuria and eGFR According to Sodium Intake. *Clin J Am Soc Nephrol*. 2015;10(12):2119-27
11. Dessing MC, Kers J, Damman J, Leuvenink HG, van Goor H, Hillebrands JL, Hepkema BG, Snieder H, van den Born J, **De Borst MH**, Bakker SJ, Navis GJ, Ploeg RJ, Florquin S, Seelen M, Leemans JC. Toll-Like Receptor Family Polymorphisms Are Associated with Primary Renal Diseases but Not with Renal Outcomes Following Kidney Transplantation. *PLoS One*. 2015;10(10):e0139769
12. Baia LC, Heilberg IP, Navis G, de Borst MH; NIGRAM investigators. Phosphate and FGF-23 homeostasis after kidney transplantation. *Nat Rev Nephrol*. 2015;11(11):656-66
13. Meems LM, **De Borst MH**, Postma DS, Vonk JM, Kremer HP, Schuttelaar ML, Rosmalen JG, Weersma RK, Wolffenbuttel BH, Scholtens S, Stolk RP, Kema IP, Navis G, Khan MA, van der Harst P, de Boer RA. Low levels of vitamin D are associated with multimorbidity: results from the LifeLines Cohort Study. *Ann Med*. 2015;47(6):474-81
14. Mirkovic K, Frenay AS, van den Born J, van Goor H, Navis G, **De Borst MH**; NIGRAM consortium. Sodium restriction potentiates the renoprotective effects of combined vitamin D receptor activation and angiotensin-converting enzyme inhibition in established proteinuric nephropathy. *Nephrol Dial Transplant*. 2015 Aug 25. pii: gfv304. [Epub ahead of print]
15. Van Ballegooijen AJ, Gansevoort RT, Lambers-Heerspink HJ, de Zeeuw D, Visser M, Brouwer IA, Kema IP, **De Borst MH**, Bakker SJ, Joosten MM. Plasma 1,25-Dihydroxyvitamin D and the Risk of Developing Hypertension: The Prevention of Renal and Vascular End-Stage Disease Study. *Hypertension*. 2015;66(3):563-70
16. Frenay AR, Kayacelebi AA, Beckmann B, Soedamah-Muhtu SS, **De Borst MH**, van den Berg E, van Goor H, Bakker SJ, Tsikas D. High urinary homoarginine excretion is associated with low rates of all-cause mortality and graft failure in renal transplant recipients. *Amino Acids*. 2015;47(9):1827-36

17. Mencke R, Harms G, Mirković K, Struik J, Van Ark J, Van Loon E, Verkaik M, **De Borst MH**, Zeebregts CJ, Hoenderop JG, Vervloet MG, Hillebrands JL; NIGRAM Consortium. Membrane-bound Klotho is not expressed endogenously in healthy or uraemic human vascular tissue. *Cardiovasc Res*. 2015;108(2):220-31
18. Van Breda F, Emans ME, van der Putten K, Braam B, van Ittersum FJ, Kraaijenhagen RJ, De Borst MH, Vervloet M, Gaillard CA. Relation between Red Cell Distribution Width and Fibroblast Growth Factor 23 Cleaving in Patients with Chronic Kidney Disease and Heart Failure. *PLoS One*. 2015;10(6):e0128994
19. Frenay AR, van den Berg E, **De Borst MH**, Beckmann B, Tsikas D, Feelisch M, Navis G, Bakker SJ, van Goor H. Plasma ADMA associates with all-cause mortality in renal transplant recipients. *Amino Acids*. 2015;47(9):1941-9
20. Keyzer CA, **De Borst MH**, Van den Berg E, Jahnen-Dechent W, Arampatzis S, Farese S, Bergmann IP, Floege J, Navis G, Bakker SJL, Van Goor H, Eisenberger U, Pasch A. Calcification Propensity and Survival among Renal Transplant Recipients. *J Am Soc Nephrol* 2016;27(1):239-48
