



**ELIZABETH NASH MEMORIAL FELLOWSHIP
PUBLICATIONS (2001-2008)**

2001

1. **Chandy, G., M. Grabe, H.P. Moore, and T.E. Machen.** 2001. Proton leak and CFTR in regulation of Golgi pH in respiratory epithelial cells. *Am J Physiol Cell Physiol* 281:C908-921.
2. **Machen, T.E., G. Chandy, M. Wu, M. Grabe, and H.P. Moore.** 2001. Cystic fibrosis transmembrane conductance regulator and H⁺ permeability in regulation of Golgi pH. *Jop* 2:229-236.

2002

3. **Jacob, T., R.J. Lee, J.N. Engel, and T.E. Machen.** 2002. Modulation of cytosolic Ca(2+) concentration in airway epithelial cells by *Pseudomonas aeruginosa*. *Infect Immun* 70:6399-6408.

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4. **Frank, J., J. Roux, H. Kawakatsu, G. Su, A. Dagenais, Y. Berthiaume, M. Howard, C.M. Canessa, et al.** 2003. TGF-beta 1 decreases expression of the epithelial sodium channel alpha ENaC and alveolar epithelial vectorial sodium and fluid transport via an ERK 1/2-dependent mechanism. *J Biol Chem* 20:20.
5. **Howard, M., H. Fischer, J. Roux, B.C. Santos, S.R. Gullans, P.H. Yancey, and W.J. Welch.** 2003. Mammalian osmolytes and S-nitrosoglutathione promote Delta F508 cystic fibrosis transmembrane conductance regulator (CFTR) protein maturation and function. *J Biol Chem* 278:35159-35167.
6. **Swanson, B., R. Savel, F. Szoka, T. Sawa, and J. Wiener-Kronish.** 2003. Development of a high throughput *Pseudomonas aeruginosa* epithelial cell adhesion assay. *J Microbiol Methods* 52:361-366.

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7. **Chen, Y., Y.H. Zhao, T.B. Kalaslavadi, E. Hamati, K. Nehrke, A.D. Le, D.K. Ann, and R. Wu.** 2004. Genome-wide search and identification of a novel gel-forming mucin MUC19/Muc19 in glandular tissues. *Am J Respir Cell Mol Biol* 30:155-165.
8. **Fischer, H., C. Schwarzer, and B. Illek.** 2004. Vitamin C controls the cystic fibrosis transmembrane conductance regulator chloride channel. *Proc Natl Acad Sci U S A* 101:3691-3696.
9. **Salinas, D.B., N. Pedemonte, C. Muanprasat, W.F. Finkbeiner, D.W. Nielson, and A.S. Verkman.** 2004. CFTR involvement in nasal potential differences in mice and pigs studied using a thiazolidinone CFTR inhibitor. *Am J Physiol Lung Cell Mol Physiol* 287:L936-943.
10. **Schwarzer, C., T.E. Machen, B. Illek, and H. Fischer.** 2004. NADPH Oxidase-dependent acid production in airway epithelial cells. *J. Biol. Chem.* 279:36454-36461.
11. **Tong, Z., B. Illek, V.J. Bhagwandin, G.M. Verghese, and G.H. Caughey.** 2004. Prostaticin, a membrane-anchored serine peptidase, regulates sodium currents in JME/CF15 cells, a cystic fibrosis airway epithelial cell line. *Am J Physiol Lung Cell Mol Physiol* 287:L928-935.
12. **Verghese, G.M., Z.Y. Tong, V.J. Bhagwandin, and G.H. Caughey.** 2004. Mouse Prostaticin* Gene Structure, Promoter Analysis, and Restricted Expression in Lung and Kidney. *Am J Respir Cell Mol Biol* 30:519-529.
13. **Wang, X.F., M.M. Reddy, and P.M. Quinton.** 2004. Effects of a new cystic fibrosis transmembrane conductance regulator inhibitor on Cl⁻ conductance in human sweat ducts. *Exp Physiol* 89:417-425.

