CURRICULUM VITAE
ANNA KÖTTGEN, M.D. M.P.H., born HOPF

PERSONAL INFORMATION

Emmy Noether Group Leader
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Assistant Professor - Adjunct
Dept. of Epidemiology
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EDUCATION AND TRAINING

2005-2006	M.P.H., Johns Hopkins School of Public Health, Baltimore, MD, USA
(2002-2005	Maternity Leave)
2002-2003	Certificate of Philosophical Ethics, University Hagen, Germany
2002	Doctoral Thesis (Prof. Greger, Department of Physiology, Albert-Ludwigs-University Freiburg, Germany. Dissertation: Mechanisms of the CFTR-mediated Inhibition of the Epithelial Sodium Channel (*summa cum laude)*
1994-2001	M.D., School of Medicine, Albert-Ludwigs-University Freiburg, Germany

Medical Licensure

Germany

2001	Full licensure to work as physician, German Medical Association

United States

2003	USMLE II CK
2000	USMLE I

PROFESSIONAL EXPERIENCE

2010 - **Group leader, Emmy Noether Research Group**, Department of Nephrology, Freiburg University School of Medicine, Germany.

10/2009 - **Assistant Professor - Adjunct,** Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD.

2009 **Offer as Assistant Professor (tenure track)**, Departments of Epidemiology/Biostatistics and Medicine, Case Western Reserve University, Cleveland, USA.

2008-09 **Assistant Scientist**, Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD.

2007-08 **Research Fellow**, The German Research Foundation, Department of Epidemiology, Welch Center for Prevention, Epidemiology & Clinical Research, Johns Hopkins University, Baltimore, MD. Academic mentors: Prof. Josef Coresh, Prof. WH Linda Kao

2006-08 **Postdoctoral Fellow**, Department of Epidemiology, Welch Center for Prevention, Epidemiology & Clinical Research, Johns Hopkins University, Baltimore, MD. Academic mentors: Prof. Josef Coresh, Prof. WH Linda Kao

2005-06 **Student Research**, Department of Epidemiology, Johns Hopkins University.

2000-01 **Medical Practical Year**, Albert-Ludwigs-University Freiburg, Germany.

PROFESSIONAL ACTIVITIES

Society memberships:

2006- American Heart Association
2007- American Society of Nephrology
2008- American Society of Human Genetics
2010- German Society of Epidemiology

EDITORIAL ACTIVITIES

Peer Review Activities:

Nature Genetics, New England Journal of Medicine, Journal of Clinical Investigation, Annals of Internal Medicine (named top 10% of reviewers in 2007)*, Journal of the American Society of Nephrology, Diabetes, Archives of Internal Medicine, Circulation, American Journal of Kidney Diseases, Kidney International, Science Translational Medicine, Atherosclerosis, Nature Reviews Nephrology, Nephrology Dialysis Transplantation.*

HONORS AND AWARDS

2010	Travel award to the annual meeting of the European Renal Association (ERA-EDTA Congress), Munich, Germany. Abstract among the best abstracts submitted by young authors.
2010	Co-first author on 2009 PNAS paper: Cozzarelli Prize for outstanding scientific excellence and originality “Identification of a urate transporter, ABCG2, with a common functional polymorphism causing gout” by Owen M. Woodward, Anna Köttgen, Josef Coresh, Eric Boerwinkle, William B. Guggino, and Michael Köttgen
2010	Emmy Noether Group Leader, The German Research Foundation
2009	Jeremiah and Rose Stamler Research Award for New Investigators, American Heart Association
2007-09	Fellowship, The German Research Foundation
1998-01	German National Academic Foundation Scholar (Studienstiftung des deutschen Volkes)
1999	Student delegate at the Annual Meeting of Nobel Prize Laureates, Lindau, Germany

PUBLICATIONS

Journal Articles: (*equal contribution)

1. McAdams MA, Maynard JW, Baer AN, **Köttgen A**, Clipp S, Coresh J, Gelber AC. Reliability and Sensitivity of the Self-report of Physician-diagnosed Gout in the Campaign Against Cancer and Heart Disease and the Atherosclerosis Risk in the Community Cohorts. *J Rheumatol.* 2010 Dec 1. [Epub ahead of print]

2. Sotoodehnia N, Isaacs A, de Bakker PI, Dörr M, Newton-Cheh C, Nolte IM, van der Harst P, Müller M, Eijgelsheim M, Alonso A, Hicks AA, Padmanabhan S, Hayward C, Smith AV, Polasek O, Giovannone S, Fu J, Magnani JW, Marciante KD, Pfeufer A, Gharib SA, Teumer A, Li M, Bis JC, Rivadeneira F, Aspelund T, **Köttgen A**, Johnson T, Rice K, Sie MP, Wang YA, Klopp N, Fuchsberger C, Wild SH, Leach IM, Estrada K, Völker U, Wright AF, Asselbergs FW, Qu J, Chakravarti A, Sinner MF, Kors JA, Petersmann A, Harris TB, Soliman EZ, Munroe PB, Psaty BM, Oostra BA, Cupples LA, Perz S, de Boer RA, Uitterlinden AG, Völzke H, Spector TD, Liu FY, Boerwinkle E, Dominiczak AF, Rotter JI, van Herpen G, Levy D, Wichmann HE, van Gilst WH, Witteman JC, Kroemer HK, Kao WH, Heckbert SR, Meitinger T, Hofman A, Campbell H, Folsom AR, van Veldhuisen DJ, Schwienbacher C, O'Donnell CJ, Volpato CB, Caulfield MJ, Connell JM, Launer L, Lu X, Franke L, Fehrmann RS, Te Meerman G, Groen HJ, Weersma RK, van den Berg LH, Wijmenga C, Ophoff RA, Navis G,