21. Keyzer CA, de Jong MA, Fenna van Breda G, Vervloet MG, Laverman GD, Hemmelder M, Janssen WM, Lambers Heerspink HJ, Navis G, **De Borst MH**; Holland Nephrology Study (HONEST) Network. Vitamin D receptor activator and dietary sodium restriction to reduce residual urinary albumin excretion in chronic kidney disease (ViRTUE study): rationale and study protocol. *Nephrol Dial Transplant*. 2015 Mar 4. pii: gfv033. [Epub ahead of print]
22. Humalda JK, Goldsmith DJ, Thadhani RI, **De Borst MH**. Vitamin D analogues to target residual proteinuria: potential impact on cardiorenal outcomes. *Nephrol Dial Transplant* 2015;30(12):1988-94
23. Poosti F, Bansal R, Yazdani S, Prakash J, Post E, Klok P, van den Born J, **de Borst MH**, van Goor H, Poelstra K, Hillebrands JL. Selective delivery of IFN- $\gamma$  to renal interstitial myofibroblasts: a novel strategy for the treatment of renal fibrosis. *FASEB J*. 2015;29(3):1029-42
24. Keyzer CA, Vermeer C, Joosten MM, Knapen MH, Drummen NE, Navis G, Bakker SJ, **De Borst MH**. Vitamin K Status and Mortality After Kidney Transplantation: A Cohort Study. *Am J Kidney Dis*. 2015;65(3):474-83
25. **De Borst MH**, Navis G. Diabetes: Risks of strict glycaemic control in diabetic nephropathy. *Nat Rev Nephrol*. 2015 Jan;11(1):5-6
26. Keyzer CA, Riphagen IJ, Joosten MM, Navis G, Muller Kobold AC, Kema IP, Bakker SJ, **De Borst MH**; NIGRAM consortium. Associations of 25(OH) and 1,25(OH)<sub>2</sub> Vitamin D With Long-Term Outcomes in Stable Renal Transplant Recipients. *J Clin Endocrinol Metab*. 2015 Jan;100(1):81-9
27. Humalda JK, Lambers Heerspink HJ, Kwakernaak AJ, Slagman MC, Waanders F, Vervloet MG, Ter Wee PM, Navis G, **De Borst MH**; NIGRAM Consortium. Fibroblast Growth Factor 23 and the Antiproteinuric Response to Dietary Sodium Restriction During Renin-Angiotensin-Aldosterone System Blockade. *Am J Kidney Dis*. 2015;65(2):259-66
28. Baia LC, Van den Berg E, Vervloet MG, Heilberg IP, Navis G, Bakker SJ, Geleijnse JM, Kromhout D, Soedamah-Muthu SS, **De Borst MH**; NIGRAM consortium. Fish and omega-3 fatty acid intake in relation to circulating fibroblast growth factor 23 levels in renal transplant recipients. *Nutr Metab Cardiovasc Dis*. 2014 Dec;24(12):1310-6
29. Vimalaswaran KS, Cavadino A, Berry DJ; LifeLines Cohort Study investigators, Jorde R, (...), **De Borst MH**, Kumari M, Kivimaki M, Wang TJ, Power C, Brenner H, Grimnes G, van der Harst P, Snieder H, Hingorani AD, Pilz S, Whittaker JC, Jarvelin MR, Hyppönen E. Association of vitamin D status with arterial blood pressure and hypertension risk: a mendelian randomisation study. *Lancet Diabetes Endocrinol* 2014;2(9):719-29
30. Kwakernaak AJ, Krikken JA, Binnenmars SH, Visser FW, Hemmelder MH, Woittiez AJ, Groen H, Laverman GD, Navis G; Holland Nephrology Study (HONEST) Group. Effects of sodium restriction and hydrochlorothiazide on RAAS blockade efficacy in diabetic nephropathy: a randomised clinical trial. *Lancet Diabetes Endocrinol* 2014;2(5):385-95
31. Derks WJ, Marijnissen RM, Comijs HC, Schoevers RA, **De Borst MH**, Oude Voshaar RC. Antidepressants differentially related to 1,25-dihydroxy vitamin D and 25-hydroxy vitamin D in late-life depression. *Transl Psychiatry* 2014;4:e383
