

Marguerite Hatch, Ph.D.

Curriculum Vitae, 2013

Personal Data

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Research Areas of Interest:

Mechanisms and control of electrolyte and solute transport across epithelial membranes.
Angiotensin II regulation of intestinal electrolyte transport. Calcium oxalate nephrolithiasis: Oxalate metabolism and transport mechanisms of oxalate across intestinal and renal tissues. *Oxalobacter* regulation of intestinal oxalate transport.

Education:

B.Sc 1970 - 1974 University College Dublin, Ireland.
Microbiology (major), Pharmacology (minor). (Degree awarded with Honours).
Ph.D. 1974 - 1978 Trinity College Dublin, Ireland.
Thesis: "The Pathophysiology of Calcium Oxalate Nephrolithiasis".

Postdoctoral Appointments:

1978 – 1982 Post-doctoral Research Assoc., Dept. Internal Medicine, University of Arizona, Tucson, AZ.
1982 – 1983 Post-doctoral Research Assoc., Dept. Physiology and Biophysics, Harvard Medical School, Boston, MA.

Academic Appointments:

1983 – 1987 Assistant Professor of Zoology & Physiology, Louisiana State University, Baton Rouge, LA
1987 – 1990 Associate Professor of Urology and Physiology, SUNY Health Science Center at Brooklyn, NY.
1990 – 2000 Associate Professor, Dept. Medicine, University of California at Irvine, College of Medicine, Irvine, CA 92697

2000 – 2001 Associate Professor, Dept. Pediatrics, Northwestern University, Chicago, IL 60611
2001 – 2011 Associate Professor, Dept. Pathology, University of Florida, Gainesville, FL 32610.
2011 – Professor, Dept. Pathology, University of Florida, Gainesville, FL 32610.

Administrative Appointments:

1987 – 1990 Director and Founder of the New York Kidney Stone Center, The Long Island College Hospital, Brooklyn, NY.
1990 – 2000 Director and Founder of UCI Kidney Stone Center, University of California at Irvine.
2000 – 2001 Co-Director of the Pediatric Nephrology Fellowship Program at Northwestern University.

Professional Activity:

Professional Associations:

American Physiological Society
Rock Society, Served as President 2003-2004.
American Urological Association

Conferences/Meetings/Workshops:

Chair and Co-ordinator of a Mini-Conference on “Oxalates” at UCI Medical Center, November 1995, following Amer. Soc. Nephrology Meetings in San Diego.

Co-chair of the FASEB Summer Conference on “Calcium Oxalate in Biological Systems” in Copper Mountain, CO, August 1999.

Member of the Planning Committee & Organizer of the 2nd NIH/NIDDK Workshop on Oxalosis & Hyperoxaluria, 2000.

Chair & Organizer of the FASEB Summer Conference on “Calcium Oxalate in Biological Systems” in Vermont, August, 2002.

President & Organizer of the 2004 ROCK Society Annual Meeting in Florida (20-22 February, 2004) & the ROCK Society Session on Stone Disease at the American Urological Association Annual Meeting (San Francisco, 05/11/04).

Member of the International Organizing Committee for the “Seventh International Workshop on Primary Hyperoxaluria” held October 8-10, 2004 at the Mayo Clinic, Rochester, MN.

Invited participant at the NIDDK Workshop on Advancing Urologic Science and Career Development in Bethesda, MD February 15-16, 2007.

Member of the International Organizing Committee for the “Eight International Workshop on Primary Hyperoxaluria” held June 29-30, 2007 at University College London, Great Britain.

Invited Co-Chair of the planning Committee for an NIH meeting on “Anion Transporters and Oxalate Homeostasis: From Genes to Diseases” held December 8-9, 2008 at the NIH.

Member of the International Organizing Committee for the “Tenth International Workshop on Primary Hyperoxaluria” held June 22-23, 2012 in Bonn, Germany.

Research Support

Current:

- R01 DK088892 (Co-PIs: **Hatch**/Freel) 09/01/2010- 08/31/2014.
NIH/NIDDK “Probiotic-Induced Elimination of Oxalate to Treat Hyperoxaluria Associated with Primary Hyperoxaluria and Bariatric Surgery”
- Research Grant (Co-PIs: **Hatch**/Freel) 10/01/2012 – 09/31/2014.
Oxalosis & Hyperoxaluria Foundation. “Probiotic Treatment of Primary Hyperoxaluria”.