Rudan I, Snieder H, Wilson JF, Pramstaller PP, Siscovick DS, Wang TJ, Gudnason V, van Duijn CM, Felix SB, Fishman GI, Jamshidi Y, Ch Stricker BH, Samani NJ, Kääb S, Arking DE. *Nat Genet.* 2010 Nov 14. [Epub ahead of print]

3. Yang Q*, **Köttgen A***, Dehghan A*, Smith AV*, Glazer NL*, Chen MH, Chasman DI, Aspelund T, Eiriksdottir G, Harris TB, Launer L, Nalls M, Hernandez D, Arking DE, Boerwinkle E, Grove ML, Li M, Kao WL, Chonchol M, Haritunians T, Li G, Lumley T, Psaty BM, Shlipak M, Hwang SJ, Larson MG, O'Donnell CJ, Upadhyay A, van Duijn CM, Hofman A, Rivadeneira F, Stricker B, Uitterlinden AG, Paré G, Parker AN, Ridker PM, Siscovick DS, Gudnason V, Witteman JC, Fox CS, Coresh J. Multiple Genetic Loci Influence Serum Urate And Their Relationship With Gout and Cardiovascular Disease Risk Factors. *Circ Cardiovasc Genet.* 2010 Sep 30. [Epub ahead of print]

4. Soranzo N, Sanna S, Wheeler E, Gieger C, Radke D, Dupuis J, Bouatia-Naji N, Langenberg C, Prokopenko I, Stolerman E, Sandhu MS, Heeney MM, Devaney JM, Reilly MP, Ricketts SL, Stewart AF, Voight BF, Willenborg C, Wright B, Altshuler D, Arking D, Balkau B, Barnes D, Boerwinkle E, Böhm B, Bonnefond A, Bonnycastle LL, Boomsma DI, Bornstein SR, Böttcher Y, Bumpstead S, Burnett-Miller MS, Campbell H, Cao A, Chambers J, Clark R, Collins FS, Coresh J, de Geus EJ, Dei M, Deloukas P, Döring A, Egan JM, Elosua R, Ferrucci L, Forouhi N, Fox CS, Franklin C, Franzosi MG, Gallina S, Goel A, Graessler J, Grallert H, Greinacher A, Hadley D, Hall A, Hamsten A; on behalf of Procardis Consortium, Hayward C, Heath S, Herder C, Homuth G, Hottenga JJ, Hunter-Merrill R, Illig T, Jackson AU, Jula A, Kleber M, Knouff CW, Kong A, Kooner J, **Köttgen A**, Kovacs P, Krohn K, Kühnel B, Kuusisto J, Laakso M, Lathrop M, Lecoeur C, Li M, Li M, Loos RJ, Luan J, Lyssenko V, Mägi R, Magnusson PK, Mälarstig A, Mangino M, Martínez-Larrad MT, März W, McArdle WL, McPherson R, Meisinger C, Meitinger T, Melander O, Mohlke KL, Mooser VE, Morken MA, Narisu N, Nathan DM, Nauck M, O'Donnell C, Oexle K, Olla N, Pankow JS, Payne F, Peden JF, Pedersen NL, Peltonen L, Perola M, Polasek O, Porcu E, Rader DJ, Rathmann W, Ripatti S, Rocheleau G, Roden M, Rudan I, Salomaa V, Saxena R, Schlessinger D, Schunkert H, Schwarz P, Seedorf U, Selvin E, Serrano-Ríos M, Shrader P, Silveira A, Siscovick D, Song K, Spector TD, Stefansson K, Steinthorsdottir V, Strachan DP, Strawbridge R, Stumvoll M, Surakka I, Swift AJ, Tanaka T, Teumer A, Thorleifsson G, Thorsteinsdottir U, Tönjes A, Usala G, Vitart V, Völzke H, Wallaschofski H, Waterworth DM, Watkins H, Wichmann HE, Wild SH, Willemsen G, Williams GH, Wilson JF, Winkelmann J, Wright AF; WTCCC, Zabena C, Zhao JH, Epstein SE, Erdmann J, Hakonarson HH, Kathiresan S, Khaw KT, Roberts R, Samani NJ, Fleming MD, Sladek R, Abecasis G, Boehnke M, Froguel P, Groop L, McCarthy MI, Kao WH, Florez JC, Uda M, Wareham NJ, Barroso I, Meigs JB. Common variants at ten genomic loci influence hemoglobin A1C levels via glycemic and non-glycemic pathways. *Diabetes.* 2010 Sep 21. [Epub ahead of print]

5. Rasmussen-Torvik LJ, Alonso A, Li M, Kao W, **Köttgen A**, Yan Y, Couper D, Boerwinkle E, Bielinski SJ, Pankow JS. Impact of repeated measures and sample selection on genome-wide association studies of fasting glucose. *Genet Epidemiol.* 2010 Sep 13. [Epub ahead of print]

6. Akoudad S, Szklo M, McAdams MA, Fulop T, Anderson CA, Coresh J, **Köttgen A**. Correlates of kidney stone disease differ by race in a multi-ethnic middle aged population: The ARIC Study. *Prev Med.* 2010 Aug 26. [Epub ahead of print]

7. Kucharska-Newton AM, Monda KL, Bielinski SJ, Boerwinkle E, Rea TD, Rosamond WD, Pankow JS, **Köttgen A**, Heiss G, North KE. Role of BMI in the Association of the TCF7L2 rs7903146 Variant with Coronary Heart Disease: The Atherosclerosis Risk in Communities (ARIC) Study. *J Obes.* 2010;2010. pii: 651903.

