

B. Selected peer-reviewed publications (in chronological order). Do not include publications submitted or in preparation.(*selected from 261 peer reviewed publications*)

235. Horvath G, Schmid N, Fragoso M, Schmid A, Salathe M, Wanner A. Epithelial OCTN1/2 organic cation/carnitin transporters ensure pH dependent drug absorption in the airway. **Am J Resp Cell Mol Biol** 2007; 36:53-60
236. Horvath G, Vasas S, Wanner A. Inhaled corticosteroids reduce asthma-associated airway hyperperfusion through genomic and non-genomic mechanisms. **Pulm Pharmacol Ther** 2007; 20: 157-162
237. Fleming LE, Kirkpatrick B, Backer LC, Bean JA, Wanner A, et al. Aerosolized red tide toxins and asthma. **Chest** 2007; 131:187-194
238. Milian A, Nierenberg, M.S., Fleming L, Bean JA, Wanner A, Reich A, Backer LC, Jahorey D, Kirkpatrick B. Reported asthma symptom intensity during exposure to aerosolized florid redtide toxins. **J Asthma** 2007; 44:583-587
239. Horvath G, Mendes ES, Schmid N, Schmid A, Conner GE, Salathe M, Wanner A. The effect of corticosteroids on the disposal of long-acting beta2-agonists by airway smooth muscle cells. **J Allergy Clin Immunol** 2007; 120: 1103-1109
240. Campos M, Alazemi S, Zhang G, Sandhaus S, Wanner A. Influenza vaccination in subjects with alpha-1 antitrypsin deficiency. **Chest** 2008; 133: 49-55
241. Mendes ES, Campos MA, Wanner A. Acute effect of a glucocorticosteroid on beta-adrenergic airway and airway smooth muscle reactivity in patients with mild asthma. **J Allergy Clin Immunol** 2008; 121:700-704
242. Mendes ES, Horvath G, Monzon ME, Casalina-Matsuda1 M, Wanner A. Endothelial dysfunction in healthy smokers. **J Appl Physiol** 2008; 105: 54-57
243. Morris NR, Ceridon ML, Beck KC, Strom NA, Schneider DA, Mendes ES, Wanner A, Johnson BD. Exercise-related change in airway blood flow in humans: relationship to changes in cardiac output and ventilation. **Resp Physiol Neurobiol** 2008, 162:204-209
244. Campos MA, Alazemi S, Zhang G, Wanner A, Sandhaus RA. Effects of a disease management program in subjects with alpha-1 antitrypsin deficiency. **COPD** 2009; 6: 31-40
245. Campos MA, Alazemi S, Zhang G, Salathe M, Wanner A, Sandhaus RA, Baier H. Clinical characteristics of subjects with symptoms of alpha-1 antitrypsin deficiency older than 60 years. **Chest** 2009; 135: 600-608
246. Wanner A. COPD: New lessons from alpha-1 antitrysin deficiency? **Chest** 2009; 135:1342-1344
247. Wanner A. The Airway Circulation: a new therapeutic target in airway disease. **Resp Drug Delivery Europe** 2009; 1: 1-14
248. Fleming LE, Bean JA, Kirkpatrick B, Cheng YS, Pierce R, Naar J, Nierenberg K, Backer LC, Wanner A, Reich A, Zhou Y, Watkins S, Henry M, Zaias J, Abraham WM, Benson J, Cassidy A, Hollenbeck J, Kirkpatrick G, Clarke T, Baden DG. Exposure and effect

assessment of aerosolized red tide toxins (brevetoxins) and asthma. **Environ Health Perspect.** 2009;117:1095-100

249. Ceridon M, Wanner A, Johnson BD. Does the bronchial circulation contribute to congestion in heart failure? **Med Hypotheses.** 2009;73:414-9
250. Campos MA, Alazemi S, Zhang G, Wanner A, Salathe M, Baier H, Sandhaus RA. Exacerbations in subjects with alpha-1 antitrypsin deficiency receiving augmentation therapy. **Respir Med.** 2009;103:1532-9
251. McCullagh A, Rosenthal M, Wanner A, Hurtado A, Padley S, Bush A. The bronchial circulation--worth a closer look: a review of the relationship between the bronchial vasculature and airway inflammation. **Pediatr Pulmonol.** 2010;45:1-13
252. Wanner A, Mendes ES. Endothelial dysfunction in asthma and COPD. **Amer J Resp Crit Care Med** 2010; 182:1344-51
253. Kirkpatrick B, Fleming LE, Bean JA, Nierenberg K, Backer LC, Cheng YS, Pierce R, Reich A, Naar J, Wanner A, Abraham W, Baden DG. Aerosolized Red Tide Toxins (Brevetoxins) and Asthma: Continued health effects after 1 hour beach exposure. **Harmful Algae** 2011; 10: 138-143
254. Fleming Barbara Kirkpatrick, Lorraine C. Backer, Cathy J. Walsh, Kate Nierenberg, John Naar, Richard Pierce, Andrea J Bo Stuart Shalat, Porter Hoagland, Wendy Stephan, Judy Bean, Sharon Watkins, Tainya Clarke, Margaret Byrne, Daniel G. Baden. Review of Florida Red Tide and Human Health Effects. **Harmful Algae** 2011; 10: 224-233.
255. Bokhari S, Willens H, Lowery M, Wanner A, DeMarchena E. Orthodeoxia platypnia syndrome in a patient with lipomatous hypertrophy of inter-atrial septum due to chronic steroid use. **Chest** 2011 139:443-445
256. Horvath G, Mendes ES, Schmid N, Schmid A, Conner GE, Fregien N, Salathe M, Wanner A. Rapid nongenomic actions of inhaled corticosteroids on long-acting beta-2-agonist trafficking by human airway epithelial and smooth muscle cells. **Pulm Pharmacol Ther** 2011; 24: 654-659
257. Bean A, Fleming L, Kirkpatrick B, Backer L, Nierenberg K, Reich A, Chen YS, Wanner A, Benson J, Naar J, Pierce R, Abraham W, Kirkpatrick G, Hollenbeck J, Zaias J, Baden D. Florida red tide toxins and longitudinal respiratory effects in asthmatics. **Harmful Algae** 2011; 10: 744-748
258. Mendes ES, Rebolledo P, Wanner A. Acute effects of Salmeterol and Fluticasone alone and in combination on airway blood flow in subjects with asthma. **Chest** 2012;141:1184-1189
259. Mendes ES, Lit L, Horvath G, Rebolledo P, Wanner A. Effect of brief exercise on airway blood flow in subject with or without asthma. **J Exer Physiol** 2012; 15: 10-17
260. Wanner A, DeArce A, Pardee E. Novel therapeutic uses of alpha-1 antitrypsin: a window to the future. **COPD** 2012; 9: 583-588
261. Mendes ES, Rebolledo P, Hurwitz B, Wanner A. Airway and extrapulmonary endothelial function in healthy smokers: effect of an inhaled glucocorticosteroid. **Chest** 2013; 143:1733-1739
- C. Research Support.** List selected ongoing or completed (during the last three years) research projects (federal and non-federal support). Begin with the projects that are most relevant to the research proposed in this application. Briefly indicate the overall goals of the projects and your role (e.g. PI, Co-Investigator, Consultant) in the research project. Do not list award amounts or percent effort in projects.