Publications:

- Costello, J., **Hatch, M.**, and Bourke, E. 1976. An enzymatic method for the spectrophotometric measurement of oxalic acid. *J. Lab. Clin. Med.*, 87:903-908.
- Hatch, M.**, Bourke, E., and Costello, J. 1977. New enzymatic method for serum oxalate determination. *Clinical Chemistry*, 23:76-78.
- Moriarty, M., Mulgrew, S., Mothersill, C., Malone, J., and **Hatch, M.** 1978. Some effects of administration of large doses of vitamin C in patients with skin carcinoma. *Irish J. of Med. Science* 47:166-170.
- Costello, J., **Hatch, M.**, and Keogh, B. 1978. Urinary oxalate excretion during ascorbic loading. *New England J. Med.*, 299:1469.
- Hatch, M.**, Mulgrew, S., Bourke, E. and Costello, J. 1980. The effect of megadoses of ascorbic acid on serum and urinary oxalate. *Eur. Urol.*, 6:166-169.
- Freel, R.W., **Hatch, M.**, Earnest, D.L., and Goldner, A.M. 1980. Oxalate transport across the rat colon: A re-examination. *Biochem. Biophys. Acta*, 600:(3), 838-843.
- Hatch, M.**, Freel, R.W., Goldner, A.M., and Earnest, D.L. 1982. Effects of bile salts on active oxalate transport in the colon. In: *The Colon and Nutrition*, (H. Kasper and H. Goebell, eds.), MTP Press, Ltd. Lancaster pp. 299-303.
- Hatch, M.**, Freel, R.W., Goldner, A.M., and Earnest, D.L. 1983. Vanadate stimulation of electrogenic chloride secretion by the rabbit colon. *Biochim. Biophys. Acta*, 732:699-704.
- Freel, R.W., **Hatch, M.**, Earnest, D.L., and Goldner, A.M. 1983. Dihydroxy bile salt-induced alterations in NaCl transport across the rabbit colon. *Am. J. Physiol.*, 245:G808-G815.
- Freel, R.W., **Hatch, M.**, Earnest, D.L., and Goldner, A.M. 1983. Role of tight junctional pathways in bile salt-induced increases in colonic permeability. *Am. J. Physiol.*, 245:G816-G823.
- Hatch, M.**, Freel, R.W., Goldner, A.M., and Earnest, D.L. 1984. Oxalate and chloride absorption by the rabbit colon: Sensitivity to metabolic and anion transport inhibitors. *Gut*, 25:232-237.
- Ahmad, S., and **Hatch, M.** 1985. Hyperoxalemia in renal failure: Hemoperfusion and hemodialysis in primary oxalosis. *Nephron*, 41:235-240.
- Hatch, M.** 1987. Short chain fatty acid transport and their effects on ion transport by rabbit caecum. *Am. J. Physiol.*, 253:G171-G178.
- Hatch, M.** and Freel, R.W. 1988. Electrolyte transport across the rabbit caecum: Sensitivity to transport inhibitors. *Pflug. Arch.* 411:333-338.
- Hatch, M.** and Geaghan, J. 1989. A comparative study of the metabolism of short chain fatty acid by rat and rabbit intestinal epithelia. *Comp. Biochem. Physiol.*, 92B, 779-786.
- Hatch, M.** 1990 Spectrophotometric determination of oxalate in whole blood. *Clin. Chim. Acta* 193, 199-202.