8. O'Seaghdha CM, Yang Q, Glazer NL, Leak TS, Dehghan A, Smith AV, Kao WH, Lohman K, Hwang SJ, Johnson AD, Hofman A, Uitterlinden AG, Chen YD; The GEFOS Consortium, Brown EM, Siscovick DS, Harris TB, Psaty BM, Coresh J, Gudnason V, Witteman JC, Liu YM, Kestenbaum BR, Fox CS, **Köttgen A**. Common Variants in the Calcium Sensing Receptor Gene are Associated with Total Serum Calcium Levels. *Hum Mol Genet.* 2010 Aug 12. [Epub ahead of print]

9. Evans K, Coresh J, Bash LD, Gary-Webb T, **Köttgen A**, Carson K, Boulware LE. Race differences in access to health care and disparities in incident chronic kidney disease in the US. *Nephrol Dial Transplant*. 2010 Aug 5. [Epub ahead of print]

10. Bi M, Kao WH, Boerwinkle E, Hoogeveen RC, Rasmussen-Torvik LJ, Astor BC, North KE, Coresh J, **Köttgen A**. Association of rs780094 in GCKR with Metabolic Traits and Incident Diabetes and Cardiovascular Disease: the ARIC Study. *PLoS One.* 2010 Jul 22;5(7):e11690.

11. Meyer TE, Verwoert GC, Hwang SJ, Glazer NL, Smith AV, van Rooij FJA, Ehret GB, Boerwinkle E, Felix JF, Leak TS, Harris TB, Yang Q, Dehghan A, Aspelund T, Katz R, Homuth G, Kocher T, Rettig R, Ried JS, Gieger C, Prucha H, Pfeufer A, Meitinger T, The GEFOS Consortium, The MAGIC Consortium, Coresh J, Hofman A, Sarnak MJ, Chen YI, Uitterlinden AG, Chakravarti A, Psaty BM, van Duijn CM, Kao WH, Witteman JCM, Gudnason V, Siscovick DS, Fox CS, **Köttgen A**. Genome-wide Association Studies of Serum Magnesium, Potassium and Sodium Concentrations Identify Six Loci Influencing Serum Magnesium Levels. *PLoS Genet.* 2010 Aug 5;6(8). pii: e1001045.

12. Kestenbaum BR*, Glazer NL*, **Köttgen A***, Felix JF*, Hwang SJ*, Liu Y, Lohman K, Kritchevsky SB, Hausman DB, Petersen AK, Gieger C, Ried JS, Meitinger T, Strom TM, Wichmann HE, Campbell H, Hayward C, Rudan I, de Boer IH, Psaty BM, Rice KM, Chen YI, Li M, Arking DE, Boerwinkle E, Coresh J, Yang Q, Levy D, van Rooij FJA, Dehghan A, Rivadeneira F, Uitterlinden AG, Hofman A, van Duijn CM, Shlipak MG, Kao WH, Witteman JCM, Siscovick DS, Fox CS. Common genetic variants are associated with the serum phosphorus concentration. *J Am Soc Nephrol*, 2010 Jul;21(7):1223-32.

13. Yamagishi K, Tanigawa T, Kitamura A, **Köttgen A**, Folsom AR, Iso H; on behalf of the CIRCS Investigators. The rs2231142 variant of the ABCG2 gene is associated with uric acid levels and gout among Japanese people. *Rheumatology* (Oxford). 2010 Aug;49(8):1461-5.

14. **Köttgen A***, Pattaro C*, Böger CA*, Fuchsberger C*, Olden M, Glazer NL, Parsa A, Gao X, Yang Q, Smith AV, O'Connell JR, Li M, Schmidt H, Tanaka T, Isaacs A, Ketkar S, Hwang SJ, Johnson AD, Dehghan A, Teumer A, Paré G, Atkinson EJ, Zeller T, Lohman K, Cornelis MC, Probst-Hensch NM, Kronenberg F, Tönjes A, Hayward C, Aspelund T, Eiriksdottir G, Launer L, Harris TB, Rapmersaud E, Mitchell