NIH 1 PO1 ES 10594-01 (Co-Investigator)

Title: Effects of Inhaled Florida Red Tide Brevetoxins

Period: 07/01/00-06/30/10

Project Title: Smooth Muscle Effects of Airborne Brevetoxin in the Airway

This project evaluates the respiratory effects of red tide-derived brevetoxins in experimental animals and human subjects.

Asthma Clinical Research Center (Principal Investigator)

Agency: American Lung Association

Period: 07/01/99-06/30/14

This program is a nationwide clinical asthma research network of centers with the necessary infrastructure for multi-center studies of the natural course of asthma and the effects of therapeutic interventions in children and

adults.

Title: School-Based Asthma Intervention Program

Agency: NIH/NIAID

Period: 09/30/94 - 08/31/03

This project tests the hypothesis that a school-based intervention program will reduce morbidity in young minority children with asthma.

1R01HL58086-01 (PI)

Title: Alpha-Adrenergic Regulation of Airway Blood Flow

Agency: NIH NHLBI

Period: 04/01/98-03/31/03

The major goal is to test the hypothesis that the inflammatory increase in alpha-adrenergic vascular responsiveness is due to upregulated alpha-adrenergic signaling in vascular smooth muscle or decreased alpha-adrenergic generation of endothelial relaxing factors, or both.

NIH NIEHS 1P01 ES 10594 ZES1- Project Title: "Effects of inhaled Florida red tide brevetoxins" 7/1/00-6/30/10

Co-Investigator.

Florida RC1 grant 24248-The airway microbiome in COPD. 1/10/10-1/9/12. (\$ 749,000). Principle investigator

Academic Grants from Industry (P.I.):

Acute effects of inhaled glucocorticoids on airway blood flow (GSK, 1999; \$92,000).

Comparative vasoconstrictive actions of inhaled glucocorticoids (GSK, 2000; \$49,000).

Racemic and R-albuterol on airway blood flow (Sepracor, 2000; \$50,000).

Effect of anti-inflammatory therapy on airway blood flow in asthma (Merck, 2003; \$48,000).

Airway blood flow reactivity in smokers with or without COPD. (GSK, 2004; \$52,000).

Low-dose steroid pretreatment potentiates adrenergic airway and airway vascular responses in the airway (Sepracor, 2004; \$50,000).

Role of airway blood flow in exercise-induced asthma (Merck 2005; \$59,000).

Endothelial function in the airway of smokers (GSK 2005; \$54,000).

Effect of budesonide on formoterol disposal (AstraZeneca, 2005; \$89,406).

Interactive smooth muscle effects of salmeterol and fluticasone in the airway (GSK 2006; \$ 50,625).

pH dependent drug transport mechanisms in the airway: implications for inhaled beta-2 adrenergic agonist therapy in asthma (AstraZeneca 2007; \$ 166,703)

Effect of an inhaled glucocorticoid on endothelial function in cigarette smokers (GSK 2008; \$73,831)

Acute effect of mometasone on beta-adrenergic airway and airway vascular relaxation in moderately severe asthmatics (Schering-Plow 2010; \$55,000)

Carrier-mediated absorption and clearance of tiotropium in the airway (BI 2009; \$110,000)

Effect of an Inhaled Glucocorticoid-long-acting beta adrenergic agonist on Endothelial Function in COPD (GSK 2010; \$62,500)

Acute vasoconstrictive effect of budesonide in the airway of patients with asthma (AZ 2010, \$70,000)

Airway and pulmonary vascular endothelial function in healthy smokers: Effect of inhaled glucocorticosteroid treatment (GSK 2013; \$125,000)

Effect of Roflumilast on Airway Blood Flow as an Expression of Airway Inflammation in COPD (Forest 2013; \$199,000)