- Hatch, M.**, Schepers, A., Grunberger, I., and Godec, C.J. 1991. A retrospective analysis of the metabolic status of stoneformers. *New York State J. Med.* 91, 196-200.
- Hatch, M.** 1993. Oxalate status in stone-formers: Two distinct hyperoxaluric entities. *Urol. Res.* 21, 55-59.
- Hatch, M.**, Freel, R.W., and Vaziri, N.D. 1993. Characteristics of oxalate and ion transport across the rabbit proximal colon. *Pflug. Arch.* 423, 206-212.
- Hatch, M.** and Vaziri, N.D. 1994. Do thiazides reduce intestinal oxalate absorption? An in vitro study using rabbit colon. *Clin. Sci.* 86, 353-357.
- Hatch, M.**, Freel, R.W., and Vaziri, N.D. 1994. Absorptive and secretory mechanisms of oxalate transport across the rabbit distal colon. *Pflug. Arch.* 426, 101-109.
- Hatch, M.** and Vaziri, N.D. 1994. Enhanced enteric excretion of urate in rats with chronic renal failure. *Clin. Sci.* 86, 511-516.
- Hatch, M.**, Freel, R.W., and Vaziri, N.D. 1994. Intestinal excretion of oxalate in chronic renal failure. *J.A.S.N.* 5:1339-1343.
- Hatch, M.**, Freel, R.W. and Vaziri, N.D. 1994. Mechanisms for bi-directional oxalate transport across the large intestine. In: Ryall, R.L., ed. *Urolithiasis 2*. New York: Plenum Press.
- Vaziri, N.D., Freel, R.W., **Hatch, M.** 1995. Effect of chronic experimental renal insufficiency on urate metabolism. *J.A.S.N.* 6:1313-1317.
- Hatch, M.**, and Freel, R.W. 1995. Alterations in intestinal transport of oxalate in disease states. *Scan. Microsc.* 9:1121-1126.
- Hatch, M.**, Freel, R.W. 1995. Oxalate Transport across Intestinal and Renal epithelia. Chapter 11: Calcium Oxalates in Biological Systems. (S.R. Khan ed.), pp. 217- 238.
- Hatch, M.** 1995. The classification of two hyperoxaluric entities in hyperoxaluric stone-formers. In: *Urolithiasis: Consensus and Controversies*, eds: Rao, P.N., Kavanagh, J.P., Tiselius, H-G.
- Hatch, M.**, and Vaziri, N.D. 1995. Diuretics and intestinal oxalate absorption. In: *Urolithiasis: Consensus and Controversies*, eds: Rao, P.N., Kavanagh, J.P. Tiselius. H-G.
- Hatch, M.**, Freel, R.W., Vaziri, N.D. 1996. Effects of a specific angiotensin II receptor antagonist, losartan, on urate homeostasis and intestinal urate transport. *J. Pharm. Exp. Ther.* 276;187-193.
- Freel, R.W., **Hatch, M.**, Vaziri, N.D. 1997. Cyclic AMP-dependent sulfate secretion by the rabbit distal colon a comparison with electrogenic chloride secretion. *Am. J. Physiol. (Cell Physiol.)* 273;C148-C160.
- Hatch, M.**, Freel, R.W., Vaziri, N.D. 1998. Local up-regulation of angiotensin II receptors enhances potassium excretion in chronic renal failure. *Am. J. Physiol. (Renal, Fluid & Elec. Physiol)* 274;F275-F282.
- Hatch, M.**, Freel, R.W., Vaziri, N.D. 1998. Losartan antagonism of angiotensin II-induced potassium secretion across rat colon. *Pflugers Arch.* 436;717-724.
- Freel, R.W., **Hatch, M.**, Vaziri, N.D., 1998. Conductive pathways for oxalate and chloride in rabbit ileal brush border membrane vesicles. *Amer. J. Physiol. (Cell Physiol.)* 275;C748-C757.
- Hatch, M.**, Freel, R.W., Vaziri, N.D. 1999. AT₁ receptor up-regulation in intestine in chronic renal failure is segment specific. *Pflugers Arch.* 437;881-887.
- Hatch, M.**, Freel, R.W., Vaziri, N.D. 1999. Regulatory aspects of oxalate secretion in enteric oxalate elimination. *JASN* 10;S324-S328.
- Freel, R.W., Vaziri, N.D., **Hatch, M.** 2000. Muscarinic down-regulation of cAMP-stimulated potassium secretion by rabbit distal colon. *Pflug. Arch.* 440:243-252.