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14. **Lee, H., M. Pespeni, J. Roux, P.A. Dennerly, M.A. Matthay, and J.F. Pittet.** 2005. HO-1 induction restores c-AMP-dependent lung epithelial fluid transport following severe hemorrhage in rats. *Faseb J* 19:287-289.
15. **Pittet, J.F., H. Lee, M. Pespeni, A. O'Mahony, J. Roux, and W.J. Welch.** 2005. Stress-induced inhibition of the NF-kappaB signaling pathway results from the insolubilization of the IkappaB kinase complex following its dissociation from heat shock protein 90. *J Immunol* 174:384-394.
16. **Reddy, M.M., X.F. Wang, M. Gottschalk, K. Jones, and P.M. Quinton.** 2005. Normal CFTR Activity and Reversed Skin Potentials in Pseudohypoaldosteronism. *J Membr Biol* 203:151-159.
17. **Roux, J., H. Kawakatsu, B. Gartland, M. Pespeni, D. Sheppard, M.A. Matthay, C.M. Canessa, and J.F. Pittet.** 2005. Interleukin-1beta decreases expression of the epithelial sodium channel alpha-subunit in alveolar epithelial cells via a p38 MAPK-dependent signaling pathway. *J Biol Chem* 280:18579-18589.
18. **Salinas, D., P.M. Haggie, J.R. Thiagarajah, Y. Song, K. Rosbe, W.E. Finkbeiner, D.W. Nielson, and A.S. Verkman.** 2005. Submucosal gland dysfunction as a primary defect in cystic fibrosis. *Faseb J.* 19:431-433.
19. **Wang, X., C. Lytle, and P.M. Quinton.** 2005. Predominant constitutive CFTR conductance in small airways. *Respir Res* 6:7 (12 pages).

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20. **DeLaBarre, B., J.C. Christianson, R.R. Kopito, and A.T. Brunger.** 2006. Central pore residues mediate the p97/VCP activity required for ERAD. *Mol Cell* 22:451-462.
21. **Xu, X., D. Zhang, H. Zhang, P.J. Wolters, N.P. Killeen, B.M. Sullivan, R.M. Locksley, C.A. Lowell, and G.H. Caughey.** 2006. Neutrophil histamine contributes to inflammation in mycoplasma pneumonia. *J Exp Med* 203:2907-2917.

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22. **Ianowski, J.P., J.Y. Choi, J.J. Wine, and J.W. Hanrahan.** 2007. Mucus secretion by single tracheal submucosal glands from normal and CFTR knock-out mice. *J Physiol.* 580.1: 301-314
23. **Gaggioli V, Schwarzer C, Fischer H.** 2007. Expression of Nox1 increases cellular acid production but not proton conductance. *Arch Biochem Biophys* 459, 189-196.
24. **Schwarzer C, Illek B, Suh JH, Remington SJ, Fischer H, Machen TE.** 2007. Organelle redox of CF and CFTR-corrected airway epithelia. *Free Radic Biol Med*, 5;43:300-16.
25. **Hybiske K, Fu Z, Schwarzer C, Tseng J, Do J, Huang N, Machen TE.** 2007. Effects of cystic fibrosis transmembrane conductance regulator and $\Delta F508$ CFTR on inflammatory response, ER stress, and Ca²⁺ of airway epithelia. *Am J Physiol* 293:L1250-60.
26. **Choi JY, Joo NS, Krouse ME, Wu JV, Robbins RC, Ianowski JP, Hanrahan JW, Wine JJ.** 2007. Synergistic airway gland mucus secretion in response to vasoactive intestinal peptide and carbachol is lost in cystic fibrosis. *J Clin Invest.* 117:3118-27

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27. **Ianowski JP, Choi JY, Wine JJ, Hanrahan JW.** Substance P stimulates CFTR-dependent fluid secretion by mouse tracheal submucosal glands. *Pflugers Arch.* 2008 May 29.
28. **Christianson JC, Shaler TA, Tyler RE, Kopito RR.** OS-9 and GRP94 deliver mutant alpha1-antitrypsin to the Hrd1-SEL1L ubiquitin ligase complex for ERAD. *Nat Cell Biol.* 2008 Mar;10(3):272-82.