CURRICULUM VITAE

NAME: Keith Choate, M.D., Ph.D.

SCHOOL: Yale University School of Medicine

EDUCATION:

B.S. Biological Sciences with Honors, Stanford University, 9/1992-6/1995

M.Phil. Cell Biology, Yale University, 6/1997-5/2000

Ph.D. Cell Biology, Yale University, 6/1997-12/2001

M.D. Medical Scientist Training Program, Yale University, 9/1996-5/2004

CAREER:

7/2004-6/2005	Intern, Internal Medicine, Yale-New Haven Hospital, New Haven, CT
7/2005-6/2008	Resident, Dermatology, Yale-New Haven Hospital, New Haven, CT
2/2006-6/2008	Post-Doctoral Fellow, Department of Dermatology, Yale University School of Medicine, New Haven, CT
7/2008-6/2009	Instructor of Dermatology, Yale University School of Medicine, New Haven, CT

BOARD CERTIFICATION: American Board of Dermatology, pending

PROFESSIONAL HONORS OR RECOGNITION

A) Alpha Omega Alpha, member

B) 2004 M.D./Ph.D. Thesis Prize, Yale School of Medicine, New Haven, Connecticut

LECTURES, COURSES

Yin Lu, Keith A Choate, Tong Wang, Richard P. Lifton. Paracellin-1 knockout mouse model of recessive renal hypomagnesemia. Free Communication Session: 2001 ASN/ISN World Congress of Nephrology. San Francisco, CA.

Choate KA, Lu Y, Simon DB, and Lifton RP. Paracellin-1 localizes to tight junctions in the thick ascending limb, revealing its role in paracellular Mg^{2+} reabsorption. Free Communication Session: 1999 Annual Meeting of the American Society of Nephrology. Miami Beach, FL.

Lu Y, Choate KA, Simon DB, Velazquez H, Al-Sabban E, Praga M, Casari G, Bettinelli A, Colussi G,

Rodriguez-Soriano J, McCredie D, Milford D, Sanjad S, Lifton RP. Positional Cloning of Paracellin-1, a novel protein required for Mg^{2+} reabsorption in the thick ascending limb. Free Communication Session: 1999 Annual Meeting of the American Society of Nephrology. Miami Beach, FL.

Choate KA, Kinsella TM, Williams ML, Nolan GA, and Khavari PA. Corrective gene delivery in lamellar ichthyosis. Free communication session. Plenary Session in Gene Therapy: 1996 Annual Meeting of The Society of Investigative Dermatology. Washington DC.

Choate KA, and Khavari PA. Corrective impact of direct plasmid delivery versus viral gene transfer in lamellar ichthyosis in vivo. Free communication session. Plenary Session in Gene Therapy: 1997 Annual Meeting of The Society of Investigative Dermatology. Washington DC.

Choate KA, Lu Y, Simon DB, Lifton RP**.** Positional cloning and characterization of Paracellin-1, a novel tight junction protein required for paracellular Mg^{++} reabsorption. Understanding Tubular Transport: Genes Lead the Way, Satellite Symposium to the 30th Congress of Nephrology. Freiburg, Germany. September, 1999.

BIBLIOGRAPHY

Peer-Reviewed Original Articles:

1. Freiberg RA, Spencer DM, Choate KA, Peng PD, Schreiber SL, Crabtree GR and Khavari PA. Specific triggering of the Fas signal transduction pathway in normal human keratinocytes. Journal of Biological Chemistry 1996 Dec; 271(49):31666-9.
2. Choate KA, Medalie DA, Morgan JR, and Khavari PA. Corrective gene delivery in the human skin disease lamellar ichthyosis. Nature Medicine 1996 Nov; 2(11) Cover and 1263-1267.
3. Choate KA, Kinsella T, Williams M, Nolan G, and Khavari PA. Transglutaminase 1 delivery to lamellar ichthyosis keratinocytes. Human Gene Therapy. 1996 Dec; 7:2247-2253.
4. Freiberg RA, Spencer DM, Choate KA, Duh HJ, Schreiber SL, Crabtree GR and Khavari PA. Fas signal transduction triggers either proliferation or apoptosis in human fibroblasts. Journal of Investigative Dermatology. 1997 Feb; 108(2):215-219.
5. Choate KA and Khavari PA. Sustainability of keratinocyte gene transfer and cell survival in vivo. Human Gene Therapy. 1997 May 20; 8: 895-901.
6. Freiberg RA, Choate KA, Deng H, Alperin E, Shapiro LJ, and Khavari PA. A model of gene transfer in X-linked ichthyosis. Human Molecular Genetics. 1997 Jun; 6(6):927-33.
7. Choate KA and Khavari PA. Direct cutaneous gene delivery in a human genetic skin disease. Human Gene Therapy. 1997 Sep 20; 8(14):1659-65.
8. Choate KA, Williams ML, and Khavari PA. Abnormal epidermal gene expression in a subset of patients with autosomal recessive ichthyosis and erythroderma. Journal of Investigative Dermatology. 1998 Jan; 110(1):8-12.
9. Choate KA, Williams ML, Elias PM, and Khavari PA. Keratinocyte transglutaminase in harlequin ichthyosis. Journal of the American Academy of Dermatology. 1998 Feb; 38(2 Pt 2):325-9
10. Deng H, Choate KA, Lin Q, Khavari PA. High efficiency gene transfer and pharmacologic selection of genetically engineered human keratinocytes. BioTechniques. 1998 Aug; 25:274-280.

11. Simon DB & Lu Y, Choate KA, Velazquez H, Al-Sabban E, Praga M, Casari G, Bettinelli A, Colussi G, Rodriguez-Soriano J, McCredie D, Milford D, Sanjad S, Lifton RP. Paracellin-1, a renal tight junction protein required for paracellular Mg2+ resorption. Science. 1999 Jul 2; 285(5424):103-6.
12. Smith AN, Skaug J, Choate KA, Nayir A, Bakkaloglu A, Ozen S, Hulton SA, Sanjad SA, Al-Sabban EA, Lifton RP, Scherer SW, Karet FE. Mutations in ATP6N1B, encoding a new kidney vacuolar proton pump 116-kD subunit, cause recessive distal renal tubular acidosis with preserved hearing. Nature Genetics. 2000 Sep; 26(1):71-5.
13. Wilson FH, Disse-Nicodeme S & Choate KA , Ishikawa K, Nelson-Williams C, Desitter I, Gunel M, Milford DV, Lipkin GW, Achard JM, Feely MP, Dussol B, Berland Y, Unwin RJ, Mayan H, Simon DB, Farfel Z, Jeunemaitre X, Lifton RP. Human hypertension caused by mutations in WNK kinases. Science. 2001 Aug 10; 293(5532):1107-12.
14. Lifton RP, Wilson FH, Choate KA, Geller DS. Salt and blood pressure: new insight from human genetic studies. Cold Spring Harb Symp Quant Biol. 2002; 67:445-50.
15. Gunel M, Laurans MS, Shin D, DiLuna ML, Voorhees J, Choate K, Nelson-Williams C, Lifton RP. KRIT1, a gene mutated in cerebral cavernous malformation, encodes a microtubule-associated protein. Proc Natl Acad Sci USA. 2002 Aug 6; 99(16):10677-82.
16. Choate KA, Kahle KT, Wilson FH, Nelson-Williams C, Lifton RP. WNK1, a kinase mutated in inherited hypertension with hyperkalemia, localizes to diverse Cl- -transporting epithelia. Proc Natl Acad Sci USA. 2003 Jan 21;100(2):663-8.

Editorials, Reviews, Chapters, Books:

1. Choate KA, Lu Y, and Lifton RP. Claudins mediate specific paracellular fluxes in vivo: Paracellin-1 is required for paracellular Mg^{2+} flux. In: Cereijido M and Anderson J, editors. *Tight Junctions*. 2nd ed. New York: CRC Press. 2001; P:483-492.