BD, Boerwinkle E, Struchalin M, Cavalieri M, Singleton A, Giallauria F, Metter J, de Boer I, Haritunians T, Lumley T, Siscovick D, Psaty BM, Zillikens MC, Oostra BA, Feitosa M, Province M, Levy D, de Andrade M, Turner ST, Schillert A, Ziegler A, Wild PS, Schnabel RB, Wilde S, Muenzel TF, Leak TS, Illig T, Klopp N, Meisinger C, Wichmann HE, Koenig W, Zgaga L, Zemunik T, Kolcic I, Minelli C, Hu FB, Johansson A, Igl W, Zaboli G, Wild SH, Wright AF, Campbell H, Ellinghaus D, Schreiber S, Aulchenko ZS, Rivadeneira F, Uitterlinden AG, Hofman A, Imboden M, Nitsch D, Brandstätter A, Kollerits B, Kedenko L, Mägi R, Stumvoll M, Kovacs P, Boban M, Campbell S, Endlich K, Völzke H, Kroemer HK, Nauck M, Völker U, Polasek O, Vitart V, Badola S, Parker AN, Ridker PM, Kardia SLR, Blankenberg S, Liu Z, Curhan GC, Franke A, Rochat T, Paulweber B, Prokopenko I, Wang W, Gudnason V, Shuldiner AR, Coresh J, Schmidt R, Ferrucci L, Shlipak MG, van Duijn CM, Borecki I, Krämer BK, Rudan I, Gyllensten U, Wilson JF, Witteman JC, Pramstaller PP, Rettig R, Hastie N, Chasman DI, Kao WHL, Heid IM, Fox CS. Multiple New Loci Associated with Kidney Function and Chronic Kidney Disease. *Nat Genet* 2010 May;42(5):376-84.

15. Yan Y, Klein R, Heiss G, Girman CJ, Lange EM, Klein BE, Rose K, Boerwinkle E, Pankow JS, Brancati FL, Ballantyne CM, **Kottgen A**, North KE. The transcription factor 7-like 2 (TCF7L2) polymorphism may be associated with focal arteriolar narrowing in Caucasians with hypertension or without diabetes: the ARIC Study. *BMC Endocrine Disorders* BMC Endocr Disord. 2010 May 17;10:9.

16. Estrella MM, Astor BC, **Köttgen A**, Selvin E, Coresh J, Parekh RS. Prevalence of kidney disease in anaemia differs by GFR-estimating method: The Third National Health and Nutrition Examination Survey (1988-94). *Nephrol Dial Transplant.* 2010 Aug;25(8):2542-8

17. Ellinor PT, Lunetta KL, Glazer NL, Pfeufer A, Alonso A, Chung MK, Sinner MF, de Bakker PI, Mueller M, Lubitz SA, Fox E, Darbar D, Smith NL, Smith JD, Schnabel RB, Soliman EZ, Rice KM, Van Wagoner DR, Beckmann BM, van Noord C, Wang K, Ehret GB, Rotter JI, Hazen SL, Steinbeck G, Smith AV, Launer LJ, Harris TB, Makino S, Nelis M, Milan DJ, Perz S, Esko T, **Köttgen A**, Moebus S, Newton-Cheh C, Li M, Möhlenkamp S, Wang TJ, Kao WH, Vasan RS, Nöthen MM, MacRae CA, Stricker BH, Hofman A, Uitterlinden AG, Levy D, Boerwinkle E, Metspalu A, Topol EJ, Chakravarti A, Gudnason V, Psaty BM, Roden DM, Meitinger T, Wichmann HE, Witteman JC, Barnard J, Arking DE, Benjamin EJ, Heckbert SR, Kääb S. Common variants in KCNN3 are associated with lone atrial fibrillation. *Nat Genet.* 2010 Mar;42(3):240-4.

18. Saxena R, Hivert MF, Langenberg C, Tanaka T, Pankow JS, Vollenweider P, Lyssenko V, Bouatia-Naji N, Dupuis J, Jackson AU, Kao WH, Li M, Glazer NL, Manning AK, Luan J, Stringham HM, Prokopenko I, Johnson T, Grarup N, Boesgaard TW, Lecoeur C, Shrader P, O'Connell J, Ingelsson E, Couper DJ, Rice K, Song K, Andreasen CH, Dina C, **Köttgen A**, Le Bacquer O, Pattou F, Taneera J, Steinthorsdottir V, Rybin D, Ardlie K, Sampson M, Qi L, van Hoek M, Weedon MN, Aulchenko YS, Voight BF, Grallert H, Balkau B, Bergman RN, Bielinski SJ, Bonnefond A, Bonnycastle LL, Borch-Johnsen K, Böttcher Y, Brunner E, Buchanan TA, Bumpstead SJ, Cavalcanti-Proença C, Charpentier G, Chen YD, Chines PS, Collins FS, Cornelis M, J Crawford G, Delplanque J, Doney A, Egan JM, Erdos MR, Firmann M, Forouhi NG, Fox CS, Goodarzi MO, Graessler J, Hingorani A, Isomaa B,

Jørgensen T, Kivimaki M, Kovacs P, Krohn K, Kumari M, Lauritzen T, Lévy-Marchal C, Mayor V, McAteer JB, Meyre D, Mitchell BD, Mohlke KL, Morken MA, Narisu N, Palmer CN, Pakyz R, Pascoe L, Payne F, Pearson D, Rathmann W, Sandbaek A, Sayer AA, Scott LJ, Sharp SJ, Sijbrands E, Singleton A, Siscovick DS, Smith NL, Sparsø T, Swift AJ, Syddall H, Thorleifsson G, Tönjes A, Tuomi T, Tuomilehto J, Valle TT, Waeber G, Walley A, Waterworth DM, Zeggini E, Zhao JH; GIANT consortium; MAGIC investigators, Illig T, Wichmann HE, Wilson JF, van Duijn C, Hu FB, Morris AD, Frayling TM, Hattersley AT, Thorsteinsdottir U, Stefansson K, Nilsson P, Syvänen AC, Shuldiner AR, Walker M, Bornstein SR, Schwarz P, Williams GH, Nathan DM, Kuusisto J, Laakso M, Cooper C, Marmot M, Ferrucci L, Mooser V, Stumvoll M, Loos RJ, Altshuler D, Psaty BM, Rotter JI, Boerwinkle E, Hansen T, Pedersen O, Florez JC, McCarthy MI, Boehnke M, Barroso I, Sladek R, Froguel P, Meigs JB, Groop L, Wareham NJ, Watanabe RM. Genetic variation in GIPR influences the glucose and insulin responses to an oral glucose challenge. *Nat Genet.* 2010 Feb;42(2):142-8