- Hatch, M.** and Freel, R.W. 2000. Adaptive enteric oxalate excretion in chronic renal failure induced by hyperoxaluria. Proceedings of the 9th International Symposium on Urolithiasis.
- Hatch, M.** and Freel, R.W. 2001. Oxalate handling following oxalate loading in rats. Proceedings of the 9th European Symposium on Urolithiasis. Eds. Kok, D.J., Romijn, H.C., Verhagen, P., and Verkoelen, C.F. Shaker Publishing, Maastricht, The Netherlands. pp 112-116.
- Hatch, M.** and Freel, R.W. 2002. Renal and intestinal handling of oxalate following oxalate loading in rats. *Am. J. Nephrol.* 23, #1, 18-26.
- Hatch, M.** and Freel, R.W. 2003. Angiotensin II Involvement in Enteric Oxalate Excretion in Rats with Chronic Renal Failure Induced by Hyperoxaluria. *Urol. Res.* 31: 426-432.
- Harris, A., Freel, R.W, and **Hatch, M.** 2004. Serum oxalate concentrations in rats and humans as determined with the use of ion chromatography. *J.Lab.Clin. Med.* 144, #1, 45-52.
- Morozumi, M, Green, M., Freel, R.W. and **Hatch, M.** 2004. The effect of oxalate loading or acidified media on the expression of mRNA encoding candidate oxalate transporters. Proceedings of the 10th International Symposium on Urolithiasis in Hong Kong pp 178-180.
- Hatch, M.** and Freel, R.W. 2005. Intestinal transport of an obdurate anion: oxalate. *Urol. Res.* 33: 1-16.
- Neu, J., Reverte, C. M., Mackey, A. D., Liboni, K., Tuhacek-Tenace, L. M., **Hatch, M.**, et al. 2005. Changes in intestinal morphology and permeability in the biobreeding rat before the onset of type 1 diabetes. *J. Pediatr. Gastroenterol. Nutr.* 40 (#5): 589-95
- Green, M., **Hatch, M.**, and Freel, R.W. 2005. Ethylene Glycol Induces Hyperoxaluria Without Metabolic Acidosis in Rats. *Am. J. Physiol. (Renal)* 289 #3: F536-F543.
- Green, M., and Freel, R.W., and **Hatch, M.** 2005. Lipid peroxidation is not the underlying cause of renal injury in hyperoxaluric rats. *Kid. Int.* 68 #6: 2629-2638.
- Freel, R.W., **Hatch, M.**, Green, M., and Soleimani, M. 2006. Ileal oxalate absorption and urinary oxalate excretion are enhanced in *slc26a6*-null mice. *Amer. J. Physiol. (Gastro.)*: 290 #4:G716-28.
- Hatch, M.**, Cornelius, J., Allison, M., Sidhu, H., Peck, A, and Freel, R.W. 2006. *Oxalobacter* sp. reduces urinary oxalate excretion by promoting enteric oxalate secretion. *Kid. Int.* 69 #4: 691-8.
- Hatch, M.**, and Freel, R.W. 2008. The roles and mechanisms of intestinal oxalate transport and oxalate homeostasis. *Sem in Neph.* 28 #2:143-151.
- Hatch, M.**, and Freel, R.W. 2008. Increased colonic sodium absorption in rats with chronic renal failure is partially mediated by AT₁ receptor agonism. *Am. J. Physiol. Gastrointest. Liver Physiol.* 295: G348-G356.
- Freel, R.W., and **Hatch, M.** 2008. Enteric oxalate secretion is not directly mediated by the human CFTR chloride channel. *Urol Res.* 36: 127-131.
- Freel, R.W., Morozumi, M., and **Hatch, M.** 2009. Parsing apical oxalate exchange in Caco-2BBE1 monolayers: siRNA knockdown of SLC26a6 reveals the role and properties of PAT-1. *Am. J. Physiol. Gastrointest. Liver Physiol.* 297: G918-G929.
- Li, N., **Hatch, M.**, Wasserfall, C., Douglas-Escobar, M., Atkinson, M., Schatz, D., and Neu, J. Butyrate and Type 1 Diabetes: Can We Fix the Intestinal Leak? 2010. *J. Ped. Gastro. & Nutr.*
- Hatch, M.**, Gjymishka, A., Salido, E.C., Allison, M.J., and Freel, R.W. Enteric oxalate elimination is induced and oxalate is normalized in a mouse model of Primary Hyperoxaluria following intestinal colonization with *Oxalobacter*. 2011. *Am. J. Physiol. Gastrointest. Liver Physiol.* 300: G461-G469.
- Freel, R.W., and **Hatch, M.** Hyperoxaluric Rats Do Not Exhibit Alterations in Renal Expression Patterns of *Slc26a1* (SAT1) mRNA or Protein. 2012. *Urol Res.* 40:647-654. PMID: 22573180

Canales, B.K. Ellen, J.E., Khan, S.R., and **Hatch, M.** 2013. Steatorrhea and hyperoxaluria occur after gastric bypass surgery in obese rats regardless of dietary fat or oxalate. *J. Urol.* March (Epub ahead of print). PMID:23499748

