

**2011-2012**  
**Summary of Scholarly Activities**  
**Department of Internal Medicine**

**I. PUBLISHED JOURNAL ARTICLES, BOOK CHAPTERS, AND PATENTS**

Abe K, Toba M, Alzoubi A, Koubsky K, Ito M, Ota H, Gairhe S, Gerthoffer WT, Fagan KA, McMurtry IF, Oka M. Tyrosine kinase inhibitors are potent acute pulmonary vasodilators in rats. *Am J Respir Cell Mol Biol*. 2011 Oct;45(4):804-8.

Adams M, Bellone JM, Wright BM, Rutecki GW. Evaluation and pharmacologic approach to patients with resistant hypertension. *Postgrad Med*. 2012 Jan;124(1):74-82.

Al-Mehdi, AB, Pastukh VM, Swiger BM, Reed DJ, Patel MR, Bardwell GC, Pastukh VV, Alexeyev MF, Gillespie MN. Peri-nuclear mitochondrial clustering creates an oxidant-rich nuclear domain required for hypoxia-induced transcription. *Sci Signal*. 2012 Jul 3;5(231):ra47.

Baliog C, Reginato AM. Epidemiology, risk factors and aging of osteoarthritis. In: Nakasato Y, Yung RL, editors. *Geriatric rheumatology comprehensive approach*. New York: Springer; 2011. Chapter 18, p. 173-86.

Black TP, Manolakis CS, Di Palma JA. "Red flag" evaluation yield in irritable bowel syndrome. *J Gastrointest Liver Dis*. 2012 Jun;21(2):153-6.

Chouteau, JM, Obaiko B, Gorodnya OM, Pastukh VM, Ruchko MV, Wright AJ, Wilson GW, Gillespie MN. Mitochondrial DNA integrity may be a determinant of endothelial barrier properties in oxidant-challenged rat lungs. *Am J Physiol Lung Cell Mol Physiol*. 2011 Dec;301(6):L892-8.

Cioffi DL, Pandey S, Alvarez DF, Cioffi EA. Terminal sialic acids are an important determinant of pulmonary endothelial barrier integrity. *Am J Physiol Lung Cell Mol Physiol*. 2012 May;302(10):L1067-77.

Cioffi DL, Wu S, Chen H, Alexeyev M, St Croix CM, Pitt BR, Uhlig S, Stevens T. Orai 1 determines calcium selectivity of an endogenous TRPC heterotetramer channel. *Circ Res*. 2012 May 25;110(11):1435-44.

Clark DW, Phang T, Edwards MG, Geraci MW, Gillespie MN. Promoter G-quadruplex sequences are targets for base oxidation and strand cleavage during hypoxia-induced transcription. *Free Radic Biol Med*. 2012 Jul 1;53(1):51-9.

Darbera L, Chenoune M, Lidouren F, Ghaleh B, Cohen MV, Downey JM, Berdeaux A, Tissier R. Adenosine and opioid receptors do not trigger the cardioprotective effect of mild hypothermia. *J Cardiovasc Pharmacol Ther*. 2012 Jun;17(2):173-80.

de Melo SW. Complete esophageal occlusion after band ligation. *Endoscopy*. 2011 Dec; 3(Suppl 2) UCTN:E259. Available from: <https://www.thieme-connect.de/ejournals/html/10.1055/s-0030-1256522>

de Melo SW Jr, Wallace MB. Normal mediastinal anatomy by EUS and EBUS. In: Gress FG, Savides TJ, Bounds BC, Deutsch JC, editors. *Atlas of endoscopic ultrasonography*. Chichester, West Sussex, UK: Wiley-Blackwell; 2011. Chapter 3. p. 14-7.

de Melo SW Jr, Di Palma JA. The role of capsule endoscopy in evaluating inflammatory bowel disease. *Gastroenterol Clin North Am*. 2012 Jun;41(2):315-23.

Di Palma J, Rex D. Advances in bowel preparations: new formulation and clinical results. *Gastroenterol Nurs*. 2011 Sep-Oct;34(Suppl 2):2-8.

Di Palma JA. Current diagnosis and treatment: gastroenterology, hepatology and endoscopy (Book Review). *Gastroenterol*. 2012 May;142(5):1255.