19. Pfeufer A, van Noord C, Marciante KD, Arking DE, Larson MG, Smith AV, Tarasov KV, Müller M, Sotoodehnia N, Sinner MF, Verwoert GC, Li M, Kao WH, **Köttgen A**, Coresh J, Bis JC, Psaty BM, Rice K, Rotter JI, Rivadeneira F, Hofman A, Kors JA, Stricker BH, Uitterlinden AG, van Duijn CM, Beckmann BM, Sauter W, Gieger C, Lubitz SA, Newton-Cheh C, Wang TJ, Magnani JW, Schnabel RB, Chung MK, Barnard J, Smith JD, Van Wagoner DR, Vasan RS, Aspelund T, Eiriksdottir G, Harris TB, Launer LJ, Najjar SS, Lakatta E, Schlessinger D, Uda M, Abecasis GR, Müller-Myhsok B, Ehret GB, Boerwinkle E, Chakravarti A, Soliman EZ, Lunetta KL, Perz S, Wichmann HE, Meitinger T, Levy D, Gudnason V, Ellinor PT, Sanna S, Kääb S, Witteman JC, Alonso A, Benjamin EJ, Heckbert SR. Genome-wide association study of PR interval. *Nat Genet.* 2010 Feb;42(2):153-9.

20. **Köttgen A**, Hwang SJ, Larson MG, Van Eyk JE, Fu Q, Benjamin EJ, Dehghan A, Glazer NL, Kao WHL, Harris TB, Gudnason V, Shlipak MG, Yang Q, Coresh J, Levy D, Fox CS. Uromodulin Levels are Associated with Common Variation in the *UMOD* Gene and Risk of Incident Chronic Kidney Disease. *J Am Soc Nephrol.* 2010 Feb;21(2):337-44.

21. Ganesh SK, Zakai NA, van Rooij FJ, Soranzo N, Smith AV, Nalls MA, Chen MH, **Kottgen A**, Glazer NL, Dehghan A, Kuhnel B, Aspelund T, Yang Q, Tanaka T, Jaffe A, Bis JC, Verwoert GC, Teumer A, Fox CS, Guralnik JM, Ehret GB, Rice K, Felix JF, Rendon A, Eiriksdottir G, Levy D, Patel KV, Boerwinkle E, Rotter JI, Hofman A, Sambrook JG, Hernandez DG, Zheng G, Bandinelli S, Singleton AB, Coresh J, Lumley T, Uitterlinden AG, Vangils JM, Launer LJ, Cupples LA, Oostra BA, Zwaginga JJ, Ouwehand WH, Thein SL, Meisinger C, Deloukas P, Nauck M, Spector TD, Gieger C, Gudnason V, van Duijn CM, Psaty BM, Ferrucci L, Chakravarti A, Greinacher A, O'Donnell CJ, Witteman JC, Furth S, Cushman M, Harris TB, Lin JP. Multiple loci influence erythrocyte phenotypes in the CHARGE Consortium. *Nat Genet.* 2009 Nov;41(11):1191-8.

22. Benjamin EJ, Rice KM, Arking DE, Pfeufer A, van Noord C, Smith AV, Schnabel RB, Bis JC, Boerwinkle E, Sinner MF, Dehghan A, Lubitz SA, D'Agostino Sr, RB, Lumley T, Ehret GB, Heeringa J, Aspelund T, Newton-Cheh C, Larson MG, Marciante KD, Soliman EZ, Rivadeneira F, Wang TJ, Eiríksdóttir G, Levy D, Psaty BM, Li M, Chamberlain AM, Hofman A, Vasan RS, Harris TB, Rotter JI, Kao WHL, Agarwal SK,

Stricker BH, Wang K, Launer LJ, Smith NL, Chakravarti A, Uitterlinden AG, Wolf PA, Sotoodehnia A, **Köttgen A**, van Duijn CM, Meitinger T, Mueller M, Perz S, Steinbeck G, Wichmann HE, Lunetta KL, Heckbert SR, Gudnason V, Alonso A, Kääb S, Ellinor PT, Witteman JC. Variants in *ZFHX3* are associated with atrial fibrillation in individuals of European ancestry. *Nat Genet*. 2009 Aug;41(8):879-81.

23. Bash LD, Coresh J, **Köttgen A**, Parekh R, Fulop T, Wang Y, Astor BC. Definition of Incident Chronic Kidney Disease in the Research Setting: The ARIC Study. *Am J Epidemiol.* 2009 Aug 15;170(4):414-24.

24. Woodward OM*, **Köttgen A***, Coresh J, Boerwinkle E, Guggino WB, Köttgen M. Identification of a novel urate transporter, ABCG2, with a common functional polymorphism causing gout. *Proc Natl Acad Sci U S A.* 2009 Jun 23;106(25):10338-42.

