

Prof. Dipl.-Ing. Dr.techn. Dr.med.habil. Harald Mischak



Harald Mischak, born 1961 St. Pölten in Austria, received his PhD in technical science from the Technical University of Vienna, Austria, in 1986. Between 1988 and 1993, after postdoctoral work on the Rhinovirus receptor at the University of Vienna (Institute for Biochemistry), he was on leave as an invited scientist on signalling by protein kinase C and Raf at the Laboratory of Viral Carcinogenesis (funded by the Fulbright Foundation) and as a Schroedinger and Fogarty Fellow at the Laboratory of Genetics of NIH National Cancer Institute in Bethesda, Maryland, USA.

He continued his research on kinases as Group Leader at the GSF - National Research Center for Environment and Health, Munich, Germany from 1993-1998. He wrote his habilitation in clinical microbiology at the Technische Universität München on Protein Kinase C in Signal Transduction. After one year as a scientific group leader at Franz-Volhard Klinikum (MDC) at Berlin-Buch, he worked on the structure of kinases and related molecules at the NIDDK, Bethesda, Maryland, USA. In 1999 he took up a position at the Department of Nephrology at Medical School of Hannover. Here he founded Mosaiques diagnostics and therapeutics AG in 2002, which was started with the aim to identify disease-specific polypeptides. Currently, he is the chief scientific officer of Mosaiques AG as well as executive director of Mosaiques diagnostics GmbH and Mosaiques DiaPat GmbH. With more than 400 scientific publications on signaling and proteomics that have been cited over 32000 times (h-index 96 in Google), he is one of the leading experts worldwide in the field of proteome research, personalized medicine and applied systems biology. In addition, more than 100 patent applications have been filed with Prof. Mischak named as inventor, the majority on proteomic biomarkers.

Among his major achievements is the identification of distinct biological roles of Protein Kinase C. He was the first to show that Protein Kinase C isoforms display highly divergent biological properties, and he described these in differentiation and oncogenic transformation (Mischak et al. 1993, J Biol Chem 268, 1749-1756 and 20110-20115) and associated these

with distinct intracellular localization (Goodnight, Mischak, et al. 1995, *J Biol Chem* 270:9991-10001). Together with Walter Kolch (for Raf signaling, e.g. Kolch et al. 1993, *Nature* 364:249-252) and Hans Hacker (for CpG signaling, e.g. Hacker, Mischak et al. 1998, *EMBO J* 17:6230-6240) he pinpointed the role of kinases in several major signaling mechanisms. All of these manuscripts have been cited several hundred times. Based on his experience on proteomics in basic research, he initiated the use of urinary proteomics and capillary electrophoresis coupled mass spectrometry for clinical application, and is the leading authority in clinical proteomics and biomarker identification. Among his achievement in this field are the development of guidelines for clinical proteome analysis, where he led a large international and multidisciplinary group to develop clinically relevant proteomic biomarkers (Mischak et al. 2007, *Proteomics Clin Appl* 1:148-156; 2010, *Sci Transl Med* 2:46ps42; 2012, *Eur. J Clin Invest* 42, 1027-1036), and the demonstration of successful application in the diagnosis and prognosis of several diseases (e.g. Decramer et al. 2006, *Nat. Med.* 12:398-400; Theodorescu et al. 2006, *Lancet Oncol.* 7:230-240; Rossing et al. 2008, *JASN* 19:1283-1290; Good et al. 2010, *Molecular & Cellular Proteomics* 9:2424-2437; Kuznetsova et al. 2012, *Eur. Heart J.* 33, 2342-2350).

The two main focuses of Prof Mischak's work are:

- 1) identification, validation, and implementation of proteomic biomarkers, aiming especially at biomarkers associated with chronic kidney disease, coronary artery disease, heart failure, and certain types of cancer
- 2) uncovering the molecular changes on a proteomic level that are relevant in, or even cause of, the major diseases mentioned above. This approach is based on the biomarkers identified, but also on addition proteomic, metabolomic and genomic data. Using appropriate bioinformatic approaches, the high-dimensional data will be combined to identify the underlying molecular structures and ultimately develop a molecular model of the respective disease, which in turn will allow identifying the most appropriate therapeutic targets for intervention, and implementation of personalized precision medicine.

CURRICULUM VITAE

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Degrees & Honors:

Dipl.Ing (with distinction) 1984

Dr. techn. (with distinction) 1986

Dr.med.habil 1995

Education:

1971 - 1979: Realistisches Gymnasium (GrammarSchool with emphasis on
science) in St.Poelten, Austria

1979: Matura with good Honors (School leaving certificate)

1979 - 1984: Department of Chemistry ,Science Faculty Technical
University of Vienna

1982: 1.Diploma in Chemistry

1984: 2.Diploma in Chemistry

1984 - 1986: Thesis at the University of Vienna.Subject: Immunotoxins

1986 - 1993: Hochschul-Assistent at the Institute for Biochemistry,
University of Vienna (on leave from 1989-93)

Sep.-Dec.1988: Invited scientist (funded by the Fulbright Foundation) to the
Laboratory of Viral Carcinogenesis,NIH,NCI, FCRF,
Frederick, Maryland, USA

1989 - 1990: Schroedinger Fellow at the Lab. of Genetics, NIH, NCI,
Bethesda, Maryland, USA

1990 - 1993: Fogarty Fellow at the Lab. of Genetics, NIH,NCI.

1993 -1997: Scientific Group Leader (equivalent to assistant professor) at the Inst.
f. Klin. Mol. Biol., GSF, Munich, Germany

1998 - 1998: Scientific Group Leader at the Technische Universität München,
Institute for Immunologie

1998 - 1999: Scientific Group Leader at Franz-Volhard Klinikum, MDC,
Berlin Buch.

1998 - 1999: Visiting Scientist (equivalent to guest professor) in the Laboratory of
Molecular Biology, NIDDK, NIH, Bethesda (Maryland, USA).

1999 - 2006: Professor, MH Hannover, GERMANY

2010 – 2017: Professor, BHF Glasgow Cardiovascular Research Centre
University of Glasgow, UK

2017 - date: Visiting Professor, Cardiovascular Research Centre
University of Glasgow, UK

2002 - date: Director of Mosaiques Diagnostics GmbH

Membership in Professional Societies:

Gesellschaft für Nephrologie	2004
EUTOX	2004
ERA EDTA	2011

Editorial Work:

Section Editor - International Journal of Artificial Organs	2008
Senior Editor - Proteomics Clin Appl	2007
Academic Editor PLOS One	2013
Executive Advisory Board Proteomics	2014
Academic Editor Scientific Reports	2019

Participation in European EU-funded Networks

PREDICTIONS	2004
INCA	2004
InGenious HyperCare	2006
Stemdiagnostics	2006
UROSYSTEOMICS	2006
GENINCA	2007
PREDIVA	2007
SysKID	2008
HEPACUTE	2009
EuroKUP	2009
ProtoClin	2010
PRIORITY	2011
MASCARA	2011

TrasnCyst	2012
CodeAge	2012
BCMolMed	2012
HOMAGE	2012
Frailomics	2012
BioMargin	2012
SysVasc	2013
CKD-BIO	2013
TransBioBC	2013
iMODE-CKD	2014
EuRenomics	2015
CaReSyAn	2017
ProACT	2017
PerstIGAN	2018
Kidneyattack	2018
DCRen	2019
STRATEGY-CKD	2020

Bibliography

Reference List

1. **Mischak,H.**, Kubicek,C.P., and Rohr,M. (1984). Citrate Inhibition of Glucose-Uptake in *Aspergillus-Niger*. *Biotechnology Letters* 6, 425-430.
2. Kolar,H., **Mischak,H.**, Kammel,W.P., and Kubicek,C.P. (1985). Carboxymethylcellulase and Beta-Glucosidase Secretion by Protoplasts of *Trichoderma-Reesei*. *Journal of General Microbiology* 131, 1339-1347.
3. Meixner,O., **Mischak,H.**, Kubicek,C.P., and Rohr,M. (1985). Effect of Manganese Deficiency on Plasma-Membrane Lipid-Composition and Glucose-Uptake in *Aspergillus-Niger*. *Fems Microbiology Letters* 26, 271-274.
4. **Mischak,H.**, Kubicek,C.P., and Rohr,M. (1985). Formation and Location of Glucose-Oxidase in Citric-Acid Producing Mycelia of *Aspergillus-Niger*. *Applied Microbiology and Biotechnology* 21, 27-31.
5. Kowalski,H., Maurerfogy,I., Zorn,M., **Mischak,H.**, Kuechler,E., and Blaas,D. (1987). Cleavage Site Between Vp1 and P2A of Human Rhinovirus Is Different in Serotype-2 and Serotype-14. *Journal of General Virology* 68, 3197-3200.
6. **Mischak,H.**, Neubauer,C., Berger,B., Kuechler,E., and Blaas,D. (1988). Detection of the Human Rhinovirus Minor Group Receptor on Renaturing Western Blots. *Journal of General Virology* 69, 2653-2656.
7. **Mischak,H.**, Neubauer,C., Kuechler,E., and Blaas,D. (1988). Characteristics of the Minor Group Receptor of Human Rhinoviruses. *Virology* 163, 19-25.
8. Hofer,F., Weissinger,E., **Mischak,H.**, Messner,R., Meixnermonori,B., Blaas,D., Visser,J., and Kubicek,C.P. (1989). A Monoclonal-Antibody Against the Alkaline Extracellular Beta-Glucosidase from *Trichoderma-Reesei* - Reactivity with Other *Trichoderma* Beta-Glucosidases. *Biochimica et Biophysica Acta* 992, 298-306.
9. **Mischak,H.**, Hofer,F., Messner,R., Weissinger,E., Hayn,M., Tomme,P., Esterbauer,H., Kuechler,E., Claeysens,M., and Kubicek,C.P. (1989). Monoclonal-Antibodies Against Different Domains of Cellobiohydrolase I and II from *Trichoderma-Reesei*. *Biochimica et Biophysica Acta* 990, 1-7.
10. Kolch,W., Weissinger,E., **Mischak,H.**, Troppmair,J., Showalter,S.D., Lloyd,P., Heidecker,G., and Rapp,U.R. (1990). Probing Structure and Function of the Raf Protein-Kinase Domain with Monoclonal-Antibodies. *Oncogene* 5, 713-720.
11. Largaespada,D., Kaehler,D., Weissinger,E., **Mischak,H.**, Mushinski,F., and Risser,R. (1990). The Activity of An Abl-Myc Retrovirus in Fibroblast Cell-Lines and in Lymphocytes. *Current Topics in Microbiology and Immunology* 166, 91-96.
12. **Mischak,H.**, Kolch,W., Hofer,F., Weissinger,E., Gessl,A., Davidson,W.F., Aiello,F.B., Blaas,D., and Rapp,U.R. (1990). A Raf/Myc Virus Immortalized Macrophage Cell-Line Which Supports the Growth of B-Cell and B-Cell Hybridomas. *Oncogene* 5, 1377-1382.
13. Weissinger,E.M., Largaespada,D., Smithgill,S.J., Risser,R., Mushinski,J.F., and **Mischak,H.** (1990). A Retrovirus Expressing V-Abl and C-Myc Induces Plasmacytomas in 100-Percent of Adult Pristane-Primed Balb/C Mice. *Current Topics in Microbiology and Immunology* 166, 121-127.

14. **Mischak,H.**, Kolch,W., Goodnight,J., Davidson,W.F., Rapp,U., Rosejohn,S., and Mushinski,J.F. (1991). Expression of Protein-Kinase-C Genes in Hematopoietic-Cells Is Cell-Type-Differentiation and B-Cell-Differentiation Stage Specific. *Journal of Immunology* *147*, 3981-3987.
15. **Mischak,H.**, Bodenteich,A., Kolch,W., Goodnight,J., Hofer,F., and Mushinski,J.F. (1991). Mouse Protein-Kinase C-Delta, the Major Isoform Expressed in Mouse Hematopoietic-Cells - Sequence of the Cdna, Expression Patterns, and Characterization of the Protein. *Biochemistry* *30*, 7925-7931.
16. Weissinger,E.M., **Mischak,H.**, Largaespada,D.A., Kaehler,D.A., Mitchell,T., Smithgill,S.J., Risser,R., and Mushinski,J.F. (1991). Induction of Plasmacytomas Secreting Antigen-Specific Monoclonal-Antibodies with A Retrovirus Expressing V-Abl and C-Myc. *Proceedings of the National Academy of Sciences of the United States of America* *88*, 8735-8739.
17. Dlugosz,A.A., **Mischak,H.**, Mushinski,J.F., and Yuspa,S.H. (1992). Transcripts Encoding Protein Kinase-C-Alpha, Kinase-C-Delta, Kinase-C, Kinase-C-Zeta, and Kinase-C-Eta Are Expressed in Basal and Differentiating Mouse Keratinocytes Invitro and Exhibit Quantitative Changes in Neoplastic-Cells. *Molecular Carcinogenesis* *5*, 286-292.
18. Goodnight,J., Kazanietz,M.G., Blumberg,P.M., Mushinski,J.F., and **Mischak,H.** (1992). The cDNA sequence, expression pattern and protein characteristics of mouse protein kinase C-zeta. *Gene* *122*, 305-311.
19. Largaespada, D., Kaehler, D., **Mischak, H.**, Weissinger, E., Poster, D., Mushinsky, J. F., and Risser, R. A retrovirus that express v-abl and c-myc oncogenes rapidly induces plasmacytomas. *Oncogene* *7*[4], 811-819. 1992.
Ref Type: Journal (Full)
20. Arnold,T.P., Standaert,M.L., Hernandez,H., Watson,J., **Mischak,H.**, Kazanietz,M.G., Zhao,L.M., Cooper,D.R., and Farese,R.V. (1993). Effects of Insulin and Phorbol Esters on Marcks (Myristoylated Alanine-Rich C-Kinase Substrate) Phosphorylation (and Other Parameters of Protein-Kinase-C Activation) in Rat Adipocytes, Rat Soleus Muscle and Bc3H-1 Myocytes. *Biochemical Journal* *295*, 155-164.
21. Kazanietz,M.G., Areces,L.B., Bahador,A., **Mischak,H.**, Goodnight,J., Mushinski,J.F., and Blumberg,P.M. (1993). Characterization of Ligand and Substrate-Specificity for the Calcium-Dependent and Calcium-Independent Protein-Kinase-C Isozymes. *Molecular Pharmacology* *44*, 298-307.
22. Kolch,W., Heidecker,G., Kochs,G., Hummel,R., Vahidi,H., **Mischak,H.**, Finkenzeller,G., Marme,D., and Rapp,U.R. (1993). Protein Kinase-C-Alpha Activates Raf-1 by Direct Phosphorylation. *Nature* *364*, 249-252.
23. Martiny-Baron,G., Kazanietz,M.G., **Mischak,H.**, Blumberg,P.M., Kochs,G., Hug,H., Marme,D., and Schachtele,C. (1993). Selective inhibition of protein kinase C isozymes by the indolocarbazole Go 6976. *J Biol. Chem.* *268*, 9194-9197.
24. **Mischak,H.**, Pierce,J.H., Goodnight,J., Kazanietz,M.G., Blumberg,P.M., and Mushinski,J.F. (1993). Phorbol Ester-Induced Myeloid Differentiation Is Mediated by Protein Kinase-C-Alpha and Kinase-C-Delta and Not by Protein Kinase-C-Beta-Ii, Kinase-C-Delta, Kinase-C-Zeta, and Kinase-C-Eta. *Journal of Biological Chemistry* *268*, 20110-20115.
25. **Mischak,H.**, Goodnight,J., Henderson,D.W., Osada,S., Ohno,S., and Mushinski,J.F. (1993). Unique Expression Pattern of Protein-Kinase-C -Theta - High Messenger-Rna Levels in Normal Mouse Testes and in T-Lymphocytic Cells and Neoplasms. *Febs Letters* *326*, 51-55.
26. **Mischak,H.**, Goodnight,J., Kolch,W., Martinybaron,G., Schachtele,C., Kazanietz,M.G., Blumberg,P.M., Pierce,J.H., and Mushinski,J.F. (1993). Overexpression of Protein Kinase-C-Delta and Kinase-Epsilon in Nih 3T3 Cells Induces Opposite Effects on Growth, Morphology, Anchorage Dependence, and Tumorigenicity. *Journal of Biological Chemistry* *268*, 6090-6096.
27. Ozawa,K., Szallasi,Z., Kazanietz,M.G., Blumberg,P.M., **Mischak,H.**, Mushinski,J.F., and Beaven,M.A. (1993). Ca(2+)-dependent and Ca(2+)-independent isozymes of protein kinase C mediate exocytosis in

antigen-stimulated rat basophilic RBL-2H3 cells. Reconstitution of secretory responses with Ca²⁺ and purified isozymes in washed permeabilized cells. *J Biol. Chem.* 268, 1749-1756.

28. Weissinger, E.M., **Mischak, H.**, Goodnight, J., Davidson, W.F., and Mushinski, J.F. (1993). Addition of Constitutive C-Myc Expression to Abelson Murine Leukemia-Virus Changes the Phenotype of the Cells Transformed by the Virus from Pre-B-Cell Lymphomas to Plasmacytomas. *Molecular and Cellular Biology* 13, 2578-2585.
29. Eissner, G., Kolch, W., **Mischak, H.**, Bornkamm, G.W., and Holler, E. (1994). Differential Role of Protein-Kinase-C in Cytokine-Induced Lymphocyte-Endothelium Interaction In-Vitro. *Scandinavian Journal of Immunology* 40, 395-402.
30. Farese, R.V., Standaert, M.L., Arnold, T.P., Yamada, K., Musunuru, K., Hernandez, H., **Mischak, H.**, and Cooper, D.R. (1994). Preferential Activation of Microsomal Diacylglycerol/Protein Kinase-C Signaling During Glucose Treatment (De-Novo Phospholipid-Synthesis) of Rat Adipocytes. *Journal of Clinical Investigation* 93, 1894-1899.
31. Goodnight, J., **Mischak, H.**, and Mushinski, J.F. (1994). Association of Elevated Levels of Protein-Kinase C-Zeta Messenger-Rna and Protein with Murine B-Lymphocytic Neoplasia. *Molecular Carcinogenesis* 11, 131-137.
32. Goodnight, J., **Mischak, H.**, and Mushinski, J.F. (1994). Selective Involvement of Protein-Kinase-C Isozymes in Differentiation and Neoplastic Transformation. *Advances in Cancer Research*, Vol 64 64, 159-209.
33. Hafner, S., Adler, H.S., **Mischak, H.**, Janosch, P., Heidecker, G., Wolfman, A., Pippig, S., Lohse, M., Ueffing, M., and Kolch, W. (1994). Mechanism of Inhibition of Raf-1 by Protein-Kinase-A. *Molecular and Cellular Biology* 14, 6696-6703.
34. Huppi, K., Siwarski, D., Goodnight, J., and **Mischak, H.** (1994). Assignment of the Protein-Kinase-C-Delta Polypeptide Gene (Prkcd) to Human-Chromosome-3 and Mouse Chromosome-14. *Genomics* 19, 161-162.
35. Kazanietz, M.G., Bustelo, X.R., Barbacid, M., Kolch, W., **Mischak, H.**, Wong, G., Pettit, G.R., Bruns, J.D., and Blumberg, P.M. (1994). Zinc-Finger Domains and Phorbol Ester Pharmacophore - Analysis of Binding to Mutated Form of Protein Kinase-C-Tau and the Vav and C-Raf Protooncogene Products. *Journal of Biological Chemistry* 269, 11590-11594.
36. Lehel, C., Olah, Z., **Mischak, H.**, Mushinski, J.F., and Anderson, W.B. (1994). Overexpressed Protein-Kinase C-Delta and C-Epsilon Subtypes in Nih 3T3 Cells Exhibit Differential Subcellular-Localization and Differential Regulation of Sodium-Dependent Phosphate-Uptake. *Journal of Biological Chemistry* 269, 4761-4766.
37. Li, W.Q., **Mischak, H.**, Yu, J.C., Wang, L.M., Mushinski, J.F., Heidaran, M.A., and Pierce, J.H. (1994). Tyrosine Phosphorylation of Protein-Kinase C-Delta in Response to Its Activation. *Journal of Biological Chemistry* 269, 2349-2352.
38. Morawetz, R., **Mischak, H.**, Goodnight, J., Lendenfeld, T., Mushinsky, J.F., and Kubicek, C.P. (1994). A Protein Kinase-Encoding Gene, Pkt1, from Trichoderma-Reesei, Homologous to the Yeast Ypk1 and Ypk2 (Ykr2) Genes. *Gene* 146, 309-310.
39. Weissinger, E.M., Henderson, D.W., **Mischak, H.**, Goodnight, J., and Mushinski, J.F. (1994). Induction of Plasmacytomas That Secrete Monoclonal Antipeptide Antibodies by Retroviral Transformation. *Journal of Immunological Methods* 168, 123-130.
40. Yamada, K., Standaert, M.L., Yu, B., **Mischak, H.**, Cooper, D.R., and Farese, R.V. (1994). Insulin-Like Effects of Sodium Orthovanadate on Diacylglycerol-Protein Kinase-C Signaling in Bc3H-1 Myocytes. *Archives of Biochemistry and Biophysics* 312, 167-172.
41. Avignon, A., Standaert, M.L., Yamada, K., **Mischak, H.**, Spencer, B., and Farese, R.V. (1995). Insulin Increases Messenger-Rna Levels of Protein-Kinase-C-Alpha and Protein-Kinase-C-Beta in Rat

Adipocytes and Protein-Kinase-C-Alpha, Protein-Kinase-C-Beta and Protein-Kinase-C-Theta in Rat Skeletal-Muscle. *Biochemical Journal* 308, 181-187.