Abstracts

- Freel, R.W., **Hatch, M.**, Earnest, D.L., and Goldner, A.M. 1980. Dose-dependent permeability increases of rabbit colon induced by a dihydroxy bile salt. *Fed. Proc.* 39:378.
- Hatch, M.**, Freel, R.W., Goldner, A.M., and Earnest, D.L. 1980. Changes in the mechanism of colonic oxalate absorption induced by low concentrations of taurochenodeoxycholate (TCDC). *Gastroenterology*, 78:1180.
- Freel, R.W., **Hatch, M.**, Earnest, D.L., and Goldner, A.M. 1980. Oxalate is actively transported by colonic mucosa. *Clin. Res.* 28 (2):276A.
- Hatch, M.**, Freel, R.W., Goldner, A.M., and Earnest, D.L. 1981. Effects of taurochenodeoxycholate (TCDC) on colonic mucosal permeability: Cellular and paracellular aspects. *Gastroenterology*, 80:1080.
- Hatch, M.**, Freel, R.W., Goldner, A.M., and Earnest, D.L. 1981. Effects of taurochenodeoxycholate on mucosal permeability: Cellular and paracellular aspects. *Clin. Res.* 29(1)32A.
- Hatch, M.**, Freel, R.W., Goldner, A.M., and Earnest, D.L. 1982. Mechanism of oxalate and chloride absorption by rabbit colon: Effects of metabolic and anion transport inhibitors and low concentrations of bile salt. *Gastroenterology*, 82:1080.
- Freel, R.W., **Hatch, M.**, Earnest, D.L. and Goldner, A.M. 1982. Bile salt induced Cl secretion in the rabbit colon: Bile salts are not endogenous calcium ionophores. *Gastroenterology*, 82:1060.
- Goldner, A.M., Freel, R.W., **Hatch, M.**, and Earnest, D.L. 1983. Bile salt induced alterations in colonic epithelial permeability. *Intestinal Absorption and Secretion, Falk Symposium No. 36* p. 67.
- Hatch, M.**, Freel, P.W., Goldner, A.M., and Earnest, D.L. 1983. Active colonic oxalate absorption is mediated by chloride-bicarbonate exchange system. *Clin. Res.*, 30:238A.
- Hatch, M.**, Freel, R.W., Goldner, A.M., and Earnest, D.L. 1983. Comparison of effects of low concentrations of ricinoleate and taurochenodeoxycholate on colonic oxalate and chloride absorption. *Gastroenterology*, 84:1181.
- Hatch, M.** Freel, R.W. 1985. Caecal transport of electrolytes and short chain fatty acids (SCFAs). *Fed. Proc.*, 44:1744.
- Freel, R.W., **Hatch, M.** and Goldner, A.M. 1985. Electrophysiology of the colon and gallbladder in the presence of bile salt. *Fed. Proc.*, 44:1745.
- Hatch, M.** and Freel, R.W. 1986. Short chain fatty acid effects on transport and metabolism of rabbit cecum. *Fed. Proc.*, 45:182.
- Freel, R.W. and **Hatch, M.** 1988. Muscarinic inhibition of K⁺ secretion by rabbit distal colon. *FASEB J.* 2:A750.
- Zeiske, A., **Hatch, M.**, and Freel, R.W. 1988. Role of glucocorticoids on ion transport by rabbit distal colon. *FASEB J.* 2:A750.
- Hatch, M.** and Vaziri, N.D. 1991. Segmental difference in intestinal oxalate transport. *FASEB J.* 5:A1138.
- Hatch, M.**, Freel, R.W., and Vaziri, N.D. 1992. Comparison of oxalate transport and related mechanisms in the rabbit proximal and distal colon. *FASEB J.* 6:A1767.
- Vaziri, N.D., Freel, R.W., and **Hatch, M.** 1992. *Am. Soc. Nephrol. 25th Annual Meeting in Baltimore, MD.*
- Hatch, M.**, Freel, R.W., and Vaziri, N.D. 1993. Potential role of enteric transport of uric acid (UA) in chronic renal failure (CRF). *FASEB J.* 7:A26.