25. Selvin E, **Köttgen A**, Coresh J. Kidney Function Estimated from Serum Creatinine and Cystatin C and Peripheral Arterial Disease in NHANES 1999-2002. *Eur J Heart*. 2009 Aug;30(15):1918-25.

26. **Köttgen A***, Glazer NL*, Dehghan A*, Hwang SJ*, Katz R, Li M, Yang Q, Gudnason V, Launer LJ, Harris TB, Smith AV, Arking DE, Astor BC, Boerwinkle E, Ehret GB, Ruczinski I, Scharpf RB, Chen YI, de Boer IH, Haritunians T, Lumley T, Sarnak M, Siscovick D, Benjamin EJ, Levy D, Upadhyay A, Aulchenko YS, Hofman A, Rivadeneira F, Uitterlinden AG, van Duijn CM, Chasman DI, Paré G, Ridker PM, Kao WHL, Witteman JC, Coresh J, Shlipak MG, Fox CS. Multiple Novel Loci are Associated with Indices of Renal Function and Chronic Kidney Disease. *Nat Genet*. 2009 Jun;41(6):712-717.

27. Levy D, Ehret GB, Rice K, Verwoert GC, Launer LJ, Dehghan A, Glazer NL, Morrison AC, Johnson AD, Aspelund T, Aulchenko Y, Lumley T, **Köttgen A**, Vasan RS, Rivadeneira F, Eiriksdottir G, Guo X, Arking DE, Mitchell GF, Mattace-Raso FUS, Smith AV, Taylor K, Scharpf RB, Hwang SJ, Sijbrands EJG, Bis J, Harris TB, Ganesh SK, O'Donnell CJ, Hofman A, Rotter JI, Coresh J, Benjamin EJ, Uitterlinden AG, Heiss G, Fox CS, Witteman JCM, Boerwinkle E, Wang TJ, Gudnason V, Larson MG, Chakravarti A, Psaty BM, van Duijn CM (2009). Association of Common Genetic Variants with Blood Pressure and Hypertension: A Genome-Wide Association Study of Six Population-based Cohort Studies, Replication, and Meta-analysis. *Nat Genet*. 2009 Jun;41(6):677-687.

28. Pfeufer A, Sanna S, Arking DE, Müller M, Gateva V, Fuchsberger C, Ehret GB, Orrú M, Pattaro C, **Köttgen A**, Perz S, Usala G, Barbalic M, Li M, Pütz B, Scuteri A, Prineas RJ, Sinner MF, Gieger C, Najjar SS, Kao WH, Mühleisen TW, Dei M, Happle C, Möhlenkamp S, Crisponi L, Erbel R, Jöckel KH, Naitza S, Steinbeck G, Marroni F, Hicks AA, Lakatta E, Müller-Myhsok B, Pramstaller PP, Wichmann HE, Schlessinger D, Boerwinkle E, Meitinger T, Uda M, Coresh J, Kääb S, Abecasis GR, Chakravarti A. Common variants at ten loci modulate the QT interval duration in the QTSCD Study. *Nat Genet.* 2009 Apr;41(4):407-14.

29. Yan Y, North KE, Ballantyne CM, Brancati FL, Chambless LE, Franceschini N, Heiss G, **Kottgen A**, Pankow JS, Selvin E, West SL, Boerwinkle E. Transcription factor 7-like 2 (TCF7L2) polymorphism and context-specific risk of type 2 diabetes in African

American and Caucasian adults: the Atherosclerosis Risk in Communities study. *Diabetes*. 2009 Jan;58(1):285-9.

30. Dehghan A*, **Köttgen A***, Yang Q*, Hwang SJ, Kao WHL, Uitterlinden AG, Boerwinkle E, Levy D, Hofman A, Astor BC, Benjamin EJ, van Duijn CM, Witteman JC*, Coresh J*, Fox CS*. Association of Three Genetic Loci with Uric Acid Levels and Gout Risk. *Lancet*. 2008 Dec 6;372(9654):1953-61.

31. Pazin Filho A, **Köttgen A**, Bertoni AG, Russell SD, Selvin E, Rosamond WD, Coresh J. Hemoglobin A1c as a Risk Factor for Heart Failure in Persons with Diabetes: The Atherosclerosis Risk in Communities (ARIC) Study. *Diabetologia*. 2008 Dec;51(12):2197-204.

32. **Köttgen A**, Hsu CC, Coresh J, Shuldiner AR, Berthier-Schaad Y, Gambhir TR, Smith MW, Boerwinkle E, Kao WH. The association of podocin R229Q polymorphism with increased albuminuria or reduced estimated GFR in a large population-based sample of U.S. adults. *Am J Kidney Dis*. 2008 Nov;52(5):868-875.

33. Groesbeck D, **Köttgen A**, Selvin E, Coresh J, Furth SL. Reference Ranges and Sources of Variation for Cystatin C in the Adolescent Population of the National Health and Nutrition Examination Survey (NHANES) III. *Clin J Am Soc Nephrol*. 2008 Nov;3(6):1777-85.

34. **Köttgen A**, Hwang S, Rampersaud E, Coresh J, North KE, Pankow JS, Meigs JB, Florez JC, Levy D, Boerwinkle E, Shuldiner AR, Fox CS, Kao WH. *TCF7L2* Variants Associate with CKD Progression and Renal Function in Population-based Cohorts. *J Am Soc Nephrol*. 2008 Oct;19(10):1989-99.