42. Avignon,A., Standaert,M.L., Yamada,K., **Mischak,H.**, Spencer,B., and Farese,R.V. (1995). Insulin increases mRNA levels of protein kinase C-alpha and -beta in rat adipocytes and protein kinase C-alpha, -beta and -theta in rat skeletal muscle. *Biochem. J* 308 (Pt 1), 181-187.
43. Chalfant,C.E., **Mischak,H.**, Watson,J.E., Winkler,B.C., Goodnight,J., Farese,R.V., and Cooper,D.R. (1995). Regulation of Alternative Splicing of Protein-Kinase C-Beta by Insulin. *Journal of Biological Chemistry* 270, 13326-13332.
44. Crespo,P., **Mischak,H.**, and Gutkind,J.S. (1995). Overexpression of Mammalian Protein-Kinase C-Zeta Does Not Affect the Growth-Characteristics of Nih 3T3 Cells. *Biochemical and Biophysical Research Communications* 213, 266-272.
45. Goodnight,J.A., **Mischak,H.**, Kolch,W., and Mushinski,J.F. (1995). Immunocytochemical localization of eight protein kinase C isozymes overexpressed in NIH 3T3 fibroblasts. Isoform-specific association with microfilaments, Golgi, endoplasmic reticulum, and nuclear and cell membranes. *J Biol. Chem.* 270, 9991-10001.
46. Kieser,A., Goodnight,J., Kolch,W., **Mischak,H.**, and Mushinski,J.F. (1995). Identification of the Primary Growth-Response Gene, St2/T1, As A Gene Whose Expression Is Differentially Regulated by Different Protein-Kinase-C Isozymes. *Febs Letters* 372, 189-193.
47. Li,S.F., Janosch,P., Tanji,M., Rosenfeld,G.C., Waymire,J.C., **Mischak,H.**, Kolch,W., and Sedivy,J.M. (1995). Regulation of Raf-1 Kinase-Activity by the 14-3-3-Family of Proteins. *Embo Journal* 14, 685-696.
48. Janosch,P., Schellerer,M., Seitz,T., Reim,P., Eulitz,M., Brielmeier,M., Kolch,W., Sedivy,J.M., and **Mischak,H.** (1996). Characterization of I kappa B kinases - I kappa B-alpha is not phosphorylated by Raf-1 or protein kinase C isozymes, but is a casein kinase II substrate. *Journal of Biological Chemistry* 271, 13868-13874.
49. Kieser,A., Seitz,T., Adler,H.S., Coffey,P., Kremmer,E., Crespo,P., Gutkind,J.S., Henderson,D.W., Mushinski,J.F., Kolch,W., and **Mischak,H.** (1996). Protein kinase C-zeta reverts v-raf transformation of NIH-3T3 cells. *Genes & Development* 10, 1455-1466.
50. Kolch,W., Philipp,A., **Mischak,H.**, Dutil,E.M., Mullen,T.M., Feramisco,J.R., Meinkoth,J.L., and Rose,D.W. (1996). Inhibition of Raf-1 signaling by a monoclonal antibody, which interferes with Raf-1 activation and with Mek substrate binding. *Oncogene* 13, 1305-1314.
51. **Mischak,H.**, Seitz,T., Janosch,P., Eulitz,M., Steen,H., Schellerer,M., Philipp,A., and Kolch,W. (1996). Negative regulation of Raf-1 by phosphorylation of serine 621. *Molecular and Cellular Biology* 16, 5409-5418.
52. Morawetz,R., Lendenfeld,T., **Mischak,H.**, Muhlbauer,M., Gruber,F., Goodnight,J., deGraaff,L.H., Visser,J., Mushinski,J.F., and Kubicek,C.P. (1996). Cloning and characterisation of genes (pkc1 and pkcA) encoding protein kinase C homologues from *Trichoderma reesei* and *Aspergillus niger*. *Molecular & General Genetics* 250, 17-28.
53. Perletti,G.P., Folini,M., Lin,H.C., **Mischak,H.**, Piccinini,F., and Tashjian,A.H. (1996). Overexpression of protein kinase C epsilon is oncogenic in rat colonic epithelial cells. *Oncogene* 12, 847-854.
54. Bossenmaier,B., Mosthaf,L., **Mischak,H.**, Ullrich,A., and Haring,H.U. (1997). Protein kinase C isoforms beta 1 and beta 2 inhibit the tyrosine kinase activity of the insulin receptor. *Diabetologia* 40, 863-866.
55. Kellerer,M., Mushack,J., **Mischak,H.**, and Haring,H.U. (1997). Protein kinase C (PKC) epsilon enhances the inhibitory effect of TNF alpha on insulin signaling in HEK293 cells. *Febs Letters* 418, 119-122.

56. Ueffing,M., Lovric,J., Philipp,A., **Mischak,H.**, and Kolch,W. (1997). Protein kinase C-epsilon associates with the Raf-1 kinase and induces the production of growth factors that stimulate Raf-1 activity. *Oncogene 15*, 2921-2927.
57. Wang,Q.J., Acs,P., Goodnight,J., Giese,T., Blumberg,P.M., **Mischak,H.**, and Mushinski,J.F. (1997). The catalytic domain of protein kinase C-delta in reciprocal delta and epsilon chimeras mediates phorbol ester-induced macrophage differentiation of mouse promyelocytes. *J Biol. Chem. 272* , 76-82.
58. Weissinger,E.M., Eissner,G., Grammer,C., Fackler,S., Haefner,B., Yoon,L.S., Lu,K.S., Bazarov,A., Sedivy,J.M., **Mischak,H.**, and Kolch,W. (1997). Inhibition of the Raf-1 kinase by cyclic AMP agonists causes apoptosis of v-abl-transformed cells. *Molecular and Cellular Biology 17*, 3229-3241.
59. Baumann,M., **Mischak,H.**, Dammeier,S., Kolch,W., Gires,O., Pich,D., Zeidler,R., Delecluse,H.J., and Hammerschmidt,W. (1998). Activation of the Epstein-Barr virus transcription factor BZLF1 by 12-O-tetradecanoylphorbol-13-acetate-induced phosphorylation. *Journal of Virology 72*, 8105-8114.
60. Hacker,H., **Mischak,H.**, Miethke,T., Liptay,S., Schmid,R., Sparwasser,T., Heeg,K., Lipford,G.B., and Wagner,H. (1998). CpG-DNA-specific activation of antigen-presenting cells requires stress kinase activity and is preceded by non-specific endocytosis and endosomal maturation. *Embo Journal 17*, 6230-6240.
61. Kellerer,M., Mushack,J., Seffer,E., **Mischak,H.**, Ullrich,A., and Haring,H.U. (1998). Protein kinase C isoforms alpha, delta and theta require insulin receptor substrate-1 to inhibit the tyrosine kinase activity of the insulin receptor in human kidney embryonic cells (HEK 293 cells). *Diabetologia 41*, 833-838.
62. Lovric,J., Dammeier,S., Kieser,A., **Mischak,H.**, and Kolch,W. (1998). Activated Raf induces the hyperphosphorylation of stathmin and the reorganization of the microtubule network. *Journal of Biological Chemistry 273*, 22848-22855.
63. Maucher,C., Weissinger,E.M., Kremmer,E., Baccarini,M., Procyk,K., Henderson,D.W., Wolff,L., Kolch,W., Kaspers,B., Mushinski,J.F., and **Mischak,H.** (1998). Activation of bcl-2 suppressible 40 and 44 kDa p38-like kinases during apoptosis of early and late B lymphocytic cell lines. *Febs Letters 427*, 29-35.
64. Muller,G., Storz,P., Bourteele,S., Doppler,H., Pfizenmaier,K., **Mischak,H.**, Philipp,A., Kaiser,C., and Kolch,W. (1998). Regulation of Raf-1 kinase by TNF via its second messenger ceramide and cross-talk with mitogenic signalling. *Embo Journal 17*, 732-742.
65. Prouty,S.M., Maroo,A., Maucher,C., **Mischak,H.**, Kolch,W., and Sedivy,J.M. (1998). Studies of perinuclear and nuclear translocation of the Raf-1 protein in rodent fibroblasts. *Biochimica et Biophysica Acta-Molecular Cell Research 1402*, 6-16.
66. Wang,Q.J., Acs,P., Goodnight,J.A., Blumberg,P.M., **Mischak,H.**, and Mushinski,J.F. (1998). The catalytic domain of PKC-epsilon, in reciprocal PKC-delta and -epsilon chimeras, is responsible for conferring tumorigenicity to NIH3T3 cells, whereas both regulatory and catalytic domains of PKC-epsilon contribute to in vitro transformation. *Oncogene 16*, 53-60.
67. Wooten,M.W., Seibenhener,M.L., Heikkila,J.E., and **Mischak,H.** (1998). delta-protein kinase C phosphorylation parallels inhibition of nerve growth factor-induced differentiation independent of changes in Trk A and MAP kinase signalling in PC12 cells. *Cellular Signalling 10*, 265-276.
68. Caloca,M.J., Garcia-Bermejo,M.L., Blumberg,P.M., Lewin,N.E., Kremmer,E., **Mischak,H.**, Wang,S.M., Nacro,K., Bienfait,B., Marquez,V.E., and Kazanietz,M.G. (1999). beta 2-chimaerin is a novel target for diacylglycerol: Binding properties and changes in subcellular localization mediated by ligand binding to its C1 domain. *Proceedings of the National Academy of Sciences of the United States of America 96*, 11854-11859.
69. Cooper,D.R., Watson,J.E., Patel,N., Illingworth,P., cevedo-Duncan,M., Goodnight,J., Chalfant,C.E., and **Mischak,H.** (1999). Ectopic expression of protein kinase C beta II, -delta, and -epsilon, but not -beta I or -zeta, provide for insulin stimulation of glucose uptake in NIH-3T3 cells. *Archives of Biochemistry and Biophysics 372*, 69-79.

70. Hacker,H., **Mischak,H.**, Hacker,G., Eser,S., Prenzel,N., Ullrich,A., and Wagner,H. (1999). Cell type-specific activation of mitogen-activated protein kinases by CpG-DNA controls interleukin-12 release from antigen-presenting cells. *Embo Journal* 18, 6973-6982.
71. Mai,S., Hanley-Hyde,J., Rainey,G.J., Kuschak,T.I., Paul,J.T., Littlewood,T.D., **Mischak,H.**, Stevens,L.M., Henderson,D.W., and Mushinski,J.F. (1999). Chromosomal and extrachromosomal instability of the cyclin D2 gene is induced by Myc overexpression. *Neoplasia*. 1, 241-252.
72. Yeung,K., Seitz,T., Li,S.F., Janosch,P., McFerran,B., Kaiser,C., Fee,F., Katsanakis,K.D., Rose,D.W., **Mischak,H.**, Sedivy,J.M., and Kolch,W. (1999). Suppression of Raf-1 kinase activity and MAP kinase signalling by RKIP. *Nature* 401, 173-177.
73. Abraham,D., Podar,K., Pacher,M., Kubicek,M., Welzel,N., Hemmings,B.A., Dilworth,S.M., **Mischak,H.**, Kolch,W., and Baccarini,M. (2000). Raf-1-associated protein phosphatase 2A as a positive regulator of kinase activation. *Journal of Biological Chemistry* 275, 22300-22304.
74. Baumann,M., Gires,O., Kolch,W., **Mischak,H.**, Zeidler,R., Pich,D., and Hammerschmidt,W. (2000). The PKC targeting protein RACK1 interacts with the Epstein-Barr virus activator protein BZLF1. *European Journal of Biochemistry* 267, 3891-3901.
75. Dammeier,S., Lovric,J., Eulitz,M., Kolch,W., Mushinski,J.F., and **Mischak,H.** (2000). Identification of the smooth muscle-specific protein, sm22, as a novel protein kinase C substrate using two-dimensional gel electrophoresis and mass spectrometry. *Electrophoresis* 21, 2443-2453.
76. Janosch,P., Kieser,A., Eulitz,M., Lovric,J., Sauer,G., Reichert,M., Gounari,F., Buscher,D., Baccarini,M., **Mischak,H.**, and Kolch,W. (2000). The Raf-1 kinase associates with vimentin kinases and regulates the structure of vimentin filaments. *Faseb Journal* 14, 2008-2021.
77. Yeung,K., Janosch,P., McFerran,B., Rose,D.W., **Mischak,H.**, Sedivy,J.M., and Kolch,W. (2000). Mechanism of suppression of the Raf/MEK/extracellular signal-regulated kinase pathway by the Raf kinase inhibitor protein. *Molecular and Cellular Biology* 20, 3079-3085.
78. Krasel,C., Dammeier,S., Winstel,R., Brockmann,J., **Mischak,H.**, and Lohse,M.J. (2001). Phosphorylation of GRK2 by protein kinase C abolishes its inhibition by calmodulin. *Journal of Biological Chemistry* 276, 1911-1915.
79. Brandt,D., Gimona,M., Hillmann,M., Haller,H., and **Mischak,H.** (2002). Protein kinase C induces actin reorganization via a Src- and Rho-dependent pathway. *Journal of Biological Chemistry* 277, 20903-20910.
80. Dhillon,A.S., Pollock,C., Steen,H., Shaw,P.E., **Mischak,H.**, and Kolch,W. (2002). Cyclic AMP-dependent kinase regulates Raf-1 kinase mainly by phosphorylation of serine 259. *Molecular and Cellular Biology* 22, 3237-3246.
81. Goerke,A., Sakai,N., Gutjahr,E., Schlapkohl,W.A., Mushinski,J.F., Haller,H., Kolch,W., Saito,N., and **Mischak,H.** (2002). Induction of apoptosis by protein kinase C delta is independent of its kinase activity. *Journal of Biological Chemistry* 277, 32054-32062.
82. Hennige,A.M., Fritsche,A., Strack,V., Weigert,C., **Mischak,H.**, Borboni,P., Renn,W., Haring,H.U., and Kellner,M. (2002). PKC zeta enhances insulin-like growth factor 1-dependent mitogenic activity in the rat clonal beta cell line RIN 1046-38. *Biochemical and Biophysical Research Communications* 290, 85-90.
83. Walter,R., **Mischak,H.**, and Haller,H. (2002). Haemodialysis, atherosclerosis and inflammation - identifying molecular mechanisms of chronic vascular disease in ESRD patients. *Nephrology Dialysis Transplantation* 17, 24-29.
84. Brandt,D.T., Goerke,A., Heuer,M., Gimona,M., Leitges,M., Kremmer,E., Lammers,R., Haller,H., and **Mischak,H.** (2003). Protein kinase C delta induces Src kinase activity via activation of the protein tyrosine phosphatase PTP alpha. *Journal of Biological Chemistry* 278, 34073-34078.

85. Chalmers,M.J., Quinn,J.P., Blakney,G.T., Emmett,M.R., **Mischak,H.**, Gaskell,S.J., and Marshall,A.G. (2003). Liquid chromatography-Fourier transform ion cyclotron resonance mass spectrometric characterization of protein kinase C phosphorylation. *Journal of Proteome Research* 2, 373-382.
86. Dhillon,A.S., Meikle,S., Peyssonnaud,C., Grindlay,J., Kaiser,C., Steen,H., Shaw,P.E., **Mischak,H.**, Eychene,A., and Kolch,W. (2003). A Raf-1 mutant that dissociates MEK/extracellular signal-regulated kinase activation from malignant transformation and differentiation but not proliferation. *Molecular and Cellular Biology* 23, 1983-1993.
87. Eitel,K., Staiger,H., Rieger,J., **Mischak,H.**, Brandhorst,H., Brendel,M.A., Bretzel,R.G., Haring,H.U., and Kellerer,M. (2003). Protein kinase C delta activation and translocation to the nucleus are required for fatty acid-induced apoptosis of insulin-secreting cells. *Diabetes* 52, 991-997.
88. Kaiser,T., Hermann,A., Kielstein,J.T., Wittke,S., Bartel,S., Krebs,R., Hausadel,F., Hillmann,M., Golovko,I., Koester,P., Haller,H., Weissinger,E.M., Fliser,D., and **Mischak,H.** (2003). Capillary electrophoresis coupled to mass spectrometry to establish polypeptide patterns in dialysis fluids. *Journal of Chromatography A* 1013, 157-171.
89. Wittke,S., Fliser,D., Haubitz,M., Bartel,S., Krebs,R., Hausadel,F., Hillmann,M., Golovko,I., Koester,P., Haller,H., Kaiser,T., **Mischak,H.**, and Weissinger,E.M. (2003). Determination of peptides and proteins in human urine with capillary electrophoresis-mass spectrometry, a suitable tool for the establishment of new diagnostic markers. *Journal of Chromatography A* 1013, 173-181.
90. Canagarajah,B., Leskow,F.C., Ho,J.Y.S., **Mischak,H.**, Saidi,L.F., Kazanietz,M.G., and Hurley,J.H. (2004). Structural mechanism for lipid activation of the Rac-specific GAP, beta 2-chimaerin. *Cell* 119, 407-418.
91. Chalmers,M.J., Kolch,W., Emmett,M.R., Marshall,A.G., and **Mischak,H.** (2004). Identification and analysis of phosphopeptides. *Journal of Chromatography B-Analytical Technologies in the Biomedical and Life Sciences* 803, 111-120.
92. Kaiser,T., Wittke,S., Just,I., Krebs,R., Bartel,S., Fliser,D., **Mischak,H.**, and Weissinger,E.M. (2004). Capillary electrophoresis coupled to mass spectrometer for automated and robust polypeptide determination in body fluids for clinical use. *Electrophoresis* 25, 2044-2055.
93. Kaiser,T., Kamal,H., Rank,A., Kolb,H.J., Holler,E., Ganser,A., Hertenstein,B., **Mischak,H.**, and Weissinger,E.M. (2004). Proteomics applied to the clinical follow-up of patients after allogeneic hematopoietic stem cell transplantation. *Blood* 104, 340-349.
94. Kolch,W., **Mischak,H.**, Chalmers,M.J., Pitt,A., and Marshall,A.G. (2004). Clinical proteomics: a question of technology. *Rapid Commun. Mass Spectrom.* 18, 2365-2366.
95. **Mischak,H.**, Kaiser,T., Walden,M., Hillmann,M., Wittke,S., Herrmann,A., Knueppel,S., Haller,H., and Fliser,D. (2004). Proteomic analysis for the assessment of diabetic renal damage in humans. *Clinical Science* 107, 485-495.
96. Neuhoff,N., Kaiser,T., Wittke,S., Krebs,R., Pitt,A., Burchard,A., Sundmacher,A., Schlegelberger,B., Kolch,W., and **Mischak,H.** (2004). Mass spectrometry for the detection of differentially expressed proteins: a comparison of surface-enhanced laser desorption/ionization and capillary electrophoresis/mass spectrometry. *Rapid Commun. Mass Spectrom.* 18, 149-156.
97. Schaefer,M., **Mischak,H.**, Schnell,S., Griese,A., Iakubov,R., Riepenhausen,G., and Schofl,C. (2004). Mechanisms of arginine-vasopressin-induced Ca²⁺ oscillations in beta-cells (HIT-T15): A role for oscillating protein kinase C. *Endocrinology* 145, 4635-4644.
98. Wang,Q.J., Lu,G., Schlapkohl,W.A., Goerke,A., Larsson,C., **Mischak,H.**, Blumberg,P.M., and Mushinski,J.F. (2004). The V5 domain of protein kinase C plays a critical role in determining the isoform-specific localization, translocation, and biological function of protein kinase C-delta and -epsilon. *Mol Cancer Res.* 2, 129-140.