32. Adema AY, **De Borst MH**, Ter Wee PM, Vervloet MG; NIGRAM Consortium. Dietary and pharmacological modification of fibroblast growth factor-23 in chronic kidney disease. *J Ren Nutr* 2014;24(3): 143-50
33. Baia LC, Humalda JK, Vervloet MG, Navis G, Bakker SJ, **De Borst MH**; on behalf of the NIGRAM Consortium. Fibroblast Growth Factor 23 and Cardiovascular Mortality after Kidney Transplantation. *Clin J Am Soc Nephrol* 2013;8(11):1968-78

34. **De Borst MH**, Hajhosseiny R, Tamez H, Wenger J, Thadhani R, Goldsmith DJ. Active Vitamin D Treatment for Reduction of Residual Proteinuria: A Systematic Review. *J Am Soc Nephrol* 2013;24(11):1863-71
35. Heijboer AC, Blankenstein MA, Hoenderop J, **De Borst MH**, Vervloet MG; on behalf of the NIGRAM consortium. Laboratory aspects of circulating  $\alpha$ -Klotho. *Nephrol Dial Transplant* 2013;28(9): 2283-7
36. Mirkovic K, Doorenbos CR, Dam WA, Nauta FL, Kramer AB, Gansevoort RT, Van den Born J, Navis G, **De Borst MH**. Urinary vitamin D binding protein: a potential novel marker of renal interstitial inflammation and fibrosis. *PLoS ONE* 2013;8(2):e55887
37. Reznichenko A, Sinkeler SJ, Snieder H, Van den Born J, **De Borst MH**, Damman J, Van Dijk MC, Van Goor H, Hepkema BG, Hillebrands JL, Leuvenink HG, Niesing J, Bakker SJ, Seelen M, Navis G. SLC22A2 is associated with tubular creatinine secretion and bias of estimated GFR in renal transplantation. *Physiol Genomics* 2013; 45(6):201-9
38. Lambers Heerspink HJ, **De Borst MH**, Bakker SJ, Navis G. Improving the efficacy of RAAS blockade in patients with chronic kidney disease. *Nat Rev Nephrol* 2013;9(2):112-21
39. Mirkovic K, **De Borst MH**. Beyond the RAAS: dissecting the antifibrotic effects of vitamin D analogues. *Lab Invest* 2012;92(12):1666-9
40. Yazdani S, Poosti F, Kramer AB, Mirkovic K, Kwakernaak AJ, Hovingh M, Slagman MCJ, Sjollem KA, **De Borst MH**, Navis G, Van Goor H, Van den Born J. Proteinuria triggers renal lymphangiogenesis prior to the development of interstitial fibrosis. *PLoS ONE* 2012;7(11):e50209
41. Boxma PY, Van den Berg E, Geleijnse M, Laverman GD, Kema IP, Muskiet FAJ, Schurgers LD, Navis G, Bakker SJL, **De Borst MH**. Vitamin K intake and plasma desphospho-uncarboxylated matrix gla-protein levels in kidney transplant recipients. *PLoS ONE* 2012;7(10):e47991
42. Poosti F, Dolman MEM, Kok RJ, Chen C, Lacombe M, Prakash J, Bulthuis M, Hillebrands JL, Van Goor H, **De Borst MH**. Targeted inhibition of Rho kinase reduces renal inflammation in acute renal allograft rejection. *Eur J Pharmacol* 2012;694(1-3):111-9
43. Reznichenko A, Böger CA, Snieder H, Van den Born J, **De Borst MH**, Damman J, Van Dijk MCRF, Van Goor H, Hepkema BG, Hillebrands JL, Leuvenink HGD, Niesing J, Bakker SJL, Seelen M, Navis G. UMOD as a susceptibility gene for end-stage renal disease. *BMC Med Genet* 2012 13(1): 78
44. **De Borst MH**, Nauta FL, Vogt L, Laverman GD, Gansevoort RT, Navis G. Indomethacin reduces glomerular and tubular damage markers in chronic kidney disease: post-hoc analysis of a clinical trial. *PLoS One* 2012;7(5):e37957