35. **Köttgen A**, Kao WH, Hwang SH, Boerwinkle E, Yang Q, Levy D, Benjamin EJ, Larson M, Astor BC, Coresh J & Fox CS. Genome-Wide Association Study for Renal Traits in the Framingham Heart and Atherosclerosis Risk in Communities Studies. *BMC Med Genet.* 2008 Jun 3;9:49.

36. **Köttgen A**, Selvin E, Stevens LA, Levey AS, Van Lente F, Coresh J. Serum Cystatin C in the U.S.: the Third National Health and Nutrition Examination Survey. *Am J Kidney Dis*. 2008 51:385-394.

37. **Köttgen A**, Russell S, Loehr L, Crainiceanu C, Rosamond W, Chang P, Chambless L, Coresh, J. Reduced Kidney Function as a Risk Factor for Incident Heart Failure: The Atherosclerosis Risk in Communities (ARIC) Study. *J Am Soc Nephrol*. 2007 Apr;18(4): 1307-15.

38. Waldegger S, Fakler B, Bleich M, Barth P, **Hopf A**, Schulte U, Busch AE, Aller SG, Forrest J, Greger R, Lang F. Molecular and functional characterization of sKCNQ1 potassium channel from rectal gland of Squalus acanthias. *Pflugers Arch*. 1999 Jan;437(2):298-304.

39. Schreiber R, **Hopf A**, Mall M, Greger R, Kunzelmann K. The first nucleotide binding fold of the cystic fibrosis transmembrane conductance regulator is required for inhibition of the epithelial Na+ channel. *Proc Natl Acad Sci U S A*. 1999 Apr 27;96(9):5310-5.

40. **Hopf A**, Schreiber R, Mall M, Greger R, Kunzelmann K. CFTR inhibits the activity of epithelial Na+ channels carrying Liddle's syndrome mutations. *J Biol Chem.* 1999 May 14;274(20):13894-9.

Review Articles:

1. Greger R, Schreiber R, Mall M, Wissner A, **Hopf A**, Briel M, Bleich M, Warth R, Kunzelmann K. Cystic Fibrosis and CFTR. *Pflugers Arch.* 2001;443 Suppl 1:S3-7.

2. **Köttgen A**. Genome-wide Association Studies in Nephrology Research. *Am J Kidney Dis*. Am J Kidney Dis. 2010 Oct;56(4):743-58.

EXTRAMURAL FUNDING

Ongoing:

2011-14 Research Group Leader "NephAge – Systems Biology of Kidney Aging", BMBF (German Federal Ministry of Education and Research)

2010-15 Emmy Noether Group "Identification and Characterization of Genetic Risk Variants for Chronic Kidney Disease and Related Traits", German Research Foundation

2009-14 Study Center of the **German Chronic Kidney Disease Study,** BMBF / Stiftung Präventivmedizin

2007-08 Postdoctoral Fellowship "Identification of sequence variations in genes involved in the podocyte signaling network that increase susceptibility of albuminuria in a community-based cohort of 16,000 U.S. middle-aged adults", German Research Foundation

PATENTS

Provisional patent: "Modulation of ABCG2-mediated transport to treat hyperuricemia and gout" # 61/159,154 filed on March 11, 2009

TEACHING

Classroom Instruction:

Epidemiology for Medical Students, 2010. Seminar group leader. Topics: Etiology and Risk. Albert-Ludwigs-University Freiburg.

Introduction to Cardiovascular Disease Epidemiology, 2009; guest lecturer. Masters and PhD students, Johns Hopkins Bloomberg School of Public Health. Lecture: Genome-wide association studies.

Introduction to Clinical Trials, 2008; teaching faculty. Second year medical students, Johns Hopkins Medical School (10-day course).

Introduction to Genetic Epidemiology, 2007, 2008; guest lecturer. Masters and PhD students, Johns Hopkins Bloomberg School of Public Health. Lecture: Genome-wide association studies.

Introduction to Genetic Epidemiology, 2007; teaching assistant. Masters and PhD students, Johns Hopkins Bloomberg School of Public Health. Laboratory Instructor (twice a week).

Clinical Epidemiology, 2007; teaching faculty. First year medical students, Johns Hopkins Medical School. Laboratory Instructor (8 sessions).

Medical Physiology, 1997-1999; teaching assistant. Freiburg Medical School. Laboratory Instructor (once a week).

Clinical problem-oriented learning, 1997; teaching assistant. Freiburg Medical School. Group instructor (once a week).

CME Credit and Extra Qualifications:

Genome-wide association studies, Welch Center for Prevention, Epidemiology & Clinical Research, Johns Hopkins Medical Institutions, October 2008

Genome-wide association studies, Division of Rheumatology, Johns Hopkins Medical Institutions, January 2009

Study Investigator Course, Clinical Trials Center, University Medical Center Freiburg, Germany, March 2010

MENTORING

Research Group Members

Claudia Hundertmark, Ph.D.
Ömer Gök, M.D. M.P.H.
Ulla Schultheiß, M.D.