- Hatch, M.** and Vaziri, N.D. 1994. Are thiazides effective in reducing intestinal oxalate absorption? 5th European Urolithiasis Symposium, Manchester, England. 1994.
- Hatch, M.** 1994. Two hyperoxaluric entities emerge from a study of hyperoxaluric stone-formers. 5th European Urolithiasis Symposium, Manchester, England. 1994
- Hatch, M.**, Freel, R.W., Vaziri, N.D. 1994. Cyclooxygenase dependence of enhanced colonic potassium secretion in chronic renal failure. *JASN*.
- Vaziri, N.D., Freel, R.W. and **Hatch, M.** 1994. Enteric secretion and hepatic metabolism of uric acid in chronic renal failure. *JASN*.
- Hatch, M.**, Freel, R.W., Vaziri, N.D. 1995. Intestinal transport and renal excretion of urate is altered by a specific angiotensin II antagonist, DUP-753. *FASEB J.* 9:A368.
- Freel, R.W., **Hatch, M.**, Vaziri, N.D. 1995. Conductive pathways for oxalate and chloride in rabbit ileal brush border membrane vesicles. *FASEB J.* 9:A87.
- Freel, R.W., **Hatch, M.**, Vaziri, N.D. 1995. Extrarenal secretion of K and Cl is abolished by a specific angiotensin II receptor antagonist. *JASN.* 6: 340.
- Hatch, M.**, Freel, R.W., Vaziri, N.D. 1995. Evidence that extrarenal oxalate excretion may be mediated by a distinct apical membrane conductance pathway in rabbit intestine. *JASN.* 6: 361.
- Hatch, M.**, Freel, R.W., Vaziri, N.D. 1996. Chronic renal failure induced KCl secretion across rat colon is abolished by losartan, a specific angiotensin II receptor antagonist. *FASEB J.* A123.
- Hatch, M.**, Freel, R.W., Vaziri, N.D. 1996. Extrarenal potassium secretion across distal colon of rats with chronic renal failure (CRF) is mediated by angiotensin II (All). *JASN.* 7. 1855.
- Hatch, M.**, Freel, R.W., Vaziri, N.D. 1997. Angiotensin II induced K⁺ secretion across intestine is antagonized by losartan. *FASEB J.* A64.
- Hatch, M.**, Freel, R.W. 1998. Epithelial oxalate transport: New views and mechanisms. Amer. Urol. Assoc. Meeting of the Rock Soc. San Diego.
- Hatch, M.**, Freel, R.W. 1998. Oxalate transport in the gastrointestinal tract. NIH/NIDDK symposium/workshop on New Horizons in the Pathogenesis, treatment and Cure of Hyperoxaluria, Oxalosis and oxalate Stone Disease.
- Hatch, M.**, Freel, R.W., Vaziri, N.D. 1999. Colonic angiotensin II receptor up-regulation and angiotensin II-induced alterations in potassium and sodium transport. *The FASEB Journal*; 13 #5, A732.
- Hatch, M.**, Freel, R.W. 1999. Oxalate and its Transport. Finlayson Symposium at the University of Florida, Gainesville. 1999.
- Hatch, M.**, Freel, R.W. Intestinal oxalate transport, FASEB Summer Conference on Calcium Oxalates in Copper Mountain, CO.
- Hatch, M.**, Freel, R.W. 2000. The dynamics of intestinal handling of oxalate and the role of Oxalobacter. NIH/NIDDK symposium/workshop on: Oxalosis and Calcium Oxalate Stone Disease.
- Freel, R.W., **Hatch, M.** 2000. Intracellular oxalate concentrations. NIH/NIDDK symposium/workshop on: Oxalosis and Calcium Oxalate Stone Disease.
- Mackey A.D., Tuhacek, L.M., **Hatch, M.**, Reverte, C., and Neu, J. Changes in intestinal morphology and permeability in the Biobreeding diabetes prone (BBdp) rat. 2003 Meeting of Experimental Biology.
- Mackey A.D., Tuhacek, L.M., **Hatch, M.**, Reverte, C., Neu, J., and Schatz, D.A. Investigating the Early Events In Pre-Type 1 Diabetes: Changes In Intestinal Morphology And Permeability In The Biobreeding Diabetes Prone (Bbdp) Rat. 2003 Meeting of the Society for Pediatric Research.
- Morozumi, M, Green, M., Freel, R.W. and **Hatch, M.** 2004. The effect of oxalate loading or acidified media on the expression of mRNA encoding candidate oxalate transporters. *Urol. Res*:32 (2), 151.

- Freel, R. W. and **Hatch, M.** 2005. Mechanisms of Intestinal Oxalate Transport. 5th International Urological Research Forum, January 2005, Okinawa, Japan. Abstract. p 36.
- Hatch, M.** and Freel, R. W. 2005. The Impact of Disease States on Intestinal Oxalate Handling. 5th International Urological Research Forum, January 2005, Okinawa, Japan. Abstract. p 38.
- Freel, R. W., Green, M., Soleimani, M., and **Hatch, M.** 2005 Ileal Oxalate Transport in the PAT1 (SLC26A6) Knockout Mouse, FASEB Summer Research Conference on Calcium Oxalates, Tucson, AZ.
- Hatch, M.**, and Freel, R.W. 2008. Oxalate handling is altered in rats with metabolic acidosis. Accepted for oral presentation at the Eleventh International Symposium on Urolithiasis, 2-5 September, 2008.
- Freel, R.W., and **Hatch, M.** 2008. Knockdown of SLC26A6 in Caco-2 Monolayers Reveals PAT-1 Symmetrically Mediates Apical Oxalate Exchange. Accepted for oral presentation at the Eleventh International Symposium on Urolithiasis, 2-5 September, 2008.
- Hatch, M.**, and Freel, R.W. 2008. Oxalate handling is altered in rats with metabolic acidosis. Urol. Res., 36:211.
- Freel, R.W., and **Hatch, M.** 2008. Knockdown of SLC26A6 in Caco-2 Monolayers Reveals PAT-1 Symmetrically Mediates Apical Oxalate Exchange. Urol. Res., 36: 211-212.
- Hatch, M.**, and Freel, R.W. 2008. Physiological Interactions between Oxalobacter and the Transporting Mucosa. NIH Workshop on Anion Transporters and Oxalate Homeostasis: From Genes to Diseases. Meeting Proceedings.
- Freel, R.W., Morozumi, M., and **Hatch, M.** 2008. siRNA Knockdown of SLC26A6 Reveals the Contribution and Some Properties of PAT-1 to Transepithelial Anion Transport, Particularly Oxalate, across Caco-2 Monolayers. NIH Workshop on Anion Transporters and Oxalate Homeostasis: From Genes to Diseases. Meeting Proceedings.
- Hatch, M.**, Salido, E., Allison, M.J., Freel, R.W. *Oxalobacter formigenes* derives oxalate from mammalian endogenous sources by inducing epithelial transport pathways mediating intestinal oxalate secretion. 3rd ASM Conference on "Beneficial Microbes", October 2010, Miami, FL.