99. Weissinger, E. M. and **Mischak, H.** Proteom analysis applied towards early diagnosis of renal diseases and transplant-monitoring. *Transplantationsmedizin* 16, 2-9. 2004.
Ref Type: Journal (Full)
100. Weissinger,E.M., Oettrich,K., Evans,C., Genieser,H.G., Schwede,F., Dangers,M., Dammann,E., Kolb,H.J., **Mischak,H.**, Ganser,A., and Kolch,W. (2004). Activation of protein kinase A (PKA) by 8-Cl-cAMP as a novel approach for antileukaemic therapy. *British Journal of Cancer* 91, 186-192.
101. Weissinger,E.M., Wittke,S., Kaiser,T., Haller,H., Bartel,S., Krebs,R., Golovko,I., Rupprecht,H.D., Haubitz,M., Hecker,H., **Mischak,H.**, and Fliser,D. (2004). Proteomic patterns established with capillary electrophoresis and mass spectrometry for diagnostic purposes. *Kidney International* 65, 2426-2434.
102. Weissinger,E.M., Kaiser,T., Meert,N., De Smet,R., Walden,M., **Mischak,H.**, and Vanholder,R.C. (2004). Proteomics: a novel tool to unravel the patho-physiology of uraemia. *Nephrology Dialysis Transplantation* 19, 3068-3077.
103. Wittke,S., Kaiser,T., and **Mischak,H.** (2004). Differential polypeptide display: the search for the elusive target. *Journal of Chromatography B-Analytical Technologies in the Biomedical and Life Sciences* 803, 17-26.
104. Chalmers,M.J., Mackay,C.L., Hendrickson,C.L., Wittke,S., Walden,M., **Mischak,H.**, Fliser,D., Just,I., and Marshall,A.G. (2005). Combined top-down and bottom-up mass spectrometric approach to characterization of biomarkers for renal disease. *Analytical Chemistry* 77, 7163-7171.
105. Fliser,D., Wittke,S., and **Mischak,H.** (2005). Capillary electrophoresis coupled to mass spectrometry for clinical diagnostic purposes. *Electrophoresis* 26, 2708-2716.
106. Haubitz,M., Wittke,S., Weissinger,E.M., Walden,M., Rupprecht,H.D., Floege,J., Haller,H., and **Mischak,H.** (2005). Urine protein patterns can serve as diagnostic tools in patients with IgA nephropathy. *Kidney International* 67, 2313-2320.
107. Kolch,W., **Mischak,H.**, and Pitt,A.R. (2005). The molecular make-up of a tumour: proteomics in cancer research. *Clinical Science* 108, 369-383.
108. Kolch,W., Neuss,C., Peizing,M., and **Mischak,H.** (2005). Capillary electrophoresis - Mass spectrometry as a powerful tool in clinical diagnosis and biomarker discovery. *Mass Spectrometry Reviews* 24, 959-977.
109. Meier,M., Kaiser,T., Herrmann,A., Kneuppel,S., Hillmann,M., Koester,P., Danne,T., Haller,H., Fliser,D., and **Mischak,H.** (2005). Identification of urinary protein pattern in Type 1 diabetic adolescents with early diabetic nephropathy by a novel combined proteome analysis. *Journal of Diabetes and Its Complications* 19, 223-232.
110. Rogers,S., Girolami,M., Krebs,R., and **Mischak,H.** (2005). Disease classification from capillary electrophoresis: Mass spectrometry. *Pattern Recognition and Data Mining, Pt 1, Proceedings 3686*, 183-191.
111. Rossing,K., **Mischak,H.**, Parving,H.H., Christensen,P.K., Walden,M., Hillmann,M., and Kaiser,T. (2005). Impact of diabetic nephropathy and angiotensin II receptor blockade on urinary polypeptide patterns. *Kidney International* 68, 193-205.
112. Theodorescu,D., Fliser,D., Wittke,S., **Mischak,H.**, Krebs,R., Walden,M., Ross,M., Eltze,E., Bettendorf,O., Wulfig,C., and Semjonow,A. (2005). Pilot study of capillary electrophoresis coupled to mass spectrometry as a tool to define potential prostate cancer biomarkers in urine. *Electrophoresis* 26, 2797-2808.
113. Weissinger,E.M., Hertenstein,B., **Mischak,H.**, and Ganser,A. (2005). Online coupling of capillary electrophoresis with mass spectrometry for the identification of biomarkers for clinical diagnosis. *Expert Review of Proteomics* 2, 639-647.

114. Wittke,S., Haubitz,M., Walden,M., Rohde,F., Schwarz,A., Mengel,M., **Mischak,H.**, Haller,H., and Gwinner,W. (2005). Detection of acute tubulointerstitial rejection by proteomic analysis of urinary samples in renal transplant recipients. *American Journal of Transplantation* 5, 2479-2488.
115. Wittke,S., **Mischak,H.**, Walden,M., Kolch,W., Radler,T., and Wiedemann,K. (2005). Discovery of biomarkers in human urine and cerebrospinal fluid by capillary electrophoresis coupled to mass spectrometry: Towards new diagnostic and therapeutic approaches. *Electrophoresis* 26, 1476-1487.
116. Decramer,S., Wittke,S., **Mischak,H.**, Zurbig,P., Walden,M., Bouissou,F., Bascands,J.L., and Schanstra,J.P. (2006). Predicting the clinical outcome of congenital unilateral ureteropelvic junction obstruction in newborn by urinary proteome analysis. *Nature Medicine* 12, 398-400.
117. Girolami, M., **Mischak, H.**, and Krebs, R. Analysis of Complex, Multi-Dimensional Data Sets. *Drug Discovery Today* 3, 13-19. 2006.
Ref Type: Journal (Full)
118. Schiffer,E., **Mischak,H.**, and Novak,J. (2006). High resolution proteome/peptidome analysis of body fluids by capillary electrophoresis coupled with MS. *Proteomics* 6, 5615-5627.
119. Theodorescu,D., Wittke,S., Ross,M.M., Walden,M., Conaway,M., Just,I., **Mischak,H.**, and Frierson,H.F. (2006). Discovery and validation of new protein biomarkers for 4 urothelial cancer: a prospective analysis. *Lancet Oncology* 7, 230-240.
120. Weissinger,E.M., **Mischak,H.**, Ganser,A., and Hertenstein,B. (2006). Value of proteomics applied to the follow-up in stem cell transplantation. *Annals of Hematology* 85, 205-211.
121. Weissinger,E.M., Nguyen-Khoa,T., Fumeron,C., Saltiel,C., Walden,M., Kaiser,T., **Mischak,H.**, Druke,T.B., Lacour,B., and Massy,Z.A. (2006). Effects of oral vitamin C supplementation in hemodialysis patients: A proteomic assessment. *Proteomics* 6, 993-1000.
122. Zurbig,P., Renfrow,M.B., Schiffer,E., Novak,J., Walden,M., Wittke,S., Just,I., Pelzing,M., Neususs,C., Theodorescu,D., Root,K.E., Ross,M.M., and **Mischak,H.** (2006). Biomarker discovery by CE-MS enables sequence analysis via MS/MS with platform-independent separation. *Electrophoresis* 27, 2111-2125.
123. Fliser,D., Novak,J., Thongboonkerd,V., Argiles,A., Jankowski,V., Girolami,M.A., Jankowski,J., and **Mischak,H.** (2007). Advances in urinary proteome analysis and biomarker discovery. *Journal of the American Society of Nephrology* 18, 1057-1071.
124. Frommberger,M., Zurbig,P., Jantos,J., Krahn,T., **Mischak,H.**, Pich,A., Just,I., Schmitt-Kopplin,P., and Schiffer,E. (2007). Peptidomic analysis of rat urine using capillary electrophoresis coupled to mass spectrometry. *Proteomics Clinical Applications* 1, 650-660.
125. Good,D.M., Thongboonkerd,V., Novak,J., Bascands,J.L., Schanstra,J.P., Coon,J.J., Dominiczak,A., and **Mischak,H.** (2007). Body fluid proteomics for biomarker discovery: Lessons from the past hold the key to success in the future. *Journal of Proteome Research* 6, 4549-4555.
126. Goodsaid,F., Bandow,J.E., and **Mischak,H.** (2007). Grand rounds in proteomics at the FDA - White Oak, Silver Spring, MD, USA, April 3, 2007. *Proteomics Clinical Applications* 1, 1526-1531.
127. Julian,B.A., Wittke,S., Novak,J., Good,D.M., Coon,J.J., Kellmann,M., Zurbig,P., Schiffer,E., Haubitz,M., Moldoveanu,Z., Calcaterra,S.M., Wyatt,R.J., Sykora,J., Sladkova,E., Hes,O., **Mischak,H.**, and McGuire,B.M. (2007). Electrophoretic methods for analysis of urinary polypeptides in IgA-associated renal diseases. *Electrophoresis* 28, 4469-4483.
128. **Mischak,H.**, Julian,B.A., and Novak,J. (2007). High-resolution proteome/peptidome analysis of peptides and low-molecular-weight proteins in urine. *Proteomics Clinical Applications* 1, 792-804.
129. **Mischak,H.**, Apweiler,R., Banks,R.E., Conaway,M., Coon,J., Dominiczak,A., Ehrich,J.H.H., Fliser,D., Girolami,M., Hermjakob,H., Hochstrasser,D., Jankowski,J., Julian,B.A., Kolch,W., Massy,Z.A., Neusuess,C., Novak,J., Peter,K., Rossing,K., Schanstra,J., Semmes,O.J., Theodorescu,D., Thongboonkerd,V., Weissinger,E.M., Van Eyk,J.E., and Yamamoto,T. (2007). Clinical proteomics: A

- need to define the field and to begin to set adequate standards. *Proteomics Clinical Applications 1*, 148-156.
130. Sniehotta,M., Schiffer,E., Zurbig,P., Novak,J., and **Mischak,H.** (2007). CE - a multifunctional application for clinical diagnosis. *Electrophoresis 28*, 1407-1417.
 131. Theodorescu,D. and **Mischak,H.** (2007). Mass spectrometry based proteomics in urine biomarker discovery. *World Journal of Urology 25*, 435-443.
 132. Vanholder,R., Meert,N., Schepers,E., Glorieux,G., Argiles,A., Brunet,P., Cohen,G., Druke,T., **Mischak,H.**, Spasovski,G., Massy,Z., and Jankowski,J. (2007). Review on uraemic solutes II - Variability in reported concentrations: causes and consequences. *Nephrology Dialysis Transplantation 22*, 3115-3121.
 133. Weissinger,E.M. and **Mischak,H.** (2007). Application of proteomics to posttransplantational follow-up. *Methods Mol Med. 134*, 217-228.
 134. Coon,J.J., Zurbig,P., Dakna,M., Dominicza,A.F., Decramer,S., Fliser,D., Frommberger,M., Golovko,I., Good,D.M., Herget-Rosenthal,S., Jankowski,J., Julian,B.A., Kellmann,M., Kolch,W., Massy,Z., Novak,J., Rossing,K., Schanstra,J.P., Schiffer,E., Theodorescu,D., Vanholder,R., Weissinger,E.M., **Mischak,H.**, and Schmitt-Kopplin,P. (2008). CE-MS analysis of the human urinary proteome for biomarker discovery and disease diagnostics. *Proteomics Clinical Applications 2*, 964-973.
 135. Decramer,S., de Peredo,A.G., Breuil,B., **Mischak,H.**, Monsarrat,B., Bascands,J.L., and Schanstra,J.P. (2008). Urine in Clinical Proteomics. *Molecular & Cellular Proteomics 7*, 1850-1862.
 136. Jiang,H., Schiffer,E., Song,Z.F., Wang,J.W., Zurbig,P., Thedieck,K., Moes,S., Bantel,H., Saal,N., Jantos,J., Brecht,M., Jenö,P., Hall,M.N., Hager,K., Manns,M.P., Hecker,H., Ganser,A., Dohner,K., Bartke,A., Meissner,C., **Mischak,H.**, Ju,Z.Y., and Rudolph,K.L. (2008). Proteins induced by telomere dysfunction and DNA damage represent biomarkers of human aging and disease. *Proceedings of the National Academy of Sciences of the United States of America 105*, 11299-11304.
 137. Mathivanan,S., Ahmed,M., Ahn,N.G., Alexandre,H., Amanchy,R., Andrews,P.C., Bader,J.S., Balgley,B.M., Bantscheff,M., Bennett,K.L., Bjorling,E., Blagoev,B., Bose,R., Brahmachari,S.K., Burlingame,A.S., Bustelo,X.R., Cagney,G., Cantin,G.T., Cardasis,H.L., Celis,J.E., Chaerkady,R., Chu,F., Cole,P.A., Costello,C.E., Cotter,R.J., Crockett,D., DeLany,J.P., De Marzo,A.M., DeSouza,L.V., Deutsch,E.W., Dransfield,E., Drewes,G., Droit,A., Dunn,M.J., Elenitoba-Johnson,K., Ewing,R.M., Van,E.J., Faca,V., Falkner,J., Fang,X., Fenselau,C., Figeys,D., Gagne,P., Gelfi,C., Gevaert,K., Gimble,J.M., Gnad,F., Goel,R., Gromov,P., Hanash,S.M., Hancock,W.S., Harsha,H.C., Hart,G., Hays,F., He,F., Hebbar,P., Helsen,K., Hermeking,H., Hide,W., Hjerno,K., Hochstrasser,D.F., Hofmann,O., Horn,D.M., Hruban,R.H., Ibarrola,N., James,P., Jensen,O.N., Jensen,P.H., Jung,P., Kandasamy,K., Kheterpal,I., Kikuno,R.F., Korf,U., Korner,R., Kuster,B., Kwon,M.S., Lee,H.J., Lee,Y.J., Lefevre,M., Lehtvaslaiho,M., Lescuyer,P., Levander,F., Lim,M.S., Lobke,C., Loo,J.A., Mann,M., Martens,L., Martinez-Heredia,J., McComb,M., McRedmond,J., Mehrle,A., Menon,R., Miller,C.A., **Mischak,H.**, Mohan,S.S., Mohmood,R., Molina,H., Moran,M.F., Morgan,J.D., Moritz,R., Morzel,M., Muddiman,D.C., Nalli,A., Navarro,J.D., Neubert,T.A., Ohara,O., Oliva,R., Omenn,G.S., Oyama,M., Paik,Y.K., Pennington,K., Pepperkok,R., Periaswamy,B., Petricoin,E.F., Poirier,G.G., Prasad,T.S., Purvine,S.O., Rahiman,B.A., Ramachandran,P., Ramachandra,Y.L., Rice,R.H., Rick,J., Ronnholm,R.H., Salonen,J., Sanchez,J.C., Sayd,T., Seshi,B., Shankari,K., Sheng,S.J., Shetty,V., Shivakumar,K., Simpson,R.J., Sirdeshmukh,R., Siu,K.W., Smith,J.C., Smith,R.D., States,D.J., Sugano,S., Sullivan,M., Superti-Furga,G., Takatalo,M., Thongboonkerd,V., Trinidad,J.C., Uhlen,M., Vandekerckhove,J., Vasilescu,J., Veenstra,T.D., Vidal-Taboada,J.M., Vihinen,M., Wait,R., Wang,X., Wiemann,S., Wu,B., Xu,T., Yates,J.R., Zhong,J., Zhou,M., Zhu,Y., Zurbig,P., and Pandey,A. (2008). Human Proteinpedia enables sharing of human protein data. *Nat. Biotechnol. 26*, 164-167.
 138. Raedler,T.J., Wittke,S., Jahn,H., Koessler,A., **Mischak,H.**, and Wiedemann,K. (2008). Capillary electrophoresis mass spectrometry as a potential tool to detect lithium-induced nephropathy: Preliminary results. *Progress in Neuro-Psychopharmacology & Biological Psychiatry 32*, 673-678.

139. Rossing,K., **Mischak,H.**, Rossing,P., Schanstra,J.P., Wiseman,A., and Maahs,D.M. (2008). The urinary proteome in diabetes and diabetes-associated complications: New ways to assess disease progression and evaluate therapy. *Proteomics Clinical Applications* 2, 997-1007.
140. Rossing,K., **Mischak,H.**, Dakna,M., Zurbig,P., Novak,J., Julian,B.A., Good,D.M., Coon,J.J., Tarnow,L., and Rossing,P. (2008). Urinary proteomics in diabetes and CKD. *Journal of the American Society of Nephrology* 19, 1283-1290.
141. Schiffer,E., **Mischak,H.**, and Vanholder,R.C. (2008). Exploring the uremic toxins using proteomic technologies. *Proteomics in Nephrology - Towards Clinical Applications* 160, 159-171.
142. Schiffer,E., **Mischak,H.**, Theodorescu,D., and Vlahou,A. (2008). Challenges of using mass spectrometry as a bladder cancer biomarker discovery platform. *World Journal of Urology* 26, 67-74.
143. Theodorescu,D., Schiffer,E., Bauer,H.W., Douwes,F., Eichhorn,F., Polley,R., Schmidt,T., Schofer,W., Zurbig,P., Good,D.M., Coon,J.J., and **Mischak,H.** (2008). Discovery and validation of urinary biomarkers for prostate cancer. *Proteomics Clinical Applications* 2, 556-570.
144. Vlahou,A., Schanstra,J., Frokiaer,J., El,N.M., Spasovski,G., **Mischak,H.**, Domon,B., Allmaier,G., Bongcam-Rudloff,E., and Attwood,T. (2008). Establishment of a European Network for Urine and Kidney Proteomics. *J Proteomics* 71, 490-492.
145. Zimmerli,L.U., Schiffer,E., Zurbig,P., Good,D.M., Kellmann,M., Mouls,L., Pitt,A.R., Coon,J.J., Schmieder,R.E., Peter,K.H., **Mischak,H.**, Kolch,W., Delles,C., and Dominiczak,A.F. (2008). Urinary proteomic biomarkers on coronary artery disease. *Molecular & Cellular Proteomics* 7, 290-298.
146. Dakna,M., He,Z., Yu,W.C., **Mischak,H.**, and Kolch,W. (2009). Technical, bioinformatical and statistical aspects of liquid chromatography-mass spectrometry (LC-MS) and capillary electrophoresis-mass spectrometry (CE-MS) based clinical proteomics: a critical assessment. *J Chromatogr. B Analyt. Technol. Biomed. Life Sci.* 877, 1250-1258.
147. Dhillon,A.S., Yip,Y.Y., Grindlay,G.J., Pakay,J.L., Dangers,M., Hillmann,M., Clark,W., Pitt,A., **Mischak,H.**, and Kolch,W. (2009). The C-terminus of Raf-1 acts as a 14-3-3-dependent activation switch. *Cell Signal.* 21, 1645-1651.
148. Drube,J., Schiffer,E., **Mischak,H.**, Kemper,M.J., Neuhaus,T., Pape,L., Lichtinghagen,R., and Ehrich,J.H. (2009). Urinary proteome pattern in children with renal Fanconi syndrome. *Nephrol Dial Transplant* 24, 2161-2169.
149. Haubitz,M., Good,D.M., Woywodt,A., Haller,H., Rupprecht,H., Theodorescu,D., Dakna,M., Coon,J.J., and **Mischak,H.** (2009). Identification and validation of urinary biomarkers for differential diagnosis and evaluation of therapeutic intervention in anti-neutrophil cytoplasmic antibody-associated vasculitis. *Mol Cell Proteomics* 8, 2296-2307.
150. Jankowski,V., van der,G.M., **Mischak,H.**, Morgan,M., Zidek,W., and Jankowski,J. (2009). Dinucleoside polyphosphates: strong endogenous agonists of the purinergic system. *Br. J Pharmacol.* 157, 1142-1153.
151. Jantos-Siwy,J., Schiffer,E., Brand,K., Schumann,G., Rossing,K., Delles,C., **Mischak,H.**, and Metzger,J. (2009). Quantitative urinary proteome analysis for biomarker evaluation in chronic kidney disease. *J Proteome Res.* 8, 268-281.
152. Kistler,A.D., **Mischak,H.**, Poster,D., Dakna,M., Wuthrich,R.P., and Serra,A.L. (2009). Identification of a unique urinary biomarker profile in patients with autosomal dominant polycystic kidney disease. *Kidney Int.* 76, 89-96.
153. Metzger,J., Schanstra,J.P., and **Mischak,H.** (2009). Capillary electrophoresis-mass spectrometry in urinary proteome analysis: current applications and future developments. *Anal. Bioanal. Chem.* 393, 1431-1442.