Advisees on Specific Projects

Graduate Students
Saloua Akoudad, M.D., Doctor of Science (2011, expected). NIHES award of Erasmus Medical Center for best paper 2010; “Correlates of kidney stone disease differ by race in a multi-ethnic middle aged population: The ARIC Study”

Adrienne Tin, M.S.: “Genetic risk variants for hyperuricemia in African American populations”

Postdoctoral Fellows
Tamra Meyer, Ph.D. M.P.H.: “Genetic variants associated with serum magnesium concentrations”
Conall O' Seaghdha, M.D.: “Genetic variants associated with serum calcium concentrations”

Undergraduate Students
Mark Bi, B.S.: “Association of rs780094 in GCKR with Metabolic Traits and Incident Diabetes and Cardiovascular Disease: the ARIC Study”

PRESENTATIONS (first or last author only)

Scientific meetings

1. “Genome-wide Association Study of Serum Calcium Levels Reveal Common Variants in the Calcium Sensing Receptor Gene Associated with Mild Features of Familial Hypocalciuric Hypercalcemia". Poster, American Society of Nephrology Renal Week, November 2010.
2. “Multiple New Genetic Loci Associated With Kidney Function And Chronic Kidney Disease: The CKDGen Consortium”. Oral presentation, Annual Meeting of the German Society of Epidemiology, Berlin, Germany. September 2010.
3. “Multiple New Genetic Loci Associated With Kidney Function And Chronic Kidney Disease: The CKDGen Consortium”. Oral presentation, XLVII ERA-EDTA Congress, Munich, Germany. June 2010.
4. “Multiple Genetic Loci Influence Serum Urate And Their Relationship With Gout and Cardiovascular Disease Risk Factors”. Oral presentation, AHA Joint Conference on Cardiovascular Disease Epidemiology and Prevention and Nutrition, Physical Activity and Metabolism. March 2010. Named among the top 10% of AHA Speciality conference presentations in 2010.
5. “Higher Levels of Uromodulin in Urine Precede the Development of Chronic Kidney Disease”. Oral presentation, American Society of Nephrology Renal Week, October 2009.
6. “Genome-wide Association Study of Chronic Kidney Disease and Related Traits in 19,877 Participants of Four Population-based Studies Identifies Common Genetic Variants Conferring Disease Risk”. Oral presentation, AHA Joint Conference on Cardiovascular Disease Epidemiology and Prevention and Nutrition, Physical Activity and Metabolism. March 2009.
7. “rs780094 of the glucosekinase regulator gene (GCKR) is associated with multiple metabolic traits: the Atherosclerosis Risk in Communities (ARIC) Study”. Poster, AHA Joint Conference on Cardiovascular Disease Epidemiology and Prevention and Nutrition, Physical Activity and Metabolism. March 2009.
8. “Variants in the Transcription Factor 7-like 2 Gene Region Are Associated with Incident Kidney Disease and Markers of Kidney Function in the Atherosclerosis Risk in Communities Study, the Framingham Heart Study Offspring Cohort, and the Heredity and Phenotype Intervention (HAPI) Heart Study”. Oral presentation, AHA Joint Conference on Cardiovascular Disease Epidemiology and Prevention and Nutrition, Physical Activity and Metabolism. March 2008.

9. “Serum Cystatin C in U.S. Adolescents and Adults: The Third National Health and Nutrition Examination Survey (NHANES III)”. Oral presentation, American Society of Nephrology Renal Week, October 2007.
10. “The R229Q polymorphism in the NPHS2 gene is associated with reduced estimated glomerular filtration rate (eGFR) in the Atherosclerosis Risk in Communities (ARIC) Study”. Poster, American Heart Association 47th Annual Conference on Cardiovascular Disease Epidemiology and Prevention, Orlando, USA, February 2007.
11. “Accounting for Measurement Error in the Estimated Glomerular Filtration Rate Augments the Association of Reduced Kidney Function and Incident Heart Failure”. Poster, American Heart Association 47th Annual Conference on Cardiovascular Disease Epidemiology and Prevention, Orlando, USA, February 2007.
12. “Reduced Kidney Function as a Risk Factor for Incident Heart Failure: The Atherosclerosis Risk in Communities (ARIC) Study”. Oral presentation, presented at the AHA Scientific Sessions, Chicago, 2006.
13. “CFTR inhibits the activity of epithelial Na^+ channels carrying Liddle's syndrome mutations”. Poster, Annual German Physiologic Society Conference, Hamburg, Germany, 1999.

Invited seminars

2011 International Congress of Nephrology, Invited Lecture, Vancouver, Canada
2011 Seminar Speaker, Workshop for Genetic Epidemiology, Grainau, Germany
2011 Departmental Seminar, Regensburg University Clinic, Germany
2010 Hinterzartener Dialyseseminar, Hinterzarten, Germany
2010 Departmental Seminar, Dept. Of Epidemiology, Erasmus Medical Centre, Rotterdam, The Netherlands
2010 Departmental Seminar, Division of Physiology, University of Greifswald, Germany
2010 Departmental Seminar, Division of Human Genetics, Innsbruck, Austria
2009 Faculty Candidate, Dept. of Epidemiology and Div. of Nephrology, Case Western University, USA
2009 Departmental Seminar, Div. of Rheumatology, Johns Hopkins Medical Institutions, USA
2008 Departmental Seminar, Dept. of Physiology, Johns Hopkins Medical Institutions, USA
2008 Division of Nephrology, Freiburg University School of Medicine, Germany
2008 Welch Center Grand Rounds, Johns Hopkins Medical Institutions, USA