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Education:

1985 Bachelor of Science (Biology)
Lewis and Clark College, Portland, OR
1993 Doctor of Philosophy (Physiology)
Tulane University, New Orleans, LA
1993-1994 Postdoctoral Fellow - NIDR/NIH

Academic Appointments:

1994-1996 Associate - Department of Medicine, Mt. Sinai School of
Medicine
1996-1999 Research Assistant Prof. - Department of Medicine, Mt.
Sinai School of Medicine
1998-present Research Assistant Prof. – Department of Physiology and
Biophysics, Mt. Sinai School of Medicine
1999-present Assistant Professor - Department of Medicine, Mt. Sinai
School of Medicine
2004 Interim Director of the Multi-photon Microscopy Shared
Research Facility

Medical School

Committee Assignments:

1997-present Medical Education Committee – Department of Physiology
and Biophysics, Mt. Sinai School of Medicine
1999-present Graduate Education Committee – Division of Nephrology,
Department of Medicine, Mt. Sinai School of Medicine
2001-present Year 1 Committee (Medical school curriculum committee for
first year) Mt Sinai School of Medicine.

Invited Lectureship and
Symposia:

Tulane University School of Medicine, Department of Pharmacology
“Wearn and Richards: The first renal micropuncturists” (1993).
University of Virginia, Charlottesville, Department of Pediatrics
“Alterations in Glomerular Dynamics in Congenital Unilateral

Hydronephrosis” (1993)
University of Arizona School of Medicine, Division of Nephrology
“Identification and Characterization of a Cell Surface Nucleic Acid
Conducting Channel” (2000)
St. Joseph’s Hospital, Grand Rounds – Department of Gynecological
Oncology. “A Potential Role for a Nucleic Acid Channel in the
Treatment of HPV and Cervical Carcinoma” (2000)
University of North Dakota School of Medicine, Department of Physiology.
“Molecular Mechanism of Renal Oligonucleotide Transport” (2000)
International Society of Nephrology - Forefronts in Gene Therapy, Beaver
Creek, Colorado. “Identification of a Selective Nucleic Acid Channel”
(2000).
Tulane University School of Medicine, Department of Physiology
“Defining the molecular mechanism of nucleic acid transport into
renal epithelial cells.” (2003)
Isis Pharmaceuticals “New insight into nucleic acid uptake by cells: Implications
for the nucleic acid channel.” (2003)
Virginia Commonwealth University Health Science Center, School of Pharmacy
“Cellular uptake of nucleic acids: evidence for a role of the nucleic acid
channel” (2003)
Georgetown University School of Medicine “The Role of Cytosolic Malate
Dehydrogenase in Nucleic Acid Transport Across the Plasma
Membrane” (2004)
Salt and Water Club, Northeastern Section, Yale University. “Transport of
Nucleic Acids Across the Plasma Membrane” (2004)
Lewis and Clark College “Defining The Molecular Mechanism Of Nucleic Acid
Transport Across The Plasma Membrane” (2004)
Department of Physiology and Biophysics, Mt Sinai School of Medicine.
“Transport of Double Stranded Nucleic Acids Across the Plasma
Membrane” (2004)
University of Houston “The Role of Cytosolic Malate Dehydrogenase in
Nucleic Acid Transport Across the Plasma Membrane” (2004)

Consulting:

1994 “The Human Body” A CD-ROM from Time-Life Books

Publications:

1. El-Dahr SS, Gee J, Dipp S, Hanss BG, Vari RC, and Chao J. Reciprocal regulation of renin and kallikrein genes in obstructive nephropathy. *Am. J. Physiol.* 264:F874-F881, 1993.
2. Hanss BG, Lewy JE, and Vari RC. Alterations in Glomerular Dynamics in congenital unilateral hydronephrosis. *Kidney Intern.* 46:48-57, 1994.

3. Rappaport J, Hanss B, Kopp JB, Bruggeman LA, Coffman TM, and Klotman PE. Transport of phosphorothioate oligonucleotides in kidney: Implications for molecular Therapy. *Kidney Internat.* 47:1462-1469, 1995.
4. Lipkowitz MS, Klotman ME, Bruggeman LA, Nicklin P, Hanss B, Rappaport J, and Klotman PE. Molecular therapy of renal disease. *Am. J. Kid. Diseases* 28:475-492, 1996.
5. Leal-Pinto E, Hanss B, and Klotman PE. Calcium regulation of a cell surface nucleic acid channel. *Kidney International* 57:S4-S10, 1996.
6. Hanss B, Leal-Pinto E, Copeland TA, Bruggeman LA, and Klotman PE. Identification and characterization of a macromolecular nucleic acid channel. *Proceedings of The National Academy of Science* 95(4):1921-1926, 1998.
7. Langer JC, Klotman ME, Hanss B, Tulchin N, Bruggeman LA, Klotman PE, and Lipkowitz MS. Adeno-associated virus gene transfer into renal cells: Potential for in vivo gene delivery. *Experimental Nephrology* 6(3): 189-194, 1998.
8. Hanss B, Stein CA, and Klotman PE. Cellular Uptake and Biodistribution of Oligodeoxynucleotides. In Stein, C.A., and Krieg, A.M. (eds.): *Applied antisense oligonucleotide technology*, Wiley-Liss, Inc., New York, 1998, pp. 111-127.
9. Lipkowitz MS, Hanss B, Tulchin N, Wilson PD, Langer JC, Ross MD, Kurtzman GJ, Klotman PE, and Klotman ME. Transduction of renal cells *in vitro* and *in vivo* by adeno-associated virus gene therapy vectors. *J. Am. Soc. Nephrol* 10(9):1908-1915, 1999.
10. Hanss, B*, Leal-Pinto E.*, Teixeira A.*, Christian RE, Shabanowitz J, Hunt DF, and Klotman P.E., Cytosolic malate dehydrogenase is the regulatory subunit of a nucleic acid channel. *Proceedings of the National Academy of Science* 99:1707-1712, 2002. *These authors contributed equally to this paper.
11. G. Luca Gusella, Elena Fedorova, Daniele Marras, Basil Hanss, Mary E. Klotman, and Paul E. Klotman. Lentiviral vectors efficiently transduce kidney *in vivo*. *Human Gene Therapy* 13(3):407-414. 2002.
12. Ross, M.D., Bruggeman, L.A., Hanss, B., Sunamoto, M., Marras, D., Klotman M.E., Klotman P.E. Podocan; a novel small leucine-rich repeat proteoglycan expressed in experimental HIV-associated nephropathy. *Journal of Biological Chemistry* (in press)
13. Hanss B, and Bruggeman L.A., Applications of gene therapy to kidney disease. *Current Opinion in Nephrology and Hypertension* 12(4):439-445.
14. Leal-Pinto E, Teixeira A, Hanss B, and Klotman P.E. Presence of the nucleic acid channel in renal brush border membranes: Allosteric modulation by extracellular calcium. (accepted with minor revisions)

15. Hanss B, Leal-Pinto E, Teixeira A, and Klotman PE. Identification and localization of the nucleic acid channel in LLC-PK1 cells. (Submitted).

16. Leal-Pinto E, Hanss B, Teixeira A, and Klotman PE. Oligonucleotides as long as 150 bases permeate lipid bilayers via the nucleic acid channel. (Submitted).