154. Metzger,J., Lupp,P.B., Good,D.M., and **Mischak,H.** (2009). Adapting mass spectrometry-based platforms for clinical proteomics applications: The capillary electrophoresis coupled mass spectrometry paradigm. *Crit Rev. Clin. Lab Sci.* 1-24.
155. **Mischak,H.**, Coon,J.J., Novak,J., Weissinger,E.M., Schanstra,J.P., and Dominiczak,A.F. (2009). Capillary electrophoresis-mass spectrometry as a powerful tool in biomarker discovery and clinical diagnosis: an update of recent developments. *Mass Spectrom. Rev.* 28, 703-724.
156. **Mischak,H.**, Espandiari,P., Sadrieh,N., and Hanig,J. (2009). Profiling of rat urinary proteomic patterns associated with drug-induced nephrotoxicity using CE coupled with MS as a potential model for detection of drug-induced adverse effects. *Proteomics Clin Appl.* 3, 1062-1071.
157. **Mischak,H.**, Massy,Z.A., and Jankowski,J. (2009). Proteomics in uremia and renal disease. *Semin. Dial* 22, 409-416.
158. Schiffer,E., **Mischak,H.**, and Zimmerli,L.U. (2009). Proteomics in gerontology: current applications and future aspects--a mini-review. *Gerontology* 55, 123-137.
159. Schiffer,E., Vlahou,A., Petrolekas,A., Stravodimos,K., Tauber,R., Geschwend,J.E., Neuhaus,J., Stolzenburg,J.U., Conaway,M.R., **Mischak,H.**, and Theodorescu,D. (2009). Prediction of muscle-invasive bladder cancer using urinary proteomics. *Clin. Cancer Res.* 15, 4935-4943.
160. Snell-Bergeon,J.K., Maahs,D.M., Ogden,L.G., Kinney,G.L., Hokanson,J.E., Schiffer,E., Rewers,M., and **Mischak,H.** (2009). Evaluation of urinary biomarkers for coronary artery disease, diabetes, and diabetic kidney disease. *Diabetes Technol. Ther.* 11, 1-9.
161. Vanholder,R., bou-Deif,O., Argiles,A., Baurmeister,U., Beige,J., Brouckaert,P., Brunet,P., Cohen,G., De Deyn,P.P., Druke,T.B., Fliser,D., Glorieux,G., Herget-Rosenthal,S., Horl,W.H., Jankowski,J., Jorres,A., Massy,Z.A., **Mischak,H.**, Perna,A.F., Rodriguez-Portillo,J.M., Spasovski,G., Stegmayr,B.G., Stenvinkel,P., Thornalley,P.J., Wanner,C., and Wiecek,A. (2009). The role of EUTox in uremic toxin research. *Semin. Dial* 22, 323-328.
162. Vlahou,A., Allmaier,G., Attwood,T., Bongcam-Rudloff,E., Charonis,A., Frokiaer,J., **Mischak,H.**, Schanstra,J., and Spasovski,G. (2009). 2nd Combined Working Group and Management Committee Meeting of Urine and Kidney Proteomics COST Action 29-30 March 2009, Nafplio, Greece. *Proteomics Clin Appl.* 3, 1017-1022.
163. von Zur,M.C., Schiffer,E., Zuerbig,P., Kellmann,M., Brasse,M., Meert,N., Vanholder,R.C., Dominiczak,A.F., Chen,Y.C., **Mischak,H.**, Bode,C., and Peter,K. (2009). Evaluation of urine proteome pattern analysis for its potential to reflect coronary artery atherosclerosis in symptomatic patients. *J Proteome Res.* 8, 335-345.
164. Weissinger,E.M., **Mischak,H.**, Kontsendorn,J., Hahn,A., Hahn,N., Morgan,M., and Ganser,A. (2009). Proteome analysis in hematology using capillary electrophoresis coupled on-line to mass spectrometry. *Mini. Rev. Med. Chem.* 9, 627-3.
165. Zurbig,P., Decramer,S., Dakna,M., Jantos,J., Good,D.M., Coon,J.J., Bandin,F., **Mischak,H.**, Bascands,J.L., and Schanstra,J.P. (2009). The human urinary proteome reveals high similarity between kidney aging and chronic kidney disease. *Proteomics* 9, 2108-2117.
166. Zurbig,P., Schiffer,E., and **Mischak,H.** (2009). Capillary electrophoresis coupled to mass spectrometry for proteomic profiling of human urine and biomarker discovery. *Methods Mol Biol.* 564, 105-121.
167. Alkhalaf,A., Zurbig,P., Bakker,S.J.L., Bilo,H.J.G., Cerna,M., Fischer,C., Fuchs,S., Janssen,B., Medek,K., **Mischak,H.**, Roob,J.M., Rossing,K., Rossing,P., Rychlik,I., Sourij,H., Tiran,B., Winklhofer-Roob,B.M., and Navis,G.J. (2010). Multicentric Validation of Proteomic Biomarkers in Urine Specific for Diabetic Nephropathy. *Plos One* 5.
168. Andersen,S., **Mischak,H.**, Zurbig,P., Parving,H.H., and Rossing,P. (2010). Urinary proteome analysis enables assessment of renoprotective treatment in type 2 diabetic patients with microalbuminuria. *BMC Nephrol.* 11, 29.

169. Caubet,C., Lacroix,C., Decramer,S., Drube,J., Ehrich,J.H., **Mischak,H.**, Bascands,J.L., and Schanstra,J.P. (2010). Advances in urinary proteome analysis and biomarker discovery in pediatric renal disease. *Pediatr. Nephrol* 25, 27-35.
170. Dakna,M., Harris,K., Kalousis,A., Carpentier,S., Kolch,W., Schanstra,J.P., Haubitz,M., Vlahou,A., **Mischak,H.**, and Girolami,M. (2010). Addressing the Challenge of Defining Valid Proteomic Biomarkers and Classifiers. *Bmc Bioinformatics* 11.
171. Delles,C., Schiffer,E., von zur Muhlen,C., Peter,K., Rossing,P., Parving,H.H., Dymott,J.A., Neisius,U., Zimmerli,L.U., Snell-Bergeon,J.K., Maahs,D.M., Schmieder,R.E., **Mischak,H.**, and Dominiczak,A.F. (2010). Urinary proteomic diagnosis of coronary artery disease: identification and clinical validation in 623 individuals. *Journal of Hypertension* 28, 2316-2322.
172. Drube,J., Zurbig,P., Schiffer,E., Lau,E., Ure,B., Gluer,S., Kirschstein,M., Pape,L., Decramer,S., Bascands,J.L., Schanstra,J.P., **Mischak,H.**, and Ehrich,J.H.H. (2010). Urinary proteome analysis identifies infants but not older children requiring pyeloplasty. *Pediatric Nephrology* 25, 1673-1678.
173. Good,D.M., Zurbig,P., Argiles,A., Bauer,H.W., Behrens,G., Coon,J.J., Dakna,M., Decramer,S., Delles,C., Dominiczak,A.F., Ehrich,J.H.H., Eitner,F., Fliser,D., Frommberger,M., Ganser,A., Girolami,M.A., Golovko,I., Gwinner,W., Haubitz,M., Herget-Rosenthal,S., Jankowski,J., Jahn,H., Jerums,G., Julian,B.A., Kellmann,M., Kliem,V., Kolch,W., Krolewski,A.S., Luppi,M., Massy,Z., Melter,M., Neuss,C., Novak,J., Peter,K., Rossing,K., Rupperecht,H., Schanstra,J.P., Schiffer,E., Stolzenburg,J.U., Tarnow,L., Theodorescu,D., Thongboonkerd,V., Vanholder,R., Weissinger,E.M., **Mischak,H.**, and Schmitt-Kopplin,P. (2010). Naturally Occurring Human Urinary Peptides for Use in Diagnosis of Chronic Kidney Disease. *Molecular & Cellular Proteomics* 9, 2424-2437.
174. Griner,E.M., Caino,M.C., Sosa,M.S., Colon-Gonzalez,F., Chalmers,M.J., **Mischak,H.**, and Kazanietz,M.G. (2010). A novel cross-talk in diacylglycerol signaling: the Rac-GAP {beta}2-chimaerin is negatively regulated by PKC{delta} mediated phosphorylation. *J Biol. Chem.*
175. Maahs,D.M., Siwy,J., Argiles,A., Cerna,M., Delles,C., Dominiczak,A.F., Gayraud,N., Iphofer,A., Jansch,L., Jerums,G., Medek,K., **Mischak,H.**, Navis,G.J., Roob,J.M., Rossing,K., Rossing,P., Rychlik,I., Schiffer,E., Schmieder,R.E., Wascher,T.C., Winklhofer-Roob,B.M., Zimmerli,L.U., Zurbig,P., and Snell-Bergeon,J.K. (2010). Urinary Collagen Fragments Are Significantly Altered in Diabetes: A Link to Pathophysiology. *Plos One* 5.
176. Metzger,J., Kirsch,T., Schiffer,E., Ulger,P., Menten,E., Brand,K., Weissinger,E.M., Haubitz,M., **Mischak,H.**, and Herget-Rosenthal,S. (2010). Urinary excretion of twenty peptides forms an early and accurate diagnostic pattern of acute kidney injury. *Kidney International* 78, 1252-1262.
177. **Mischak,H.**, Delles,C., Klein,J., and Schanstra,J.P. (2010). Urinary Proteomics Based on Capillary Electrophoresis-Coupled Mass Spectrometry in Kidney Disease: Discovery and Validation of Biomarkers, and Clinical Application. *Advances in Chronic Kidney Disease* 17, 493-506.
178. **Mischak,H.** and Rossing,P. (2010). Proteomic biomarkers in diabetic nephropathy-reality or future promise? *Nephrology Dialysis Transplantation* 25, 2843-2845.
179. **Mischak,H.**, Kolch,W., Aivaliotis,M., Bouyssie,D., Court,M., Dihazi,H., Dihazi,G.H., Franke,J., Garin,J., de Peredo,A.G., Iphofer,A., Jansch,L., Lacroix,C., Makridakis,M., Masselon,C., Metzger,J., Monsarrat,B., Mrug,M., Norling,M., Novak,J., Pich,A., Pitt,A., Bongcam-Rudloff,E., Siwy,J., Suzuki,H., Thongboonkerd,V., Wang,L., Zoidakis,J., Zuerbig,P., Schanstra,J., and Vlahou,A. (2010). Comprehensive human urine standards for comparability and standardization in clinical proteome analysis. *Proteomics Clinical Applications* 4, 464-478.
180. **Mischak,H.**, Allmaier,G., Apweiler,R., Attwood,T., Baumann,M., Benigni,A., Bennett,S.E., Bischoff,R., Bongcam-Rudloff,E., Capasso,G., Coon,J.J., D'Haese,P., Dominiczak,A.F., Dakna,M., Dihazi,H., Ehrich,J.H., Fernandez-Llama,P., Fliser,D., Frokiaer,J., Garin,J., Girolami,M., Hancock,W.S., Haubitz,M., Hochstrasser,D., Holman,R.R., Ioannidis,J.P., Jankowski,J., Julian,B.A., Klein,J.B., Kolch,W., Luider,T., Massy,Z., Mattes,W.B., Molina,F., Monsarrat,B., Novak,J., Peter,K., Rossing,P., Sanchez-Carbayo,M., Schanstra,J.P., Semmes,O.J., Spasovski,G., Theodorescu,D., Thongboonkerd,V., Vanholder,R., Veenstra,T.D., Weissinger,E., Yamamoto,T., and Vlahou,A. (2010).

Recommendations for biomarker identification and qualification in clinical proteomics. *Sci. Transl. Med.* 2, 46ps42.

181. Albalat,A., **Mischak,H.**, and Mullen,W. (2011). Urine proteomics in clinical applications: technologies, principal considerations and clinical implementation. *Prilozi.* 32, 13-44.
182. Albalat,A., **Mischak,H.**, and Mullen,W. (2011). Clinical application of urinary proteomics/peptidomics. *Expert Rev. Proteomics* 8, 615-629.
183. Carty,D.M., Siwy,J., Brennand,J.E., Zurbig,P., Mullen,W., Franke,J., McCulloch,J.W., Roberts,C.T., North,R.A., Chappell,L.C., **Mischak,H.**, Poston,L., Dominiczak,A.F., and Delles,C. (2011). Urinary Proteomics for Prediction of Preeclampsia. *Hypertension* 57, 561-U387.
184. Foucher,C., Schiffer,E., **Mischak,H.**, Ansquer,J.C., and Wilbraham,D. (2011). Effect of fenofibrate treatment on the low molecular weight urinary proteome of healthy volunteers. *Proteomics Clinical Applications* 5, 159-166.
185. Jahn,H., Wittke,S., Zurbig,P., Raedler,T.J., Arlt,S., Kellmann,M., Mullen,W., Eichenlaub,M., **Mischak,H.**, and Wiedemann,K. (2011). Peptide fingerprinting of Alzheimer's disease in cerebrospinal fluid: identification and prospective evaluation of new synaptic biomarkers. *Plos One* 6, e26540.
186. Kistler,A.D., Siwy,J., Breunig,F., Jeevaratnam,P., Scherl,A., Mullen,W., Warnock,D.G., Wanner,C., Hughes,D.A., **Mischak,H.**, Wuthrich,R.P., and Serra,A.L. (2011). A Distinct Urinary Biomarker Pattern Characteristic of Female Fabry Patients That Mirrors Response to Enzyme Replacement Therapy. *Plos One* 6.
187. Lankisch,T.O., Metzger,J., Negm,A.A., Vosskuhl,K., Schiffer,E., Siwy,J., Weismuller,T.J., Schneider,A.S., Thedieck,K., Baumeister,R., Zurbig,P., Weissinger,E.M., Manns,M.P., **Mischak,H.**, and Wedemeyer,J. (2011). Bile Proteomic Profiles Differentiate Cholangiocarcinoma from Primary Sclerosing Cholangitis and Choledocholithiasis. *Hepatology* 53, 875-884.
188. Lopez,L.M., Mullen,W., Zurbig,P., Harris,S.E., Gow,A.J., Starr,J.M., Porteous,D.J., **Mischak,H.**, and Deary,I.J. (2011). A pilot study of urinary peptides as biomarkers for intelligence in old age. *Intelligence* 39, 46-53.
189. Mayer,G., Heinze,G., **Mischak,H.**, Hellemons,M.E., Heerspink,H.J., Bakker,S.J., de,Z.D., Haiduk,M., Rossing,P., and Oberbauer,R. (2011). Omics-bioinformatics in the context of clinical data. *Methods Mol. Biol.* 719, 479-497.
190. Metzger,J., Chatzikyrkou,C., Broecker,V., Schiffer,E., Jaensch,L., Iphoefer,A., Mengel,M., Mullen,W., **Mischak,H.**, Haller,H., and Gwinner,W. (2011). Diagnosis of subclinical and clinical acute T-cell-mediated rejection in renal transplant patients by urinary proteome analysis. *Proteomics Clinical Applications* 5, 322-333.
191. **Mischak,H.**, Thongboonkerd,V., Schanstra,J.P., and Vlahou,A. (2011). Renal and Urinary Proteomics. *Proteomics Clinical Applications* 5, 211-213.
192. **Mischak,H.** and Schanstra,J.P. (2011). CE-MS in biomarker discovery, validation, and clinical application. *Proteomics Clinical Applications* 5, 9-23.
193. Mullen,W., Delles,C., and **Mischak,H.** (2011). Urinary proteomics in the assessment of chronic kidney disease. *Curr. Opin. Nephrol. Hypertens.* 20, 654-661.
194. Mullen,W., Gonzalez,J., Siwy,J., Franke,J., Sattar,N., Mullan,A., Roberts,S., Delles,C., **Mischak,H.**, and Albalat,A. (2011). A Pilot Study on the Effect of Short-Term Consumption of a Polyphenol Rich Drink on Biomarkers of Coronary Artery Disease Defined by Urinary Proteomics. *J. Agric. Food Chem.*
195. Schiffer,E., Liabeuf,S., Lacroix,C., Temmar,M., Renard,C., Monsarrat,B., Choukroun,G., Lemke,H.D., Vanholder,R., **Mischak,H.**, and Massy,Z.A. (2011). Markers of vascular disease in plasma from patients with chronic kidney disease identified by proteomic analysis. *Journal of Hypertension* 29, 783-790.

196. Bandin,F., Siwy,J., Breuil,B., **Mischak,H.**, Bascands,J.L., Decramer,S., and Schanstra,J.P. (2012). Urinary proteome analysis at 5-year followup of patients with nonoperated ureteropelvic junction obstruction suggests ongoing kidney remodeling. *J Urol.* 187, 1006-1011.
197. Dawson,J., Walters,M., Delles,C., **Mischak,H.**, and Mullen,W. (2012). Urinary proteomics to support diagnosis of stroke. *Plos One* 7, e35879.
198. Drube,J., Schiffer,E., Lau,E., Petersen,C., Kirschstein,M., Kemper,M.J., Lichtinghagen,R., Ure,B., **Mischak,H.**, Pape,L., and Ehrich,J.H. (2012). Urinary proteome analysis to exclude severe vesicoureteral reflux. *Pediatrics* 129, e356-e363.
199. Duranton,F., Cohen,G., De,S.R., Rodriguez,M., Jankowski,J., Vanholder,R., and Argiles,A. (2012). Normal and pathologic concentrations of uremic toxins. *J Am. Soc. Nephrol.* 23, 1258-1270.
200. Herget-Rosenthal,S., Metzger,J., Albalat,A., Bitsika,V., and **Mischak,H.** (2012). Proteomic biomarkers for the early detection of acute kidney injury. *Prilozi* 33, 27-48.
201. Kuznetsova T., **Mischak,H.**, Mullen,W., and Staessen,J.A. (2012). Urinary proteome analysis in hypertensive patients with left ventricular diastolic dysfunction. *Eur. Heart J.* *in press*.
202. **Mischak,H.** (2012). How to get proteomics to the clinic? Issues in clinical proteomics, exemplified by CE-MS. *Proteomics Clinical Applications* *in press*.
203. **Mischak,H.**, Ioannidis,J.P., Argiles,A., Attwood,T.K., Bongcam-Rudloff,E., Broenstrup,M., Charonis,A., Chrousos,G.P., Delles,C., Dominiczak,A., Dylag,T., Ehrich,J., Egidio,J., Findeisen,P., Jankowski,J., Johnson,R.W., Julien,B.A., Lankisch,T., Leung,H.Y., Maahs,D., Magni,F., Manns,M.P., Manolis,E., Mayer,G., Navis,G., Novak,J., Ortiz,A., Persson,F., Peter,K., Riese,H.H., Rossing,P., Sattar,N., Spasovski,G., Thongboonkerd,V., Vanholder,R., Schanstra,J.P., and Vlahou,A. (2012). Implementation of proteomic biomarkers: making it work. *Eur. J Clin Invest* 42, 1027-1036.
204. Molin,L., Seraglia,R., Lapolla,A., Ragazzi,E., Gonzalez,J., Vlahou,A., Schanstra,J.P., Albalat,A., Dakna,M., Siwy,J., Jankowski,J., Bitsika,V., **Mischak,H.**, Zurbig,P., and Traldi,P. (2012). A comparison between MALDI-MS and CE-MS data for biomarker assessment in chronic kidney diseases. *J. Proteomics* 75, 5888-5897.
205. Mullen,W., Albalat,A., Gonzalez,J., Zerefos,P., Siwy,J., Franke,J., and **Mischak,H.** (2012). Performance of different separation methods interfaced in the same MS-reflection TOF detector: a comparison of performance between CE versus HPLC for biomarker analysis. *Electrophoresis* 33, 567-574.
206. Roscioni,S., de Zeeuw D, Hellemons,M.E., **Mischak,H.**, Zuerbig,P., Bakker ,S.J.L., Gansevoort RT, Reinhard,H., Lajer,M., Rossing,P., and Lambers Heerspink,H.J. (2012). A urinary peptide biomarker set predicts worsening of albuminuria in type 2 diabetes. *Diabetologia* *in press*.
207. Rouse,R., Siwy,J., Mullen,W., **Mischak,H.**, Metzger,J., and Hanig,J. (2012). Proteomic candidate biomarkers of drug-induced nephrotoxicity in the rat. *Plos One* 7, e34606.
208. Siwy,J., Zoja,C., Klein,J., Benigni,A., Mullen,W., Mayer,B., **Mischak,H.**, Jankowski,J., Stevens,R., Vlahou,A., Kossida,S., Perco,P., and Bahlmann,F.H. (2012). Evaluation of the Zucker diabetic fatty (ZDF) rat as a model for human disease based on urinary peptidomic profiles. *Plos One* 7, e51334.
209. von Zur,M.C., Schiffer,E., Sackmann,C., Zurbig,P., Neudorfer,I., Zirlik,A., Htun,N., Iphofer,A., Jansch,L., **Mischak,H.**, Bode,C., Chen,Y.C., and Peter,K. (2012). Urine proteome analysis reflects atherosclerotic disease in an ApoE^{-/-} mouse model and allows the discovery of new biomarkers in mouse and human atherosclerosis. *Mol Cell Proteomics*.
210. Zurbig,P., Jerums,G., Hovind,P., Macisaac,R.J., **Mischak,H.**, Nielsen,S.E., Panagiotopoulos,S., Persson,F., and Rossing,P. (2012). Urinary proteomics for early diagnosis in diabetic nephropathy. *Diabetes* 61 , 3304-3313.
211. Albalat,A., Stalmach,A., Bitsika,V., Siwy,J., Schanstra,J.P., Petropoulos,A.D., Vlahou,A., Jankowski,J., Persson,F., Rossing,P., Jaskolla,T.W., **Mischak,H.**, and Husi,H. (2013). Improving

peptide relative quantification in MALDI-TOF MS for biomarker assessment. *Proteomics* 13, 2967-2975.