Invited Presentations:

- "The effects of megadoses of ascorbic acid on serum and urinary oxalate". Dept. Medicine, Trinity College, Dublin, Ireland. 1977.
- "Enteric hyperoxaluria". Irish Medical Association Annual Meeting, Dublin, Ireland. 1977.
- "The analysis of oxalate in biological fluids and oxalate status in health and disease". Dept. Physiology, University of Arizona Health Sciences Center, Tucson, AZ. 1978.
- "Oxalate status in health and disease". Rock Society Annual Meeting at the Health Sciences Center, University of Texas, Dallas. 1979.
- "Problems with oxalate analysis of biological fluids". Dept. Medicine, University of California, San Diego, CA. 1981.
- "Effects of bile salt on active oxalate transport in colon". Falk Symposium 32 in Titisee, W. Germany. 1981
- "The implications of enteric hyperoxaluria in the pathogenesis of calcium oxalate nephrolithiasis". Dept. Zoology and Physiology, Louisiana State University, Baton Rouge, LA. 1983.
- "Short chain fatty acid transport across rabbit caecum and their effects on ion transport". University of Michigan affiliated with Henry Ford Hospital, Detroit, MI. 1986.
- "Oxalate status in health and disease". SUNY-Downstate Health Sciences Center/ Long Island College Hospital, Dept. Urology, Brooklyn, NY. 1987.
- "Short chain fatty acid transport across rabbit caecum and their effects on ion transport". Department of Physiology, SUNY-Downstate Health Sciences Center, Brooklyn, NY 1987.
- "Short chain fatty acid transport". Yale University School of Medicine, New Haven, CT. 1988.

"Oxalate status in health and disease". Beth Israel Hospital, NY. 1988.
 "Kidney Stone Disease". Indiana University School of Medicine, IN. 1989.
 "Kidney Stone Disease". Urology Conference. Albert Einstein/ Montefiore Medical Center, NY. 1989.
 "Calcium Oxalate Stone Disease". Nephrology, UC-Irvine, CA. 1989.
 "Transport of oxalate across the mammalian intestine". Invited speaker at the second Gordon Conference on Calcium Oxalates, 1989.
 "Kidney Stone Disease". Physiology Conference. SUNY Health Science Center at Brooklyn, NY. 1989.
 "Intestinal oxalate transport in enteric hyperoxaluria". Allegheny General Hospital, Pittsburgh, PA. 1989.
 "Mechanisms of enteric hyperoxaluria". Dept. Urology, Cornell Medical Center, NY. 1990.
 "Segmental differences in intestinal oxalate transport". Invited speaker at the third Gordon Conference on Calcium Oxalates, 1991.
 "Metabolic evaluation of stone disease and aspects of ongoing research in intestinal oxalate transport". Dept. Urology, UCI. 1992.
 "Mechanisms for bi-directional oxalate transport across the large intestine". Invited speaker at the VII International Symposium on Urolithiasis, Cairns, Australia. 1992.
 "Update on transport mechanisms for oxalate across intestine", Nephrology Grand Rounds, UCI. 1993.
 "Intestinal transport of oxalate". Invited speaker at the fourth Gordon Conference on Calcium Oxalates, 1993.
 Fifth European Urolithiasis Symposium, Manchester England. Invited speaker and Session Chair. 1994.
 Scanning Microscopy International Meeting. Houston, Texas. Invited speaker on Alterations in intestinal transport of oxalate in disease states. 1995.
 "Kidney Stone Disease: Caught between a rock and a hard place". Renal Grand Rounds at UCI Medical Center. 1996.
 "Intestinal oxalate transport and oxalate homeostasis". Renal Research Group, UCI. 1996.
 "Regulation of potassium secretion in chronic renal failure". Renal Research Group, UCI. 1996.
 "Extrarenal Urate Transport and metabolism in chronic renal failure". Basic Science Research Group. UCI. 1996.
 "Extrarenal oxalate handling in health and disease states". Basic Science Research Group. UCI. 1996.
 "Management of Kidney Stones". Guest Lecture at Daniel Freeman Hospital - Marina Del Rey. 1996.
 "Conductive pathways for oxalate in small intestine". Invited Speaker. Rock Society Meeting, Steamboat Springs, CO. 1997.
 "Angiotensin II mediates extrarenal excretion of potassium in chronic renal failure". Invited presentation at the University of Florida. Co-sponsored by the Center for Study of Lithiasis and Calcification and the Hypertension Center. 1997.
 "Angiotensin II mediates extrarenal excretion of K⁺ in chronic renal failure". CHOC Research Conference, Orange County, CA. 1997.
 "Epithelial oxalate transport: New views and mechanisms". Invited presentation, Amer. Urol. Assoc. Meeting of the Rock Soc. San Diego. 1998.
 "Oxalate transport in the gastrointestinal tract". Invited speaker. NIH symposium/workshop on New Horizons in the Pathogenesis, treatment and Cure of Hyperoxaluria, Oxalosis and oxalate Stone Disease. December 8-9, 1998.
 Finlayson Symposium. Invited speaker on Oxalate and its Transport. University of Florida, January 29-31, 1999.
 First FASEB Conference on Speaker on Intestinal oxalate transport, 1999. Calcium Oxalates in Copper Mountain, CO.
 University College Dublin, Department of Pharmacology. Invited speaker. "Angiotensin II receptor up-regulation mediates adaptive enteric excretion of potassium in chronic renal failure". Ireland, October 1999.
 IXth International Symposium on Urolithiasis in Cape Town, South Africa. Invited speaker and session Chair on Oxalate Transport in Intestine, February, 2000.