45. Reznichenko A, Snieder H, Van den Born J, **De Borst MH**, Damman J, Van Dijk MC, Van Goor H, Hepkema BG, Hillebrands JL, Leuvenink HG, Niesing J, Bakker SJ, Seelen M, Navis G; on behalf of the REGaTTA (REnal GeneTics TrAnplantation) Groningen group. CUBN as a Novel Locus for End-Stage Renal Disease: Insights from Renal Transplantation. *PLoS One*. 2012;7(5):e36512
46. Damman J, Daha MR, Leuvenink HGD, Van Goor H, Hillebrands J, Van Dijk MCRF, Hepkema BG, Snieder H, Van den Born J, **De Borst MH**, Bakker SJL, Navis G, Ploeg RJ, Seelen MA. Association of Complement C3 Gene Variants with Renal Transplant Outcome of Deceased Cardiac Dead Donor Kidneys. *Am J Transplant*. 2012 Mar;12(3):660-8
47. Damman J, Kok JL, Snieder H, Leuvenink HG, van Goor H, Hillebrands JL, van Dijk MC, Hepkema BG, Reznichenko A, van den Born J, **De Borst MH**, Bakker SJ, Navis GJ, Ploeg RJ, Seelen MA. Lectin complement pathway gene profile of the donor and recipient does not influence graft outcome after kidney transplantation. *Mol Immunol*. 2012 Feb;50(1-2):1-8
48. Doorenbos CRC, De Cuba MM, Vogt L, Kema IP, Van den Born J, Gans ROB, Navis GJ, **De Borst MH**. Antiproteinuric treatment reduces urinary loss of vitamin D binding protein but does not affect 25-hydroxyvitamin D levels in patients with chronic kidney disease. *J Ster Biochem Mol Biol* 2012;128(1-2):56-61
49. **De Borst MH**, Vervloet MG, Ter Wee PM, Navis G. Cross talk between the renin-angiotensin-aldosterone system and vitamin D-FGF-23-klotho in chronic kidney disease. *J Am Soc Nephrol* 2011;22(9):1603-9
50. **De Borst MH**. Vitamin D deficiency in cardiovascular and renal disease: new light shed on an old enemy. *Curr Drug Targets* 2011;12(1):1-3
51. Mirkovic K, Van den Born J, Navis G, **De Borst MH**. Vitamin D in chronic kidney disease: new potential for intervention. *Curr Drug Targets* 2011;12(1):42-53
52. **De Borst MH**, De Boer RA, Stolk RP, Wolfenbuttel BH, Navis GJ. Vitamin D deficiency: universal risk factor for multifactorial diseases? *Curr Drug Targets* 2011;12(1):97-106

53. J Prakash, **De Borst MH**. Towards tailored treatment: New organ-specific drug strategies interfering in signal transduction. *Curr Sign Transd Ther* 2011;6(2):234-6
54. Poosti F, Hillebrands JL, Van Goor H, **De Borst MH**. Renal targeting of protein kinase inhibitors. *Curr Sign Transd Ther* 2011;6(2):249-59
55. **De Borst MH**, Navis GJ. Dietary salt reduction for reduction of cardiovascular events. *New Engl J Med* 2010;362(23):2224-5 (*Impact factor* 51.658)
56. **De Borst MH**, Van Zeijl JH, Grond J, Hoogendoorn M. The concealed trip of an immunocompromised patient. *Ned Tijdschr Geneesk* 2010;154(17):A1157
57. Doorenbos CRC, Van den Born J, Navis G, **De Borst MH**. Renoprotective effects of vitamin D in chronic renal disease: beyond mineral metabolism. *Nat Rev Nephrol* 2009;5(12):691-700
58. **De Borst MH**, Prakash J, Sandovici M, Klok PA, Hamming I, Kok RJ, Navis GJ, Van Goor H. Activation of c-Jun N-terminal kinase is involved in renal tubulointerstitial inflammatory damage. *J Pharm Exp Ther* 2009;331(3):896-905
59. **De Borst MH**, Lacor MEM. Something's in the air. *BMJ* 2009;338:b425