212. Albalat,A., Franke,J., Gonzalez,J., **Mischak,H.**, and Zurbig,P. (2013). Urinary proteomics based on capillary electrophoresis coupled to mass spectrometry in kidney disease. *Methods Mol Biol* 919, 203-213.
213. Argiles,A., Siwy,J., Duranton,F., Gayraud,N., Dakna,M., Lundin,U., Osaba,L., Delles,C., Mourad,G., Weinberger,K.M., and **Mischak,H.** (2013). CKD273, a new proteomics classifier assessing CKD and its prognosis. *Plos One* 8, e62837.
214. Dissard,R., Klein,J., Caubet,C., Breuil,B., Siwy,J., Hoffman,J., Sicard,L., Ducasse,L., Rascalou,S., Payre,B., Buleon,M., Mullen,W., **Mischak,H.**, Tack,I., Bascands,J.L., Buffin-Meyer,B., and Schanstra,J.P. (2013). Long term metabolic syndrome induced by a high fat high fructose diet leads to minimal renal injury in C57BL/6 mice. *Plos One* 8, e76703.
215. Frantzi,M., Zoidakis,J., Papadopoulos,T., Zurbig,P., Katafigiotis,I., Stravodimos,K., Lazaris,A., Giannopoulou,I., Ploumidis,A., **Mischak,H.**, Mullen,W., and Vlahou,A. (2013). IMAC fractionation in combination with LC-MS reveals H2B and NIF-1 peptides as potential bladder cancer biomarkers. *J Proteome Res* 12, 3969-3979.
216. Husi,H., Sanchez-Nino,M.D., Delles,C., Mullen,W., Vlahou,A., Ortiz,A., and **Mischak,H.** (2013). A combinatorial approach of Proteomics and Systems Biology in unravelling the mechanisms of acute kidney injury (AKI): involvement of NMDA receptor GRIN1 in murine AKI. *BMC Syst Biol* 7, 110.
217. Jankowski,V., Schulz,A., Kretschmer,A., **Mischak,H.**, Boehringer,F., van der,G.M., Janke,D., Schuchardt,M., Herwig,R., Zidek,W., and Jankowski,J. (2013). The enzymatic activity of the VEGFR2 receptor for the biosynthesis of dinucleoside polyphosphates. *J Mol Med (Berl)* 91, 1095-1107.
218. Kistler,A.D., Serra,A.L., Siwy,J., Poster,D., Krauer,F., Torres,V.E., Mrug,M., Grantham,J.J., Bae,K.T., Bost,J.E., Mullen,W., Wuthrich,R.P., **Mischak,H.**, and Chapman,A.B. (2013). Urinary proteomic biomarkers for diagnosis and risk stratification of autosomal dominant polycystic kidney disease: a multicentric study. *Plos One* 8, e53016.
219. Klein,G., Schanstra,J.P., Hoffmann,J., **Mischak,H.**, Siwy,J., and Zimmermann,K. (2013). Proteomics as a Quality Control Tool of Pharmaceutical Probiotic Bacterial Lysate Products. *Plos One* 8, e66682.
220. Klein,J., Lacroix,C., Caubet,C., Siwy,J., Zurbig,P., Dakna,M., Muller,F., Breuil,B., Stalmach,A., Mullen,W., **Mischak,H.**, Bandin,F., Monsarrat,B., Bascands,J.L., Decramer,S., and Schanstra,J.P. (2013). Fetal urinary peptides to predict postnatal outcome of renal disease in fetuses with posterior urethral valves (PUV). *Sci Transl. Med* 5, 198ra106.
221. Klein,J., Eales,J., Zurbig,P., Vlahou,A., **Mischak,H.**, and Stevens,R. (2013). Proteasix: a tool for automated and large-scale prediction of proteases involved in naturally occurring peptide generation. *Proteomics* 13, 1077-1082.
222. Latosinska,A., Frantzi,M., Vlahou,A., and **Mischak,H.** (2013). Clinical applications of capillary electrophoresis coupled to mass spectrometry in biomarker discovery: Focus on Bladder Cancer. *Proteomics Clin Appl.*
223. Mansor,R., Mullen,W., Albalat,A., Zerefos,P., **Mischak,H.**, Barrett,D.C., Biggs,A., and Eckersall,P.D. (2013). A peptidomic approach to biomarker discovery for bovine mastitis. *J Proteomics* 85, 89-98.
224. Metzger,J., Negm,A.A., Plentz,R.R., Weismuller,T.J., Wedemeyer,J., Karlsen,T.H., Dakna,M., Mullen,W., **Mischak,H.**, Manns,M.P., and Lankisch,T.O. (2013). Urine proteomic analysis differentiates cholangiocarcinoma from primary sclerosing cholangitis and other benign biliary disorders. *Gut* 62, 122-130.
225. **Mischak,H.**, Vlahou,A., and Ioannidis,J.P. (2013). Technical aspects and inter-laboratory variability in native peptide profiling: the CE-MS experience. *Clin Biochem.* 46, 432-443.

226. Stalmach,A., Albalat,A., Mullen,W., and **Mischak,H.** (2013). Recent advances in capillary electrophoresis coupled to mass spectrometry for clinical proteomic applications. *Electrophoresis* 34, 1452-1464.
227. Albalat,A., Husi,H., Stalmach,A., Schanstra,J.P., and **Mischak,H.** (2014). Classical MALDI-MS versus CE-based ESI-MS proteomic profiling in urine for clinical applications. *Bioanalysis*. 6, 247-266.
228. Duranton,F., Lundin,U., Gayraud,N., **Mischak,H.**, Aparicio,M., Mourad,G., Daures,J.P., Weinberger,K.M., and Argiles,A. (2014). Plasma and urinary amino acid metabolomic profiling in patients with different levels of kidney function. *Clin. J. Am. Soc. Nephrol.* 9, 37-45.
229. Filip,S., Pontillo,C., Peter,S.J., Vlahou,A., **Mischak,H.**, and Klein,J. (2014). Urinary proteomics and molecular determinants of chronic kidney disease: possible link to proteases. *Expert Rev. Proteomics* 11, 535-548.
230. Filip,S., Zoidakis,J., Vlahou,A., and **Mischak,H.** (2014). Advances in urinary proteome analysis and applications in systems biology. *Bioanalysis* 6, 2549-2569.
231. Frantzi,M., Metzger,J., Banks,R.E., Husi,H., Klein,J., Dakna,M., Mullen,W., Cartledge,J.J., Schanstra,J.P., Brand,K., Kuczyk,M.A., **Mischak,H.**, Vlahou,A., Theodorescu,D., and Merseburger,A.S. (2014). Discovery and validation of urinary biomarkers for detection of renal cell carcinoma. *J. Proteomics* 98, 44-58.
232. Gu,Y.M., Thijs,L., Liu,Y.P., Zhang,Z., Jacobs,L., Koeck,T., Zurbig,P., Lichtinghagen,R., Brand,K., Kuznetsova,T., Olivi,L., Verhamme,P., Delles,C., **Mischak,H.**, and Staessen,J.A. (2014). The urinary proteome as correlate and predictor of renal function in a population study. *Nephrol Dial Transplant* 29, 2260-2268.
233. Husi,H., Van,A.T., Mullen,W., Bahlmann,F.H., Schanstra,J.P., Vlahou,A., Delles,C., Perco,P., and **Mischak,H.** (2014). Proteome-based systems biology analysis of the diabetic mouse aorta reveals major changes in Fatty Acid biosynthesis as potential hallmark in diabetes mellitus-associated vascular disease. *Circ. Cardiovasc. Genet.* 7, 161-170.
234. Klein,J., Papadopoulos,T., **Mischak,H.**, and Mullen,W. (2014). Comparison of CE-MS/MS and LC-MS/MS sequencing demonstrates significant complementarity in natural peptide identification in human urine. *Electrophoresis* 35, 1060-1064.
235. Klein,J., Buffin-Meyer,B., Mullen,W., Carty,D.M., Delles,C., Vlahou,A., **Mischak,H.**, Decramer,S., Bascands,J.L., and Schanstra,J.P. (2014). Clinical proteomics in obstetrics and neonatology. *Expert. Rev. Proteomics* 11, 75-89.
236. Koss,M.J., Hoffmann,J., Nguyen,N., Pfister,M., **Mischak,H.**, Mullen,W., Husi,H., Rejdak,R., Koch,F., Jankowski,J., Krueger,K., Bertelmann,T., Klein,J., Schanstra,J.P., and Siwy,J. (2014). Proteomics of vitreous humor of patients with exudative age-related macular degeneration. *Plos One* 9, e96895.
237. **Mischak,H.**, Vlahou,A., Righetti,P.G., and Calvete,J.J. (2014). Putting value in biomarker research and reporting. *J. Proteomics* 96, A1-A3.
238. Mullen,W., Saigusa,D., Abe,T., Adamski,J., and **Mischak,H.** (2014). Proteomics and Metabolomics as Tools to Unravel Novel Culprits and Mechanisms of Uremic Toxicity: Instrument or Hype? *Semin. Nephrol.* 34, 180-190.
239. Nkuipou-Kenfack,E., Koeck,T., **Mischak,H.**, Pich,A., Schanstra,J.P., Zurbig,P., and Schumacher,B. (2014). Proteome analysis in the assessment of ageing. *Ageing Res Rev.* 18C, 74-85.
240. Nkuipou-Kenfack,E., Duranton,F., Gayraud,N., Argiles,A., Lundin,U., Weinberger,K.M., Dakna,M., Delles,C., Mullen,W., Husi,H., Klein,J., Koeck,T., Zurbig,P., and **Mischak,H.** (2014). Assessment of metabolomic and proteomic biomarkers in detection and prognosis of progression of renal function in chronic kidney disease. *Plos One* 9, e96955.

241. Rodriguez-Suarez,E., Siwy,J., Zurbig,P., and **Mischak,H.** (2014). Urine as a source for clinical proteome analysis: From discovery to clinical application. *Biochim. Biophys. Acta* 1844, 884-898.
242. Schanstra,J.P. and **Mischak,H.** (2014). Proteomic urinary biomarker approach in renal disease: from discovery to implementation. *Pediatr. Nephrol.*
243. Seetho,I.W., Siwy,J., Albalat,A., Mullen,W., **Mischak,H.**, Parker,R.J., Craig,S., Duffy,N., Hardy,K.J., Burniston,J.G., and Wilding,J.P. (2014). Urinary proteomics in obstructive sleep apnoea and obesity. *Eur. J Clin Invest* 44, 1104-1115.
244. Siwy,J., Schanstra,J.P., Argiles,A., Bakker,S.J., Beige,J., Boucek,P., Brand,K., Delles,C., Duranton,F., Fernandez-Fernandez,B., Jankowski,M.L., Al,K.M., Kunt,T., Lajer,M., Lichtinghagen,R., Lindhardt,M., Maahs,D.M., **Mischak,H.**, Mullen,W., Navis,G., Noutsou,M., Ortiz,A., Persson,F., Petrie,J.R., Roob,J.M., Rossing,P., Ruggenenti,P., Rychlik,I., Serra,A.L., Snell-Bergeon,J., Spasovski,G., Stojceva-Taneva,O., Trillini,M., von der,L.H., Winklhofer-Roob,B.M., Zurbig,P., and Jankowski,J. (2014). Multicentre prospective validation of a urinary peptidome-based classifier for the diagnosis of type 2 diabetic nephropathy. *Nephrol. Dial. Transplant.*
245. Stalmach,A., Johnsson,H., McInnes,I.B., Husi,H., Klein,J., Dakna,M., Mullen,W., **Mischak,H.**, and Porter,D. (2014). Identification of urinary peptide biomarkers associated with rheumatoid arthritis. *Plos One* 9, e104625.
246. Weissinger,E.M., Metzger,J., Dobbstein,C., Wolff,D., Schleuning,M., Kuzmina,Z., Greinix,H., Dickinson,A.M., Mullen,W., Kreipe,H., Hamwi,I., Morgan,M., Krons,A., Tchebotarenko,I., Ihlenburg-Schwarz,D., Dammann,E., Collin,M., Ehrlich,S., Diedrich,H., Stadler,M., Eder,M., Holler,E., **Mischak,H.**, Krauter,J., and Ganser,A. (2014). Proteomic peptide profiling for preemptive diagnosis of acute graft-versus-host disease after allogeneic stem cell transplantation. *Leukemia* 28, 842-852.
247. Zhang,Z., Staessen,J.A., Thijs,L., Gu,Y., Liu,Y., Jacobs,L., Koeck,T., Zurbig,P., **Mischak,H.**, and Kuznetsova,T. (2014). Left ventricular diastolic function in relation to the urinary proteome: a proof-of-concept study in a general population. *Int. J Cardiol.* 176, 158-165.
248. Bhat,A., Dakna,M., and **Mischak,H.** (2015). Integrating proteomics profiling data sets: a network perspective. *Methods Mol Biol* 1243, 237-253.
249. Bhat,A., Heinzl,A., Mayer,B., Perco,P., Muhlberger,I., Husi,H., Merseburger,A.S., Zoidakis,J., Vlahou,A., Schanstra,J.P., **Mischak,H.**, and Jankowski,V. (2015). Protein interactome of muscle invasive bladder cancer. *Plos One* 10, e0116404.
250. Brown,C.E., McCarthy,N.S., Hughes,A.D., Sever,P., Stalmach,A., Mullen,W., Dominiczak,A.F., Sattar,N., **Mischak,H.**, Thom,S., Mayet,J., Stanton,A.V., and Delles,C. (2015). Urinary proteomic biomarkers to predict cardiovascular events. *Proteomics Clin Appl.*
251. Filip,S., Vougas,K., Zoidakis,J., Latosinska,A., Mullen,W., Spasovski,G., **Mischak,H.**, Vlahou,A., and Jankowski,J. (2015). Comparison of Depletion Strategies for the Enrichment of Low-Abundance Proteins in Urine. *PLoS One* 10, e0133773.
252. Frantzi,M., Latosinska,A., Fluhe,L., Hupe,M.C., Critselis,E., Kramer,M.W., Merseburger,A.S., **Mischak,H.**, and Vlahou,A. (2015a). Developing proteomic biomarkers for bladder cancer: towards clinical application. *Nat. Rev. Urol* 12, 317-330.
253. Frantzi,M., Latosinska,A., Merseburger,A.S., and **Mischak,H.** (2015b). Recent progress in urinary proteome analysis for prostate cancer diagnosis and management. *Expert Rev. Mol. Diagn.* 15, 1539-1554.
254. Gleiss,A., Dakna,M., **Mischak,H.**, and Heinze,G. (2015). Two-group comparisons of zero-inflated intensity values: the choice of test statistic matters. *Bioinformatics.* 31, 2310-2317.
255. Glorieux,G., Mullen,W., Duranton,F., Filip,S., Gayrard,N., Husi,H., Schepers,E., Neiryck,N., Schanstra,J.P., Jankowski,J., **Mischak,H.**, Argiles,A., Vanholder,R., Vlahou,A., and Klein,J. (2015). New insights in molecular mechanisms involved in chronic kidney disease using high-resolution plasma proteome analysis. *Nephrol. Dial. Transplant.* 30, 1842-1852.

256. Jankowski,J., Schanstra,J.P., and **Mischak,H.** (2015). Body fluid peptide and protein signatures in diabetic kidney diseases. *Nephrol. Dial. Transplant.* 30 Suppl 4, iv43-iv53.
257. Latosinska,A., Vougas,K., Makridakis,M., Klein,J., Mullen,W., Abbas,M., Stravodimos,K., Katafigiotis,I., Merseburger,A.S., Zoidakis,J., **Mischak,H.**, Vlahou,A., and Jankowski,V. (2015). Comparative Analysis of Label-Free and 8-Plex iTRAQ Approach for Quantitative Tissue Proteomic Analysis. *PLoS One* 10, e0137048.
- 258.**Mischak,H.**, Critselis,E., Hanash,S., Gallagher,W.M., Vlahou,A., and Ioannidis,J.P. (2015). Epidemiologic design and analysis for proteomic studies: a primer on -omic technologies. *Am. J Epidemiol.* 181, 635-647.
- 259.**Mischak,H.**, Delles,C., Vlahou,A., and Vanholder,R. (2015). Proteomic biomarkers in kidney disease: issues in development and implementation. *Nat. Rev. Nephrol* 11, 221-232.
- 260.**Mischak,H.** (2015). Pro: Urine proteomics as a liquid kidney biopsy: no more kidney punctures! *Nephrol Dial Transplant* 30, 532-537.
- 261.**Mischak,H.** (2015). Opponent's comments. *Nephrol Dial Transplant* 30, 531-532.
- 262.Nally,J.E., Mullen,W., Callanan,J.J., **Mischak,H.**, and Albalat,A. (2015). Detection of urinary biomarkers in reservoir hosts of leptospirosis by capillary electrophoresis-mass spectrometry. *Proteomics Clin. Appl.* 9, 543-551.
- 263.Nkuipou-Kenfack,E., Bhat,A., Klein,J., Jankowski,V., Mullen,W., Vlahou,A., Dakna,M., Koeck,T., Schanstra,J.P., Zurbig,P., Rudolph,K.L., Schumacher,B., Pich,A., and **Mischak,H.** (2015). Identification of ageing-associated naturally occurring peptides in human urine. *Oncotarget* 6, 34106-34117.
- 264.Pejchinovski,M., Hrnjez,D., Ramirez-Torres,A., Bitsika,V., Mermelekas,G., Vlahou,A., Zurbig,P., **Mischak,H.**, Metzger,J., and Koeck,T. (2015). Capillary zone electrophoresis on-line coupled to mass spectrometry: A perspective application for clinical proteomics. *Proteomics Clin. Appl.* 9, 453-468.
- 265.Pejchinovski,M., Klein,J., Ramirez-Torres,A., Bitsika,V., Mermelekas,G., Vlahou,A., Mullen,W., **Mischak,H.**, and Jankowski,V. (2015). Comparison of higher energy collisional dissociation and collision-induced dissociation MS/MS sequencing methods for identification of naturally occurring peptides in human urine. *Proteomics. Clin. Appl.* 9, 531-542.
- 266.Pena,M.J., de,Z.D., **Mischak,H.**, Jankowski,J., Oberbauer,R., Woloszczuk,W., Benner,J., Dallmann,G., Mayer,B., Mayer,G., Rossing,P., and Lambers Heerspink,H.J. (2015). Prognostic clinical and molecular biomarkers of renal disease in type 2 diabetes. *Nephrol. Dial. Transplant.* 30 Suppl 4, iv86-iv95.
- 267.Pontillo,C., Filip,S., Borrás,D.M., Mullen,W., Vlahou,A., and **Mischak,H.** (2015). CE-MS-based proteomics in biomarker discovery and clinical application. *Proteomics Clin Appl.* 9, 322-334.
- 268.Schanstra,J.P., Zurbig,P., Alkhalaf,A., Argiles,A., Bakker,S.J., Beige,J., Bilo,H.J., Chatzikyrkou,C., Dakna,M., Dawson,J., Delles,C., Haller,H., Haubitz,M., Husi,H., Jankowski,J., Jerums,G., Kleefstra,N., Kuznetsova,T., Maahs,D.M., Menne,J., Mullen,W., Ortiz,A., Persson,F., Rossing,P., Ruggenenti,P., Rychlik,I., Serra,A.L., Siwy,J., Snell-Bergeon,J., Spasovski,G., Staessen,J.A., Vlahou,A., **Mischak,H.**, and Vanholder,R. (2015). Diagnosis and Prediction of CKD Progression by Assessment of Urinary Peptides. *J Am Soc. Nephrol.* 26, 1999-2010.
- 269.Seetho,I.W., Ramirez-Torres,A., Albalat,A., Mullen,W., **Mischak,H.**, Parker,R.J., Craig,S., Duffy,N., Hardy,K.J., Burniston,J.G., and Wilding,J.P. (2015). Urinary proteomic profiling in severe obesity and obstructive sleep apnoea with CPAP treatment. *Sleep Sci.* 8, 58-67.
270. Silva,S., Bronze,M.R., Figueira,M.E., Siwy,J., **Mischak,H.**, Combet,E., and Mullen,W. (2015). Impact of a 6-wk olive oil supplementation in healthy adults on urinary proteomic biomarkers of coronary artery disease, chronic kidney disease, and diabetes (types 1 and 2): a randomized, parallel, controlled, double-blind study. *Am. J Clin Nutr.* 101, 44-54.