NIH symposium/workshop on Oxalosis. November 16-17, 2000. Invited speaker on The dynamics of intestinal oxalate handling and *Oxalobacter*.

Pediatric Nephrology Seminar XXVII, Miami, Feb. 2001. Invited Speaker on Exploration of Novel Ways to Innocuously Excrete Oxalate”.

European Urolithiasis Symposium in The Netherlands, 2001. Invited Speaker on Oxalate Metabolism and Handling.

Mayo Clinic, Rochester, MN. Invited Speaker for both Nephrology Grand Rounds (Adaptive Enteric Potassium Excretion in Chronic Renal Failure) and Nephrology Research Forum (Renal and Intestinal Handling of Oxalate), December 9-11, 2002.

UF Department of Food Science and Human Nutrition. Invited Seminar Speaker on “Renal and Intestinal Handling of Oxalate”. October, 2003.

NIH symposium/workshop on Oxalosis. November 20-21, 2003. Invited speaker on Oxalate Transport.

XXXIst Pediatric Nephrology Seminar, Miami. Invited (04/03) Speaker on Oxalate Handling in Chronic Renal Failure”. March, 2004.

7th International Workshop on Primary Hyperoxaluria at the Mayo Clinic, Rochester, MN. Invited session Chairperson. October 8-10, 2004.

5th Urological Research Forum in Okinawa, Japan. Invited speaker on Oxalate Transport. January 27-29, 2005.

Invited session Chair at the FASEB Summer Conference in Tucson, AZ, July 16-21, 2005.

“Knockouts & Probiotics: Two Contemporary Approaches in Oxalate Transport Studies”. Invited guest speaker to The Medical College of Wisconsin Nephrology and Gastroenterology Divisions, August 20 – 23rd, 2005.

8th International Workshop on Primary Hyperoxaluria, London June 29-30, 2007. Invited speaker on “The Ins and Outs of enteric Oxalate Transport”.

11th International Symposium on Urolithiasis in Nice, France. Invited speaker and session Chair on “Oxalate handling is altered in rats with metabolic acidosis”, September 2-5, 2008.

NIH workshop on “Anion Transporters and Oxalate Homeostasis: From Genes to Diseases” held December 8-9, 2008 at the NIH. Invited speaker on: “Physiological interactions between *Oxalobacter* and the transporting mucosa”.

9th International Workshop on Primary Hyperoxaluria, New York, August 28-29, 2010. Invited speaker on “Urinary oxalate excretion is normalized in a mouse model of Primary Hyperoxaluria following intestinal colonization with *Oxalobacter sp.*”

“10th International Workshop on Primary Hyperoxaluria” held June 22-23, 2012 in Bonn, Germany. Invited speaker on “Intestinal Transport of Oxalate: The role of PAT1 and DRA transport proteins and the impact of *Oxalobacter sp.*”