60. Prakash J, **De Borst MH**, Lacombe M, Opdam F, Klok PA, Van Goor H, Meijer DKF, Moolenaar F, Poelstra K, Kok RJ. Renal-specific delivery of ROCK inhibitor Y27632 inhibits ischemia/reperfusion-induced acute renal injury. *J Am Soc Nephrol* 2008;19(11):2086-97
61. **De Borst MH**, Benigni A, Remuzzi G. Strategies for identification of genes involved in renal damage. *Nat Clin Pract Nephrol* 2008; 4(5):265-76
62. Liu Y, Van Goor H, Havinga R, Baller JWF, Bloks VW, Van der Leij FR, Sauer PJJ, Kuipers F, Navis GJ, **De Borst MH**. Postnatal dexamethasone administration causes end-stage renal disease in rats due to induction of an early inflammatory response. *Am J Physiol Renal Physiol* 2008;294(4):F768-76
63. Prakash J, **De Borst MH**, Loenen-Weemaes A, Lacombe M, Opdam F, Van Goor H, Meijer DKF, Moolenaar F, Poelstra K, Kok RJ. Cell-specific delivery of a transforming growth factor-beta type I receptor kinase inhibitor to proximal tubular cells for the treatment of renal fibrosis. *Pharm Res* 2008;25(10):2427-39
64. **De Borst MH**. On the origin of albuminuria. *Kidney Int* 2007;72(11):1409
65. **De Borst MH**, Prakash J, Melenhorst WBWH, Van den Heuvel MC, Kok RJ, Van Goor H, Navis GJ. Glomerular and tubular activation of the transcription factor c-Jun in human renal disease. *J Pathol* 2007; 213(2): 219-28
66. **De Borst MH**, Diks SH, Van Dalen MBA, Schellings MW, Bolbrinker J, Peppelenbosch MP, Pinto YM, Kreutz R, Navis GJ, Van Goor H. Profiling of the renal kinome: a novel tool to identify protein kinases involved in angiotensin II-dependent hypertensive renal damage. *Am J Physiol Renal Physiol* 2007; 293(1): F428-37
67. **De Borst MH**, Van Timmeren MM, Vaidya VS, Van Dalen MBA, Kramer AB, Schuur TA, Bonventre JV, Navis GJ, Van Goor H. Induction of Kidney Injury Molecule-1 (Kim-1) in homozygous Ren2 rats is attenuated by blockade of the renin-angiotensin system or p38 MAP kinase. *Am J Physiol Renal Physiol* 2007; 292(1): F313-20
68. Prakash J, Saluja V, Lacombe M, **De Borst MH**, Van Goor H, Proost H, Moolenaar F, Keri G, Meijer DKF, Poelstra K, Kok RJ. Intracellular Targeting of the P38 MAPK Inhibitor SB202190 in Renal Tubular Cells: a Novel Strategy to Treat Renal Fibrosis. *J Pharm Exp Ther* 2006; 319(1): 8-19
69. Greupink R, Bakker HI, Van Goor H, **De Borst MH**, Beljaars L, Poelstra K. Mannose-6-Phosphate/insulin-like growth factor-II receptor expression is increased in livers of bile duct-ligated Wistar rats as well as in renal blood vessels of homozygous TGR(mRen2)27 rats and may serve as a target for selective delivery of mycophenolic acid to fibrogenic cells. *Pharm Res* 2006; 23(8): 1827-34
70. **De Borst MH**, Wassef L, Kelly DJ, Van Goor H, Navis GJ. Mitogen activated protein kinase signaling in the kidney: target for intervention? *Signal Transduction* 2006;6:32-53
71. **De Borst MH**, Navis GJ, De Boer RA, Vis LM, Van Gilst WH, Van Goor H. Specific effects of MAP-kinase blockade in homozygous TGR(mRen2)27 rats. *Lab Invest* 2003 Dec; 83(12): 1761-70
72. **De Borst MH**, Sleswijk ME, Woittiez AJJ, Van Goor H, Navis GJ. Hypertensive renal damage: pathophysiology and prevention. *Histopathology* 2002; 41(Suppl 2): 314-319