271. Stalmach,A., Husi,H., Mosbahi,K., Albalat,A., Mullen,W., and **Mischak,H.** (2015). Methods in capillary electrophoresis coupled to mass spectrometry for the identification of clinical proteomic/peptidomic biomarkers in biofluids. *Methods Mol Biol* 1243, 187-205.
272. Zhang,Z.Y., Thijs,L., Petit,T., Gu,Y.M., Jacobs,L., Yang,W.Y., Liu,Y.P., Koeck,T., Zurbig,P., Jin,Y., Verhamme,P., Voigt,J.U., Kuznetsova,T., **Mischak,H.**, and Staessen,J.A. (2015). Urinary Proteome and Systolic Blood Pressure as Predictors of 5-Year Cardiovascular and Cardiac Outcomes in a General Population. *Hypertension* 66, 52-60.
273. Drube,J., Zuerbig,P., **Mischak,H.**, and Pape,L. (2016). Chronic kidney disease can be identified reliably by urinary proteome analysis in children after orthotopic liver transplantation. *Pediatric Nephrology* 31, 1748.
274. Bhat,A., Mokou,M., Zoidakis,J., Jankowski,V., Vlahou,A., and **Mischak,H.** (2016). BcCluster: A Bladder Cancer Database at the Molecular Level. *Bladder. Cancer* 2, 65-76.
275. Carrick,E., Vanmassenhove,J., Glorieux,G., Metzger,J., Dakna,M., Pejchinovski,M., Jankowski,V., Mansoorian,B., Husi,H., Mullen,W., **Mischak,H.**, Vanholder,R., and Van,B.W. (2016). Development of a MALDI MS-based platform for early detection of acute kidney injury. *Proteomics. Clin. Appl.* 10, 732-742.
276. Cisek,K., Krochmal,M., Klein,J., and **Mischak,H.** (2016). The application of multi-omics and systems biology to identify therapeutic targets in chronic kidney disease. *Nephrology Dialysis Transplantation* 31, 2003-2011.
277. Farmakis,D., Koeck,T., Mullen,W., Parissis,J., Gogas,B.D., Nikolaou,M., Lekakis,J., **Mischak,H.**, and Filippatos,G. (2016). Urine proteome analysis in heart failure with reduced ejection fraction complicated by chronic kidney disease: feasibility, and clinical and pathogenetic correlates. *Eur. J. Heart Fail.* 18, 822-829.
278. Frantzi,M., van Kessel,K.E., Zwarthoff,E.C., Marquez,M., Rava,M., Malats,N., Merseburger,A.S., Katafigiotis,I., Stravodimos,K., Mullen,W., Zoidakis,J., Makridakis,M., Pejchinovski,M., Critselis,E., Lichtinghagen,R., Brand,K., Dakna,M., Roubelakis,M.G., Theodorescu,D., Vlahou,A., **Mischak,H.**, and Anagnou,N.P. (2016). Development and Validation of Urine-based Peptide Biomarker Panels for Detecting Bladder Cancer in a Multi-center Study. *Clin. Cancer Res.* 22, 4077-4086.
279. Frantzi,M., Klimou,Z., Makridakis,M., Zoidakis,J., Latosinska,A., Borrás,D.M., Janssen,B., Giannopoulou,I., Lygirou,V., Lazaris,A.C., Anagnou,N.P., **Mischak,H.**, Roubelakis,M.G., and Vlahou,A. (2016). Silencing of Profilin-1 suppresses cell adhesion and tumor growth via predicted alterations in integrin and Ca²⁺ signaling in T24M-based bladder cancer models. *Oncotarget.* 7, 70750-70768.
280. Klein,J., Bascands,J.L., **Mischak,H.**, and Schanstra,J.P. (2016). The role of urinary peptidomics in kidney disease research. *Kidney Int.* 89, 539-545.
281. Klein,J., Ramirez-Torres,A., Ericsson,A., Huang,Y., Breuil,B., Siwy,J., **Mischak,H.**, Peng,X.R., Bascands,J.L., and Schanstra,J.P. (2016). Urinary peptidomics provides a noninvasive humanized readout of diabetic nephropathy in mice. *Kidney International* 90, 1045-1055.
282. Krochmal,M., Fernandes,M., Filip,S., Pontillo,C., Husi,H., Zoidakis,J., **Mischak,H.**, Vlahou,A., and Jankowski,J. (2016). PeptiCKDdb-peptide- and protein-centric database for the investigation of genesis and progression of chronic kidney disease. *Database. (Oxford)* 2016.
283. Latosinska,A., Makridakis,M., Frantzi,M., Borrás,D.M., Janssen,B., Mullen,W., Zoidakis,J., Merseburger,A.S., Jankowski,V., **Mischak,H.**, and Vlahou,A. (2016). Integrative analysis of extracellular and intracellular bladder cancer cell line proteome with transcriptome: improving coverage and validity of -omics findings. *Sci. Rep.* 6, 25619.
284. Lindhardt,M., Persson,F., Currie,G., Pontillo,C., Beige,J., Delles,C., von der,L.H., **Mischak,H.**, Navis,G., Noutsou,M., Ortiz,A., Ruggenenti,P.L., Rychlik,I., Spasovski,G., and Rossing,P. (2016). Proteomic prediction and Renin angiotensin aldosterone system Inhibition prevention Of early diabetic

nephropathy in Type 2 diabetic patients with normoalbuminuria (PRIORITY): essential study design and rationale of a randomised clinical multicentre trial. *BMJ Open*. 6, e010310.

285. Magalhaes,P., **Mischak,H.**, and Zurbig,P. (2016). Urinary proteomics using capillary electrophoresis coupled to mass spectrometry for diagnosis and prognosis in kidney diseases. *Curr. Opin. Nephrol. Hypertens.* 25, 494-501.
286. Magalhaes,P., Schanstra,J.P., Carrick,E., **Mischak,H.**, and Zuerbig,P. (2016). Urinary biomarkers for renal tract malformations. *Expert Review of Proteomics* 13, 1121-1129.
287. Martin-Pozuelo,G., Gonzalez-Barrio,R., Barbera,G.G., Albalat,A., Garcia-Alonso,J., Mullen,W., **Mischak,H.**, and Periago,M.J. (2016). Tomato Juice Consumption Modifies the Urinary Peptide Profile in Sprague-Dawley Rats with Induced Hepatic Steatosis. *International Journal of Molecular Sciences* 17.
288. Metzger,J., Mullen,W., Husi,H., Stalmach,A., Herget-Rosenthal,S., Groesdonk,H.V., **Mischak,H.**, and Klingele,M. (2016). Acute kidney injury prediction in cardiac surgery patients by a urinary peptide pattern: a case-control validation study. *Crit Care* 20, 157.
289. Neisius,U., Koeck,T., **Mischak,H.**, Rossi,S.H., Olson,E., Carty,D.M., Dymott,J.A., Dominiczak,A.F., Berry,C., Oldroyd,K.G., and Delles,C. (2016). Urine proteomics in the diagnosis of stable angina. *BMC. Cardiovasc. Disord.* 16, 70.
290. Pena,M.J., **Mischak,H.**, and Heerspink,H.J. (2016). Proteomics for prediction of disease progression and response to therapy in diabetic kidney disease. *Diabetologia* 59, 1819-1831.
291. Pontillo,C. and **Mischak,H.** (2016). Urinary biomarkers to predict CKD: is the future in multi-marker panels? *Nephrol. Dial. Transplant.* 31, 1373-1375.
292. Rossing,K., Bosselmann,H.S., Gustafsson,F., Zhang,Z.Y., Gu,Y.M., Kuznetsova,T., Nkuipou-Kenfack,E., **Mischak,H.**, Staessen,J.A., Koeck,T., and Schou,M. (2016). Urinary Proteomics Pilot Study for Biomarker Discovery and Diagnosis in Heart Failure with Reduced Ejection Fraction. *PLoS One*. 11, e0157167.
293. Schonemeier,B., Metzger,J., Klein,J., Husi,H., Bremer,B., Armbrrecht,N., Dakna,M., Schanstra,J.P., Rosendahl,J., Wiegand,J., Jager,M., Mullen,W., Breuil,B., Plentz,R.R., Lichtinghagen,R., Brand,K., Kuhnel,F., **Mischak,H.**, Manns,M.P., and Lankisch,T.O. (2016). Urinary Peptide Analysis Differentiates Pancreatic Cancer From Chronic Pancreatitis. *Pancreas* 45, 1018-1026.
294. Stanley,E., Delatola,E.I., Nkuipou-Kenfack,E., Spooner,W., Kolch,W., Schanstra,J.P., **Mischak,H.**, and Koeck,T. (2016). Comparison of different statistical approaches for urinary peptide biomarker detection in the context of coronary artery disease. *Bmc Bioinformatics* 17.
295. Stepczynska,A., Schanstra,J.P., and **Mischak,H.** (2016). Implementation of CE-MS-identified proteome-based biomarker panels in drug development and patient management. *Bioanalysis*. 8, 439-455.
296. von Zur,M.C., Koeck,T., Schiffer,E., Sackmann,C., Zurbig,P., Hilgendorf,I., Reinohl,J., Rivera,J., Zirlik,A., Hehrlein,C., **Mischak,H.**, Bode,C., and Peter,K. (2016). Urine proteome analysis as a discovery tool in patients with deep vein thrombosis and pulmonary embolism. *Proteomics. Clin. Appl.* 10, 574-584.
297. Zhang,Z.Y., Ravassa,S., Yang,W.Y., Petit,T., Pejchinovski,M., Zuerbig,P., Lopez,B., Wei,F.F., Pontillo,C., Thijs,L., Jacobs,L., Gonzalez,A., Koeck,T., Delles,C., Voigt,J.U., Verhamme,P., Kuznetsova,T., Diez,J., **Mischak,H.**, and Staessen,J.A. (2016). Diastolic Left Ventricular Function in Relation to Urinary and Serum Collagen Biomarkers in a General Population. *Plos One* 11.
298. Albalat,A., Mullen,W., Husi,H., and **Mischak,H.** (2017). Tissue Proteomics in Vascular Disease. *Hypertension: Methods and Protocols* 1527, 53-60.
299. Carleo,A., Chorostowska-Wynimko,J., Koeck,T., **Mischak,H.**, Czajkowska-Malinowska,M., Rozy,A., Welte,T., and Janciauskiene,S. (2017). Does urinary peptide content differ between COPD patients with

and without inherited alpha-1 antitrypsin deficiency? *International Journal of Chronic Obstructive Pulmonary Disease* 12, 829-837.

300. Cherney,D., Perkins,B.A., Lytvyn,Y., Heerspink,H., Rodriguez-Ortie,M.E., and **Mischak,H.** (2017). The effect of sodium/glucose cotransporter 2 (SGLT2) inhibition on the urinary proteome. *Plos One* 12.
301. Drube,J., Zuerbig,P., Beige,J., **Mischak,H.**, and Jankowski,J. (2017). Proteome Analysis: New Approaches for Improved Treatment of Diabetic Nephropathy. *Diabetologie und Stoffwechsel* 12, 213-221.
302. Htun,N.M., Magliano,D.J., Zhang,Z.Y., Lyons,J., Petit,T., Nkuipou-Kenfack,E., Ramirez-Torres,A., von zur Muhlen,C., Maahs,D., Schanstra,J.P., Pontillo,C., Pejchinovski,M., Snell-Bergeon,J.K., Delles,C., **Mischak,H.**, Staessen,J.A., Shaw,J.E., Koeck,T., and Peter,K. (2017). Prediction of acute coronary syndromes by urinary proteome analysis. *Plos One* 12.
303. Kanzelmeyer,N., Zuerbig,P., **Mischak,H.**, Heidelruszai,K., Seemann,T., Hansen,M., Fichtner,A., Toenshoff,B., Melk,A., and Pape,L. (2017). Urinary Proteomics to Diagnose Chronic-Antibody-Mediated Rejection in Pediatric Kidney Transplantation. *Pediatric Nephrology* 32, 1671-1672.
304. Krochmal,M., Cisek,K., Filip,S., Markoska,K., Orange,C., Zoidakis,J., Gakiopoulou,C., Spasovski,G., **Mischak,H.**, Delles,C., Vlahou,A., and Jankowski,J. (2017). Identification of novel molecular signatures of IgA nephropathy through an integrative -omics analysis. *Scientific Reports* 7.
305. Krochmal,M., Kontostathi,G., Magalhaes,P., Makridakis,M., Klein,J., Husi,H., Leierer,J., Mayer,G., Bascands,J.L., Denis,C., Zoidakis,J., Zuerbig,P., Delles,C., Schanstra,J.P., **Mischak,H.**, and Vlahou,A. (2017). Urinary peptidomics analysis reveals proteases involved in diabetic nephropathy. *Scientific Reports* 7.
306. Latosinska,A., Mokou,M., Makridakis,M., Mullen,W., Zoidakis,J., Lygirou,V., Frantzi,M., Katafigiotis,I., Stravodimos,K., Hupe,M.C., Dobrzynski,M., Kolch,W., Merseburger,A.S., **Mischak,H.**, Roubelakis,M.G., and Vlahou,A. (2017). Proteomics analysis of bladder cancer invasion: Targeting EIF3D for therapeutic intervention. *Oncotarget* 8, 69435-69455.
307. Lindhardt,M., Persson,F., Zuerbig,P., Stalmach,A., **Mischak,H.**, de Zeeuw,D., Heerspink,H.L., Klein,R., Orchard,T., Porta,M., Fuller,J., Bilous,R., Chaturvedi,N., Parving,H.H., and Rossing,P. (2017). Urinary proteomics predict onset of microalbuminuria in normoalbuminuric type 2 diabetic patients, a sub-study of the DIRECT-Protect 2 study. *Nephrology Dialysis Transplantation* 32, 1866-1873.
308. Magalhaes,P., Pejchinovski,M., Markoska,K., Banasik,M., Klinger,M., Svec-Billa,D., Rychlik,I., Rroji,M., Restivo,A., Capasso,G., Bob,F., Schiller,A., Ortiz,A., Vanessa Perez-Gomez,M., Cannata,P., Dolores Sanchez-Nino,M., Naumovic,R., Brkovic,V., Polenakovic,M., Mullen,W., Vlahou,A., Zuerbig,P., Pape,L., Ferrario,F., Denis,C., Spasovski,G., **Mischak,H.**, and Schanstra,J.P. (2017). Association of kidney fibrosis with urinary peptides: a path towards non-invasive liquid biopsies? *Scientific Reports* 7.
309. Markoska,K., Pejchinovski,M., Pontillo,C., Zurbig,P., Jacobs,L., Smith,A., Masin-Spasovska,J., Stojceva-Taneva,O., Polenakovic,M., Magni,F., **Mischak,H.**, and Spasovski,G. (2017). Urinary peptide biomarker panel associated with an improvement in estimated glomerular filtration rate in chronic kidney disease patients. *Nephrology, dialysis, transplantation : official publication of the European Dialysis and Transplant Association - European Renal Association*.
310. Mokou,M., Lygirou,V., Vlahou,A., and **Mischak,H.** (2017). Proteomics in cardiovascular disease: recent progress and clinical implication and implementation. *Expert Review of Proteomics* 14, 117-136.
311. Nkuipou-Kenfack,E., Zuerbig,P., and **Mischak,H.** (2017). The long path towards implementation of clinical proteomics: Exemplified based on CKD273. *Proteomics Clinical Applications* 11.
312. Nkuipou-Kenfack,E., Schanstra,J.P., Bajwa,S., Pejchinovski,M., Vinel,C., Dray,C., Valet,P., Bascands,J.L., Vlahou,A., Koeck,T., Borries,M., Busch,H., Bechtel-Walz,W., Huber,T.B., Rudolph,K.L., Pich,A., **Mischak,H.**, and Zuerbig,P. (2017). The use of urinary proteomics in the assessment of suitability of mouse models for ageing. *Plos One* 12.

313. Ortiz,A., Husi,H., Gonzalez-Lafuente,L., Valino-Rivas,L., Fresno,M., Belen Sanz,A., Mullen,W., Albalat,A., Mezzano,S., Vlahou,T., **Mischak,H.**, and Dolores Sanchez-Nino,M. (2017). Mitogen-Activated Protein Kinase 14 Promotes AKI. *Journal of the American Society of Nephrology* 28, 823-836.
314. Pejchinovski,M., Siwy,J., Metzger,J., Dakna,M., **Mischak,H.**, Klein,J., Jankowski,V., Bae,K.T., Chapman,A.B., and Kistler,A.D. (2017). Urine peptidome analysis predicts risk of end-stage renal disease and reveals proteolytic pathways involved in autosomal dominant polycystic kidney disease progression. *Nephrology Dialysis Transplantation* 32, 487-497.
315. Pontillo,C. and **Mischak,H.** (2017). Urinary peptide-based classifier CKD273: towards clinical application in chronic kidney disease. *Clinical Kidney Journal* 10, 192-201.
316. Pontillo,C., Jacobs,L., Staessen,J.A., Schanstra,J.P., Rossing,P., Heerspink,H.J., Siwy,J., Mullen,W., Vlahou,A., **Mischak,H.**, Vanholder,R., Zuerbig,P., and Jankowski,J. (2017). A urinary proteome-based classifier for the early detection of decline in glomerular filtration. *Nephrology Dialysis Transplantation* 32, 1510-1516.
317. Pontillo,C., Zhang,Z.Y., Schanstra,J.P., Jacobs,L., Zuerbig,P., Thijs,L., Ramirez-Torres,A., Heerspink,H.J., Lindhardt,M., Klein,R., Orchard,T., Porta,M., Bilous,R.W., Charturvedi,N., Rossing,P., Vlahou,A., Schepers,E., Glorieux,G., Mullen,W., Delles,C., Verhamme,P., Vanholder,R., Staessen,J.A., **Mischak,H.**, and Jankowski,J. (2017). Prediction of Chronic Kidney Disease Stage 3 by CKD273, a Urinary Proteomic Biomarker. *Kidney International Reports* 2, 1066-1075.
318. Siebert,S., Porter,D., Paterson,C., Hampson,R., Gaya,D., Latosinska,A., **Mischak,H.**, Schanstra,J., Mullen,W., and McInnes,I. (2017). Urinary proteomics can define distinct diagnostic inflammatory arthritis subgroups. *Sci. Rep.* 7, 40473.
319. Siwy,J., Zuerbig,P., Argiles,A., Beige,J., Haubitz,M., Jankowski,J., Julian,B.A., Linde,P.G., Marx,D., **Mischak,H.**, Mullen,W., Novak,J., Ortiz,A., Persson,F., Pontillo,C., Rossing,P., Rupprecht,H., Schanstra,J.P., Vlahou,A., and Vanholder,R. (2017). Noninvasive diagnosis of chronic kidney diseases using urinary proteome analysis. *Nephrology Dialysis Transplantation* 32, 2079-2089.
320. Voigtlaender,T., Metzger,J., Schoenemeier,B., Jaeger,M., **Mischak,H.**, Manns,M.P., and Lankisch,T.O. (2017). A combined bile and urine proteomic test for cholangiocarcinoma diagnosis in patients with biliary strictures of unknown origin. *United European Gastroenterology Journal* 5, 668-676.
321. Wei,R., Gao,B., Shih,F., Ranger,A., Dearth,A., **Mischak,H.**, Siwy,J., Wisniacki,N., Petri,M., and Burkly,L.C. (2017). Alterations in urinary collagen peptides in lupus nephritis subjects correlate with renal dysfunction and renal histopathology. *Nephrology Dialysis Transplantation* 32, 1468-1477.
322. Zhang,Z.Y., Ravassa,S., Pejchinovski,M., Yang,W.Y., Zuerbig,P., Lopez,B., Wei,F.F., Thijs,L., Jacobs,L., Gonzalez,A., Voigt,J.U., Verhamme,P., Kuznetsova,T., Diez,J., **Mischak,H.**, and Staessen,J.A. (2017). A Urinary Fragment of Mucin-1 Subunit alpha Is a Novel Biomarker Associated With Renal Dysfunction in the General Population. *Kidney International Reports* 2, 811-820.
323. Zhang,Z.Y., Ravassa,S., Nkuipou-Kenfack,E., Yang,W.Y., Kerr,S.M., Koeck,T., Campbell,A., Kuznetsova,T., **Mischak,H.**, Padmanabhan,S., Dominiczak,A.F., Delles,C., and Staessen,J.A. (2017). Novel Urinary Peptidomic Classifier Predicts Incident Heart Failure. *Journal of the American Heart Association* 6.
324. Zoidakis,J., Mokou,M., Galaras,A., Latosinska,A., Lygirou,V., Makridakis,M., Fragkoulis,C., Mullen,W., **Mischak,H.**, Roubelakis,M., Merseburger,A., Ntoumas,K., and Vlahou,A. (2017). Proteomics phenotyping of bladder cancer. *Urologic Oncology-Seminars and Original Investigations* 35, 620-621.
325. Magalhaes,P., Pontillo,C., Pejchinovski,M., Siwy,J., Krochmal,M., Makridakis,M., Carrick,E., Klein,J., Mullen,W., Jankowski,J., Vlahou,A., **Mischak,H.**, Schanstra,J.P., Zurbig,P., and Pape,L. (2018). Comparison of urine and plasma peptidome indicates selectivity in renal peptide handling. *Proteomics. Clinical applications* 12 e1700163.

326. Belczacka,I., Latosinska,A., Siwy,J., Metzger,J., Merseburger,A.S., **Mischak,H.**, Vlahou,A., Frantzi,M., and Jankowski,V. (2018). Urinary CE-MS peptide marker pattern for detection of solid tumors. *Scientific Reports* 8, 12864
327. Currie,G.E., von Scholten,B.J., Mary,S., Guerrero,J.L.F., Lindhardt,M., Reinhard,H., Jacobsen,P.K., Mullen,W., Parving,H.H., **Mischak,H.**, Rossing,P., and Delles,C. (2018). Urinary proteomics for prediction of mortality in patients with type 2 diabetes and microalbuminuria. *Cardiovascular Diabetology* 17.
328. Dacheva,I., Reich,M., Nobl,M., Ceglowska,K., Wasiak,J., Siwy,J., Zuerbig,P., **Mischak,H.**, Koch,F., Kopitz,J., Kretz,F., Tandogan,T., Auffarth,G., and Koss,M. (2018). Proteome analysis of undiluted vitreous humor in patients with branch retinal vein occlusion. *Ophthalmologie* 115, 203-215.
329. Frantzi,M., Latosinska,A., Kontostathi,G., and **Mischak,H.** (2018). Clinical Proteomics: Closing the Gap from Discovery to Implementation. *Proteomics* 18.
330. Huang,Q.F., Van Keer,J., Zhang,Z.Y., Trenson,S., Nkuipou-Kenfack,E., Van Aelst,L.N., Yang,W.Y., Thijs,L., Wei,F.F., Ciarka,A., Vanhaecke,J., Janssens,S., Van Cleemput,J., **Mischak,H.**, and Staessen,J.A. (2018). Urinary proteomic signatures associated with beta-blockade and heart rate in heart transplant recipients. *Plos One* 13.
331. Huang,Q.F., Trenson,S., Zhang,Z.Y., Van Keer,J., Van Aelst,L., Yang,W.Y., Nkuipou-Kenfack,E., Thijs,L., Wei,F.F., Ciarka,A., Droogne,W., Vanhaecke,J., Janssens,S., Van Cleemput,J., **Mischak,H.**, and Staessen,J. (2018). Biomarkers to Monitor Right Heart Pressures in Heart Transplanted Patients - A Proof-Of-Concept Study. *Journal of Hypertension* 36, E96-E97.
332. Huang,Q.F., Trenson,S., Zhang,Z.Y., Van Keer,J., Van Aelst,L.N., Yang,W.Y., Nkuipou-Kenfack,E., Thijs,L., Wei,F.F., Mujaj,B., Ciarka,A., Droogne,W., Vanhaecke,J., Janssens,S., Van Cleemput,J., **Mischak,H.**, and Staessen,J.A. (2018). Biomarkers to Assess Right Heart Pressures in Recipients of a Heart Transplant: A Proof-of-Concept Study. *Transplantation Direct* 4.
333. Huang,Q.F., Zhang,Z.Y., Van Keer,J., Trenson,S., Nkuipou-Kenfack,E., Yang,W.Y., Thijs,L., Vanhaecke,J., Van Aelst,L.N., Van Cleemput,J., Janssens,S., Verhamme,P., **Mischak,H.**, and Staessen,J.A. (2019). Urinary peptidomic biomarkers of renal function in heart transplant recipients. *Nephrology Dialysis Transplantation* 34, 1336-1343.
334. Krochmal,M., Schanstra,J.P., and **Mischak,H.** (2018). Urinary peptidomics in kidney disease and drug research. *Expert Opinion on Drug Discovery* 13, 259-268.
335. Latosinska,A., Frantzi,M., Merseburger,A.S., and **Mischak,H.** (2018). Promise and Implementation of Proteomic Prostate Cancer Biomarkers. *Diagnostics* 8.
336. Latosinska,A., Hulko,M., Speidel,R., **Mischak,H.**, Storr,M., and Krause,B. (2018). Removal of Cell-Activating Substances Using Dialyzers With Various Permeability Profiles. *Artificial Organs* 42, 78-87.
337. Latosinska,A., Frantzi,M., Vlahou,A., Merseburger,A.S., and **Mischak,H.** (2018). Clinical Proteomics for Precision Medicine: The Bladder Cancer Case. *Proteomics Clinical Applications* 12.
338. Lindhardt,M., Persson,F., Oxlund,C., Jacobsen,I.A., Zuerbig,P., **Mischak,H.**, Rossing,P., and Heerspink,H.J. (2018). Predicting albuminuria response to spironolactone treatment with urinary proteomics in patients with type 2 diabetes and hypertension. *Nephrology Dialysis Transplantation* 33, 296-303.
339. Liu,Y., Pejchinovski,M., Wang,X., Fu,X., Castelletti,D., Watnick,T.J., Arcaro,A., Siwy,J., Mullen,W., **Mischak,H.**, and Serra,A.L. (2018). Dual mTOR/PI3K inhibition limits PI3K-dependent pathways activated upon mTOR inhibition in autosomal dominant polycystic kidney disease. *Scientific Reports* 8.
340. Lygirou,V., Latosinska,A., Makridakis,M., Mullen,W., Delles,C., Schanstra,J.P., Zoidakis,J., Pieske,B., **Mischak,H.**, and Vlahou,A. (2018). Plasma proteomic analysis reveals altered protein abundances in cardiovascular disease. *Journal of translational medicine* 16, 104.

341. Magalhaes,P., Drube,J., Schaefer,F., **Mischak,H.**, Klein,J., Schanstra,J., Pape,L., and Zurbig,P. (2018). A Urinary Proteome-Based Classifier for the Diagnosis of Chronic Kidney Disease in Children. *Nephrology Dialysis Transplantation* 33.
342. Markoska,K., Pejchinovski,M., Pontillo,C., Zuerbig,P., Jacobs,L., Smith,A., Masin-Spasovska,J., Stojceva-Taneva,O., Polenakovic,M., Magni,F., **Mischak,H.**, and Spasovski,G. (2018). Urinary peptide biomarker panel associated with an improvement in estimated glomerular filtration rate in chronic kidney disease patients. *Nephrology Dialysis Transplantation* 33, 751-759.
343. Pejchinovski,M., Siwy,J., Mullen,W., **Mischak,H.**, Petri,M., Burkly,L., and Wei,R. (2018). Urine peptidomic biomarkers for diagnosis of patients with systematic lupus erythematosus. *Lupus* 27, 6-16.
344. Ricci,P., Magalhaes,P., Krochmal,M., Pejchinovski,M., Daina,E., Caruso,M.R., Remuzzi,G., Umbhauer,M., Pape,L., **Mischak,H.**, Decramer,S., Schaefer,F., Schanstra,J., Cereghini,S., and Zuerbig,P. (2018). Urinary Peptidome Analysis Allows Non-Invasive Diagnosis of the Read Syndrome. *Nephrology Dialysis Transplantation* 33.
345. Rodriguez-Ortiz,M.E., Pontillo,C., Rodriguez,M., Zurbig,P., **Mischak,H.**, and Ortiz,A. (2018). Novel Urinary Biomarkers For Improved Prediction Of Progressive Egfr Loss In Early Chronic Kidney Disease Stages And In High Risk Individuals Without Chronic Kidney Disease. *Scientific Reports* 8.
346. Siwy,J., **Mischak,H.**, Klein,T., and von Eynatten,M. (2018). Urinary proteomics may unmask the renal potential of the dipeptidyl peptidase (DPP)-4 inhibitor linagliptin in patients with diabetic kidney disease (DKD). *Diabetologia* 61, S383.
347. Siwy,J., **Mischak,H.**, Klein,T., and von Eynatten,M. (2018). Urinary Proteomics May Unmask the Renal Potential of the Dpp-4 Inhibitor Linagliptin in Patients with Diabetic Kidney Disease. *Nephrology Dialysis Transplantation* 33.
348. Siwy,J., Magalhaes,P., Schepers,E., Pontillo,C., Vlahou,A., Glorieux,G., and **Mischak,H.** (2018). Value of Urinary Proteome-Based Classifier Associated with Chronic Kidney Disease and Its Progression in the Prognosis of A Patient-Relevant Endpoint, Mortality. *Nephrology Dialysis Transplantation* 33.
349. Tofte,N., Lindhardt,M., Adamova,K., Beige,J., Beulens,J., Birkenfeld,A., Currie,G., Delles,C., Dimos,I., Francova,L., Frimodt-Moller,M., Girman,P., Goeke,R., Havrdova,T., Kooy,A., **Mischak,H.**, Navis,G., Nijpels,G., Noutsou,M., Ortiz,A., Parvanova,A., Persson,F., Ruggenti,P., Rutters,F., Rychlik,I., Spasovski,G., Speckaert,M., Trillini,M., von der Leyen,H., and Rossing,P. (2018). Characteristics of high- and low-risk individuals in the PRIORITY study: urinary proteomics and mineralocorticoid receptor antagonism for prevention of diabetic nephropathy in Type 2 diabetes. *Diabetic Medicine* 35, 1375-1382.
350. Wallbach,M., Zuerbig,P., Dihazi,H., Mueller,G.A., Wachter,R., Beige,J., Koziolk,M.J., and **Mischak,H.** (2018). Kidney protective effects of baroreflex activation therapy in patients with resistant hypertension. *Journal of Clinical Hypertension* 20, 1519-1526.
351. Zhang,Z.Y., Nkuipou-Kenfack,E., Yang,W.Y., Wei,F.F., Cauwenberghs,N., Thijs,L., Huang,Q.F., Feng,Y.M., Schanstra,J.P., Kuznetsova,T., Voigt,J.U., Verhamme,P., **Mischak,H.**, and Staessen,J.A. (2018). Epidemiologic observations guiding clinical application of a urinary peptidomic marker of diastolic left ventricular dysfunction. *Journal of the American Society of Hypertension* 12, 438-447.
352. Zurbig,P., Ozaltin,F., Anarat,A., Paripovic,D., Yilmaz,A., Caliskan,S., Jankauskiene,A., Trautmann,A., **Mischak,H.**, and Schaefer,F. (2018). Peptide Biomarker Signatures in Steroid-Resistant Nephrotic Syndrome. *Nephrology Dialysis Transplantation* 33.
353. Belczacka,I., Latosinska,A., Metzger,J., Marx,D., Vlahou,A., **Mischak,H.**, and Frantzi,M. (2019). Proteomics biomarkers for solid tumors: Current status and future prospects. *Mass Spectrometry Reviews* 38, 49-78.
354. Belczacka,I., Pejchinovski,M., Krochmal,M., Magalhaes,P., Frantzi,M., Mullen,W., Vlahou,A., **Mischak,H.**, and Jankowski,V. (2019). Urinary Glycopeptide Analysis for the Investigation of Novel Biomarkers. *Proteomics Clinical Applications* 13.

355. Duranton,F., Laget,J., Gayrard,N., Saulnier-Blache,J.S., Lundin,U., Schanstra,J.P., **Mischak,H.**, Weinberger,K.M., Servel,M.F., and Argiles,A. (2019). The CKD plasma lipidome varies with disease severity and outcome. *Journal of Clinical Lipidology* 13, 176-185.
356. Ferreira,J.P., Verdonshot,J., Collier,T., Wang,P., Pizard,A., Bar,C., Bjorkman,J., Boccanelli,A., Butler,J., Clark,A., Cleland,J.G., Delles,C., Diez,J., Girerd,N., Gonzalez,A., Hazebroek,M., Huby,A.C., Jukema,W., Latini,R., Leenders,J., Levy,D., Mebazaa,A., **Mischak,H.**, Pinet,F., Rossignol,P., Sattar,N., Sever,P., Staessen,J.A., Thum,T., Vodovar,N., Zhang,Z.Y., Heymans,S., and Zannad,F. (2019). Proteomic Bioprofiles and Mechanistic Pathways of Progression to Heart Failure The HOMAGE Study. *Circulation-Heart Failure* 12.
357. Fourdinier,O., Schepers,E., Metzinger-Le Meuth,V., Glorieux,G., Liabeuf,S., Verbeke,F., Vanholder,R., Brigant,B., Pletinck,A., Diouf,M., Burtey,S., Choukroun,G., Massy,Z.A., and Metzinger,L. (2019). Serum levels of miR-126 and miR-223 and outcomes in chronic kidney disease patients. *Scientific Reports* 9.
358. Frantzi,M., Latosinska,A., Belczacka,I., and **Mischak,H.** (2019). Urinary proteomic biomarkers in oncology: ready for implementation? *Expert Review of Proteomics* 16, 49-63.
359. Frantzi,M., Latosinska,A., and **Mischak,H.** (2019). Proteomics in Drug Development: The Dawn of a New Era? *Proteomics Clinical Applications* 13. e1800087
360. Frantzi,M., Gomez Gomez,E., Blanca Pedregosa,A., Valero Rosa,J., Latosinska,A., Culig,Z., Merseburger,A.S., Luque,R.M., Requena Tapia,M.J., **Mischak,H.**, and Carrasco Valiente,J. (2019). CE-MS-based urinary biomarkers to distinguish non-significant from significant prostate cancer. *British Journal of Cancer* 120, 1120-1128.
361. Frantzi,M., **Mischak,H.**, and Latosinska,A. (2019). Clinical Proteomics on the Path Toward Implementation: First Promises Delivered. *Proteomics Clinical Applications* 13. e1800094.
362. Kanzelmeyer,N.K., Zuerbig,P., **Mischak,H.**, Metzger,J., Fichtner,A., Ruszai,K.H., Seemann,T., Hansen,M., Wygoda,S., Krupka,K., Toenshoff,B., Melk,A., and Pape,L. (2019). Urinary proteomics to diagnose chronic active antibody-mediated rejection in pediatric kidney transplantation - a pilot study. *Transplant International* 32, 28-37.
363. Krochmal,M., van Kessel,K.E.M., Zwarthoff,E.C., Belczacka,I., Pejchinovski,M., Vlahou,A., **Mischak,H.**, and Frantzi,M. (2019). Urinary peptide panel for prognostic assessment of bladder cancer relapse. *Sci. Rep.* 9, 7635.
364. Latosinska,A., Siwy,J., **Mischak,H.**, and Frantzi,M. (2019). Peptidomics and proteomics based on CE-MS as a robust tool in clinical application: The past, the present, and the future. *Electrophoresis*. 40, 2294-2308.
365. Mokou,M., Klein,J., Makridakis,M., Bitsika,V., Bascands,J.L., Saulnier-Blache,J.S., Mullen,W., Sacherer,M., Zoidakis,J., Pieske,B., **Mischak,H.**, Roubelakis,M.G., Schanstra,J.P., and Vlahou,A. (2019). Proteomics based identification of KDM5 histone demethylases associated with cardiovascular disease. *Ebiomedicine* 41, 91-104.
366. Mujaj,B., Zhang,Z., Thijs,L., Clark,A., **Mischak,H.**, Nkuipou-Kenfack,E., Cleland,J., Zannad,F., and Staessen,J. (2019). Novel urinary peptidomic classifiers predict mortality in heart failure patients: (HOMAGE). *European Journal of Heart Failure* 21, 224.
367. Ricci,P., Magalhaes,P., Krochmal,M., Pejchinovski,M., Daina,E., Caruso,M.R., Goea,L., Belczacka,I., Remuzzi,G., Umbhauer,M., Drube,J., Pape,L., **Mischak,H.**, Decramer,S., Schaefer,F., Schanstra,J.P., Cereghini,S., and Zuerbig,P. (2019). Urinary proteome signature of Renal Cysts and Diabetes syndrome in children. *Scientific Reports* 9.
368. Schanstra,J.P., Luong,T.T., Makridakis,M., Van Linthout,S., Lygiroou,V., Latosinska,A., Alesutan,I., Boehme,B., Schelski,N., Von Lewinski,D., Mullen,W., Nicklin,S., Delles,C., Feuillet,G., Denis,C., Lang,F., Pieske,B., Bascands,J.L., **Mischak,H.**, Saulnier-Blache,J.S., Voelkl,J., Vlahou,A., and Klein,J. (2019). Systems biology identifies cytosolic PLA2 as a target in vascular calcification treatment. *Jci Insight* 4.

369. Siwy,J., **Mischak,H.**, and Zurbig,P. (2019). Proteomics and personalized medicine: a focus on kidney disease. *Expert Rev. Proteomics* 16, 773-782.
370. Stroggilos,R., Mokou,M., Latosinska,A., Makridakis,M., Lygizou,V., Mavrogeorgis,E., Drekolias,D., Frantzi,M., Mullen,W., Fragkoulis,C., Stasinopoulos,K., Papadopoulos,G., Stathouros,G., Lazaris,A.C., Makrythanasis,P., Ntoumas,K., **Mischak,H.**, Zoidakis,J., and Vlahou,A. (2019). Proteome-based classification of Nonmuscle Invasive Bladder Cancer. *International Journal of Cancer*. 146, 281-294.
371. Valino-Rivas,L., Cuarental,L., Agustin,M., Husi,H., Cannata-Ortiz,P., Sanz,A.B., **Mischak,H.**, Ortiz,A., and Sanchez-Nino,M.D. (2019). MAGE genes in the kidney: identification of MAGED2 as upregulated during kidney injury and in stressed tubular cells. *Nephrol Dial. Transplant* 34, 1498-1507.
372. Verbeke,F., Siwy,J., Van,B.W., **Mischak,H.**, Pletinck,A., Schepers,E., Neiryndck,N., Magalhaes,P., Pejchinovski,M., Pontillo,C., Lichtinghagen,R., Brand,K., Vlahou,A., De,B.D., and Glorieux,G. (2019). The urinary proteomics classifier chronic kidney disease 273 predicts cardiovascular outcome in patients with chronic kidney disease. *Nephrol Dial. Transplant*.
373. Zuerbig,P., **Mischak,H.**, Menne,J., and Haller,H. (2019). CKD273 Enables Efficient Prediction of Diabetic Nephropathy in Nonalbuminuric Patients. *Diabetes Care* 42, E4-E5.
374. Zurbig,P., Siwy,J., and **Mischak,H.** (2019). Emerging urine-based proteomic biomarkers as valuable tools in the management of chronic kidney disease. *Expert Rev. Mol. Diagn.* 19, 853-856.
375. Bruno,R.M., **Mischak,H.**, and Persu,A. (2020). Multi-omics applied to fibromuscular dysplasia: first steps on a new research avenue. *Cardiovasc. Res.* 116, 4-5.
376. Bannaga,A.S., Metzger,J., Kyrou,I., Voigtlander,T., Book,T., Melgarejo,J., Latosinska,A., Pejchinovski,M., Staessen,J.A., **Mischak,H.**, Manns,M.P., and Arasaradnam,R.P. (2020). Discovery, validation and sequencing of urinary peptides for diagnosis of liver fibrosis-A multicentre study. *EBioMedicine* 62, 103083.
377. Campbell,R.T., Jasilek,A., **Mischak,H.**, Nkuipou-Kenfack,E., Latosinska,A., Welsh,P.I., Jackson,C.E., Cannon,J., McConnachie,A., Delles,C., and McMurray,J.J.V. (2020). The novel urinary proteomic classifier HF1 has similar diagnostic and prognostic utility to BNP in heart failure. *ESC Heart Fail.* 7, 1595-1604.
378. Frantzi,M., Latosinska,A., Mokou,M., **Mischak,H.**, and Vlahou,A. (2020). Drug repurposing in oncology. *Lancet Oncol.* 21, e543.
379. Frantzi,M., Hupe,M.C., Merseburger,A.S., Schanstra,J.P., **Mischak,H.**, and Latosinska,A. (2020). Omics Derived Biomarkers and Novel Drug Targets for Improved Intervention in Advanced Prostate Cancer. *Diagnostics (Basel)* 10.
380. He,T., Siwy,J., Metzger,J., Mullen,W., **Mischak,H.**, Schanstra,J.P., Zurbig,P., and Jankowski,V. (2020). Associations of urinary polymeric immunoglobulin receptor peptides in the context of cardio-renal syndrome. *Sci. Rep.* 10, 8291.
381. Klein,J., Caubet,C., Camus,M., Makridakis,M., Denis,C., Gilet,M., Feuillet,G., Rascalou,S., Neau,E., Garrigues,L., Thillaye du,B.O., **Mischak,H.**, Monsarrat,B., Burette-Schiltz,O., Vlahou,A., Saulnier-Blache,J.S., Bascands,J.L., and Schanstra,J.P. (2020). Connectivity mapping of glomerular proteins identifies dimethylaminoparthenolide as a new inhibitor of diabetic kidney disease. *Sci. Rep.* 10, 14898.
382. Klein,J., Buffin-Meyer,B., Boizard,F., Moussaoui,N., Lescat,O., Breuil,B., Fedou,C., Feuillet,G., Casemayou,A., Neau,E., Hindryckx,A., Decatte,L., Levtchenko,E., Raaijmakers,A., Vayssiere,C., Goua,V., Lucas,C., Perrotin,F., Cloarec,S., Benachi,A., Manca-Pellissier,M.C., Delmas,H.L., Bessenay,L., Le,V.C., Iain-Launay,E., Gondry,J., Boudailliez,B., Simon,E., Prieur,F., Lavocat,M.P., Saliou,A.H., De,P.L., Bidat,L., Noel,C., Floch,C., Bourdat-Michel,G., Favre,R., Weingertner,A.S., Oury,J.F., Baudouin,V., Bory,J.P., Pietrement,C., Fiorenza,M., Massardier,J., Kessler,S., Lounis,N., Auriol,F.C., Marcorelles,P., Collardeau-Frachon,S., Zurbig,P., **Mischak,H.**, Magalhaes,P., Batut,J., Blader,P., Saulnier Blache,J.S., Bascands,J.L., Schaefer,F., Decramer,S., and Schanstra,J.P. (2021). Amniotic fluid peptides predict postnatal kidney survival in developmental kidney disease. *Kidney Int.* 99, 737-749.

383. Latosinska,A., Davaliev,K., Makridakis,M., Mullen,W., Schanstra,J.P., Vlahou,A., **Mischak,H.**, and Frantzi,M. (2020). Molecular Changes in Tissue Proteome during Prostate Cancer Development: Proof-of-Principle Investigation. *Diagnostics (Basel)* 10.
384. Makridakis,M., Kontostathi,G., Petra,E., Stroggilos,R., Lygirou,V., Filip,S., Duranton,F., **Mischak,H.**, Argiles,A., Zoidakis,J., and Vlahou,A. (2020). Multiplexed MRM-based protein quantification of putative prognostic biomarkers for chronic kidney disease progression in plasma. *Sci. Rep.* 10, 4815.
385. **Mischak,H.** (2020). Datasharing: Obsolete? Impossible in times of GDPR ? Or mandatory in science?! *Eur. J Clin Invest* e13244.
386. Mokou,M., Lygirou,V., Angelioudaki,I., Paschalidis,N., Stroggilos,R., Frantzi,M., Latosinska,A., Bamias,A., Hoffmann,M.J., **Mischak,H.**, and Vlahou,A. (2020). A Novel Pipeline for Drug Repurposing for Bladder Cancer Based on Patients' Omics Signatures. *Cancers. (Basel)* 12.
387. Nkuiou-Kenfack,E., Latosinska,A., Yang,W.Y., Fournier,M.C., Blet,A., Mujaj,B., Thijs,L., Feliot,E., Gayat,E., **Mischak,H.**, Staessen,J.A., Mebazaa,A., and Zhang,Z.Y. (2020). A novel urinary biomarker predicts 1-year mortality after discharge from intensive care. *Crit Care* 24, 10.
388. Pejchinovski,M. and **Mischak,H.** (2020). Re-analysis of "Peptidomic analysis of cartilage and subchondral bone in OA patients". *Eur. J Clin Invest* e13240.
389. Rudnicki,M., Siwy,J., Wendt,R., Lipphardt,M., Koziolk,M.J., Maixnerova,D., Peters,B., Kerschbaum,J., Leierer,J., Neprasova,M., Banasik,M., Sanz,A.B., Perez-Gomez,M.V., Ortiz,A., Stegmayr,B., Tesar,V., **Mischak,H.**, Beige,J., and Reich,H.N. (2020). Urine proteomics for prediction of disease progression in patients with IgA nephropathy. *Nephrol Dial. Transplant*.
390. Stroggilos,R., Mokou,M., Latosinska,A., Makridakis,M., Lygirou,V., Mavrogeorgis,E., Drekolias,D., Frantzi,M., Mullen,W., Fragkoulis,C., Stasinopoulos,K., Papadopoulos,G., Stathouros,G., Lazaris,A.C., Makrythanasis,P., Ntoumas,K., **Mischak,H.**, Zoidakis,J., and Vlahou,A. (2020). Proteome-based classification of Nonmuscle Invasive Bladder Cancer. *Int J Cancer* 146, 281-294.
391. Tofte,N., Lindhardt,M., Adamova,K., Bakker,S.J.L., Beige,J., Beulens,J.W.J., Birkenfeld,A.L., Currie,G., Delles,C., Dimos,I., Francova,L., Frimodt-Moller,M., Girman,P., Goke,R., Havrdova,T., Heerspink,H.J.L., Kooy,A., Laverman,G.D., **Mischak,H.**, Navis,G., Nijpels,G., Noutsou,M., Ortiz,A., Parvanova,A., Persson,F., Petrie,J.R., Ruggenti,P.L., Rutters,F., Rychlik,I., Siwy,J., Spasovski,G., Speeckaert,M., Trillini,M., Zurbig,P., von der,L.H., and Rossing,P. (2020). Early detection of diabetic kidney disease by urinary proteomics and subsequent intervention with spironolactone to delay progression (PRIORITY): a prospective observational study and embedded randomised placebo-controlled trial. *Lancet Diabetes Endocrinol.* 8, 301-312.
392. Voigtlander,T., Metzger,J., Husi,H., Kirstein,M.M., Pejchinovski,M., Latosinska,A., Frantzi,M., Mullen,W., Book,T., **Mischak,H.**, and Manns,M.P. (2020). Bile and urine peptide marker profiles: access keys to molecular pathways and biological processes in cholangiocarcinoma. *J Biomed Sci.* 27, 13.
393. Wendt,R., Kalbitz,S., Lubbert,C., Kellner,N., Macholz,M., Schroth,S., Ermisch,J., Latosinska,A., Arnold,B., **Mischak,H.**, Beige,J., and Metzger,J. (2020). Urinary Proteomics Associates with COVID-19 Severity: Pilot Proof-of-Principle Data and Design of a Multicentric Diagnostic Study. *Proteomics* e2000202.
394. Wendt,R., He,T., Latosinska,A., Siwy,J., **Mischak,H.**, and Beige,J. (2020). Proteomic characterization of obesity-related nephropathy. *Clin Kidney J* 13, 684-692.
395. He,T., Melgarejo,J.D., Clark,A.L., Yu,Y.L., Thijs,L., Diez,J., Lopez,B., Gonzalez,A., Cleland,J.G., Schanstra,J.P., Vlahou,A., Latosinska,A., **Mischak,H.**, Staessen,J.A., Zhang,Z.Y., and Jankowski,V. (2021). Serum and urinary biomarkers of collagen type-I turnover predict prognosis in patients with heart failure. *Clin Transl. Med.* 11, e267.

396. He, T., Pejchinovski, M., Mullen, W., Beige, J., **Mischak, H.**, and Jankowski, V. (2021). Peptides in Plasma, Urine, and Dialysate: Toward Unravelling Renal Peptide Handling. *Proteomics Clin Appl.* 15, e2000029.
397. Bannaga, A., Metzger, J., Voigtlander, T., Pejchinovski, M., Frantzi, M., Book, T., James, S., Gopalakrishnan, K., **Mischak, H.**, Manns, M.P., and Arasaradnam, R.P. (2021). Pathophysiological Implications of Urinary Peptides in Hepatocellular Carcinoma. *Cancers (Basel)* 13.
398. Catanese, L., Siwy, J., Mavrogeorgis, E., Amann, K., **Mischak, H.**, Beige, J., and Rupprecht, H. (2021). A Novel Urinary Proteomics Classifier for Non-Invasive Evaluation of Interstitial Fibrosis and Tubular Atrophy in Chronic Kidney Disease. *Proteomes*. 9.
399. Gomez-Cabrero, D., Walter, S., Abugessaisa, I., Minambres-Herraiz, R., Palomares, L.B., Butcher, L., Erusalimsky, J.D., Garcia-Garcia, F.J., Carnicero, J., Hardman, T.C., **Mischak, H.**, Zurbig, P., Hackl, M., Grillari, J., Fiorillo, E., Cucca, F., Cesari, M., Carrie, I., Colpo, M., Bandinelli, S., Feart, C., Peres, K., Dartigues, J.F., Helmer, C., Vina, J., Olaso, G., Garcia-Palmero, I., Martinez, J.G., Jansen-Durr, P., Grune, T., Weber, D., Lippi, G., Bonaguri, C., Sinclair, A.J., Tegner, J., and Rodriguez-Manas, L. (2021). A robust machine learning framework to identify signatures for frailty: a nested case-control study in four aging European cohorts. *Geroscience*. 43, 1317-1329.
400. He, T., Mischak, M., Clark, A.L., Campbell, R.T., Delles, C., Diez, J., Filippatos, G., Mebazaa, A., McMurray, J.J.V., Gonzalez, A., Raad, J., Stroggilos, R., Bosselmann, H.S., Campbell, A., Kerr, S.M., Jackson, C.E., Cannon, J.A., Schou, M., Girerd, N., Rossignol, P., McConnachie, A., Rossing, K., Schanstra, J.P., Zannad, F., Vlahou, A., Mullen, W., Jankowski, V., **Mischak, H.**, Zhang, Z., Staessen, J.A., and Latosinska, A. (2021c). Urinary peptides in heart failure: a link to molecular pathophysiology. *Eur. J Heart Fail.*
401. He, T., Zhang, Z., Staessen, J.A., **Mischak, H.**, Latosinska, A., and Beige, J. (2021f). Proteomic Biomarkers in the Cardiorenal Syndrome: Toward Deciphering Molecular Pathophysiology. *Am. J Hypertens.* 34, 669-679.
402. Hupe, M.C., Hempel, M.C., Rodler, S., Frantzi, M., **Mischak, H.**, Merseburger, A.S., Stief, C.G., and Chaloupka, M. (2021b). [Diagnostic markers in urology]. *Urologe A* 60, 1323-1330.
403. Klein, J., Buffin-Meyer, B., Boizard, F., Moussaoui, N., Lescat, O., Breuil, B., Fedou, C., Feuillet, G., Casemayou, A., Neau, E., Hindryckx, A., Decatte, L., Levtchenko, E., Raaijmakers, A., Vayssiere, C., Goua, V., Lucas, C., Perrotin, F., Cloarec, S., Benachi, A., Manca-Pellissier, M.C., Delmas, H.L., Bessenay, L., Le, V.C., Iain-Launay, E., Gondry, J., Boudailliez, B., Simon, E., Prieur, F., Lavocat, M.P., Saliou, A.H., De, P.L., Bidat, L., Noel, C., Floch, C., Bourdat-Michel, G., Favre, R., Weingertner, A.S., Oury, J.F., Baudouin, V., Bory, J.P., Pietrement, C., Fiorenza, M., Massardier, J., Kessler, S., Lounis, N., Auriol, F.C., Marcorelles, P., Collardeau-Frachon, S., Zurbig, P., **Mischak, H.**, Magalhaes, P., Batut, J., Blader, P., Saulnier Blache, J.S., Bascands, J.L., Schaefer, F., Decramer, S., and Schanstra, J.P. (2021). Amniotic fluid peptides predict postnatal kidney survival in developmental kidney disease. *Kidney Int* 99, 737-749.
404. Latosinska, A., Siwy, J., Cherney, D.Z., Perkins, B.A., **Mischak, H.**, and Beige, J. (2021a). SGLT2-Inhibition reverts urinary peptide changes associated with severe COVID-19: An in-silico proof-of-principle of proteomics-based drug repurposing. *Proteomics* 21, e2100160.
405. Latosinska, A., Siwy, J., Faguer, S., Beige, J., Mischak, H., and Schanstra, J.P. (2021b). Value of Urine Peptides in Assessing Kidney and Cardiovascular Disease. *Proteomics Clin Appl.* 15, e2000027.
406. Magalhaes, P., Zurbig, P., **Mischak, H.**, and Schleicher, E. (2021). Urinary fetuin-A peptides as a new marker for impaired kidney function in patients with type 2 diabetes. *Clin Kidney J* 14, 269-276.
407. Mavrogeorgis, E., **Mischak, H.**, Beige, J., Latosinska, A., and Siwy, J. (2021). Understanding glomerular diseases through proteomics. *Expert Rev. Proteomics* 18, 137-157.
408. Mokou, M., Frantzi, M., **Mischak, H.**, Vlahou, A., and Latosinska, A. (2021). Developing novel drug candidates and repurposed drugs for prostate cancer based on molecular profiles. *Curr. Med. Chem.*

409. Petra, E., He, T., Lygirou, V., Latosinska, A., **Mischak, H.**, Vlahou, A., and Jankowski, J. (2021). Urine peptidome analysis in cardiorenal syndrome reflects molecular processes. *Sci. Rep.* 11, 16219.
410. Rambabova-Bushljetik, I., Metzger, J., Siwy, J., Dohcevic, S., Bushljetik, O., Filipce, V., Trajceska, L., **Mischak, H.**, and Spasovski, G. (2021). Association of the chronic kidney disease urinary proteomic predictor CKD273 with clinical risk factors of graft failure in kidney allograft recipients. *Nephrol Dial. Transplant.*
411. Rotbain, C., V, Magalhaes, P., He, T., Hansen, T.W., **Mischak, H.**, and Rossing, P. (2021). Urinary peptidome and diabetic retinopathy in the DIRECT-Protect 1 and 2 trials. *Diabet. Med.* 38, e14634.
412. Siwy, J., **Mischak, H.**, Beige, J., Rossing, P., and Stegmayr, B. (2021). Biomarkers for early detection of kidney disease: a call for pathophysiological relevance. *Kidney Int* 99, 1240-1241.
413. Siwy, J., Wendt, R., Albalat, A., He, T., **Mischak, H.**, Mullen, W., Latosinska, A., Lubbert, C., Kalbitz, S., Mebazaa, A., Peters, B., Stegmayr, B., Spasovski, G., Wiech, T., Staessen, J.A., Wolf, J., and Beige, J. (2021). CD99 and polymeric immunoglobulin receptor peptides deregulation in critical COVID-19: A potential link to molecular pathophysiology? *Proteomics* 21, e2100133.
414. Thijs, L., Asayama, K., Maestre, G.E., Hansen, T.W., Buyse, L., Wei, D.M., Melgarejo, J.D., Brguljan-Hitij, J., Cheng, H.M., de, S.F., Gilis-Malinowska, N., Kawecka-Jaszcz, K., Mels, C., Mokwatsi, G., Muxfeldt, E.S., Narkiewicz, K., Odili, A.N., Rajzer, M., Schutte, A.E., Stolarz-Skrzypek, K., Tsai, Y.W., Vanassche, T., Vanholder, R., Zhang, Z.Y., Verhamme, P., Kruger, R., **Mischak, H.**, and Staessen, J.A. (2021). Urinary proteomics combined with home blood pressure telemonitoring for health care reform trial: rational and protocol. *Blood Press* 30, 269-281.
415. Verbeke, F., Siwy, J., Van, B.W., **Mischak, H.**, Pletinck, A., Schepers, E., Neiryck, N., Magalhaes, P., Pejchinovski, M., Pontillo, C., Lichtinghagen, R., Brand, K., Vlahou, A., De, B.D., and Glorieux, G. (2021). The urinary proteomics classifier chronic kidney disease 273 predicts cardiovascular outcome in patients with chronic kidney disease. *Nephrol Dial. Transplant* 36, 811-818.
416. Vlahou, A., Hallinan, D., Apweiler, R., Argiles, A., Beige, J., Benigni, A., Bischoff, R., Black, P.C., Boehm, F., Ceraline, J., Chrousos, G.P., Delles, C., Evenepoel, P., Fridolin, I., Glorieux, G., van Gool, A.J., Heidegger, I., Ioannidis, J.P.A., Jankowski, J., Jankowski, V., Jeronimo, C., Kamat, A.M., Masereeuw, R., Mayer, G., **Mischak, H.**, Ortiz, A., Remuzzi, G., Rossing, P., Schanstra, J.P., Schmitz-Drager, B.J., Spasovski, G., Staessen, J.A., Stamatialis, D., Stenvinkel, P., Wanner, C., Williams, S.B., Zannad, F., Zoccali, C., and Vanholder, R. (2021). Data Sharing Under the General Data Protection Regulation: Time to Harmonize Law and Research Ethics? *Hypertension* 77, 1029-1035.
417. Wendt, R., Thijs, L., Kalbitz, S., **Mischak, H.**, Siwy, J., Raad, J., Metzger, J., Neuhaus, B., Leyen, H.V., Dudoignon, E., Mebazaa, A., Spasovski, G., Milenkova, M., Canevska-Talevska, A., Czerwienska, B., Wiecek, A., Peters, B., Nilsson, A., Schwab, M., Rothfuss, K., Lubbert, C., Staessen, J.A., and Beige, J. (2021). A urinary peptidomic profile predicts outcome in SARS-CoV-2-infected patients. *EClinicalMedicine.* 36, 100883.