Di Palma JA, Rex DK, Cohen LB, Pelham RW. Split-dose bowel cleaning and clinical considerations of sedation prior to colonoscopy. *Gastroenterol Endosc News*. 2011 Sep; 62(9):SR1146. Available from: [http://www.gastroendonews.com/download/SR1146\\_WM.pdf](http://www.gastroendonews.com/download/SR1146_WM.pdf)

Fitzgerald M, Fagan K, Herbert DE, Al-Ali M, Mugal M, Haynes J Jr. Misclassification of pulmonary hypertension in adults with sickle hemoglobiopathies using doppler-echocardiography. *South Med J*. 2012 Jun;105(6):300-5.

Downey JM, Cohen MV. Pathophysiology of myocardial reperfusion injury. In: Kaski JC, Hausenloy DJ, Gersh BJ, Yellon DM, editors. *Management of myocardial reperfusion injury*. New York: Springer; 2012. Chapter 2, p. 11-28.

Gairhe S, Bauer NN, Gebb SA, McMurtry IF. Myoendothelial gap junctional signaling induces differentiation of pulmonary arterial smooth muscle cells. *Am J Physiol Lung Cell Mol Physiol*. 2011 Oct;301(4):L527-35.

Gallos G, Yim P, Chang S, Zhang Y, Xu D, Cook JM, Gerthoffer WT, Emala CW Sr. Targeting the restricted  $\alpha$ -subunit repertoire of airway smooth muscle GABAA receptors augments airway smooth muscle relaxation. *Am J Physiol Lung Cell Mol Physiol*. 2012 Jan;302(2):L248-56.

Gerthoffer WT, Schaafsma D, Sharma P, Ghavami S, Halayko AJ. Motility, survival and proliferation. *Compr Physiol*. 2012 Jan;2(1):255-81. Available from: <http://www.comprehensivephysiology.com/WileyCDA/CompPhysArticle/refId-c110018.html>

Gilbert D, Trimm F, Rutecki GW. Experiencing differences between European and American end-of-life care: a difficult discontinuation of life support. *Ethics Med*. 2012 Summer;28(2):77-9.

Huang J, Dou D, Dang J, Pardue JH, Qin X, Huan J, Gerthoffer WT, Tan M. Knowledge acquisition, semantic text mining, and security risks in health and biomedical informatics. *World J Biol Chem.* 2012 Feb 26;3(2):27-33.

Ibrahim M, Omar B. Ciprofloxacin-induced torsade de pointes. *Am J Emerg Med.* 2012 Jan;30(1):252. e5-9. Available from: [http://ac.els-cdn.com/S073567571000481X/1-s2.0-S073567571000481X-main.pdf?\\_tid=c3217c70-2787-11e2-b368-00000aab0f01&acdnat=1352147662\\_ff4bdf1d8616751185455c7ac6465b9e](http://ac.els-cdn.com/S073567571000481X/1-s2.0-S073567571000481X-main.pdf?_tid=c3217c70-2787-11e2-b368-00000aab0f01&acdnat=1352147662_ff4bdf1d8616751185455c7ac6465b9e)

Johnson JA, Hennes AR, Perrien DS, Schuster M, Robinson LJ, Gladson S, Loibner H, Bai S, Blackwell TR, Tada Y, Harral JW, Talati M, Lane KB, Fagan KA, West J. Cytoskeletal defects in Bmpr2-associated pulmonary arterial hypertension. *Am J Physiol Lung Cell Mol Physiol.* 2012 Mar;302(5):L474-84.

Joshi SR, Comer BS, McLendon JM, Gerthoffer WT. MicroRNA regulation of smooth muscle phenotype. *Mol Cell Pharmacol.* 2012 Mar 1;4(1):1-16.

Knudsen CD, Di Palma JA. Carbohydrate challenge tests: do you need to measure methane? *South Med J.* 2012 May;105(5):251-3.

Landreneau SW, Knudsen C, Rodriguez R. Dysphagia in a patient with esophageal intramural pseudo-diverticulosis. *VHjoe.* 2011 10(1). Available from: <http://www.vhjo.org/index.php/vhjo/article/viewfile/42/62>

Leavesley SJ, Annamdevula N, Boni J, Stocker S, Grant K, Troyanovsky B, Rich TC, Alvarez DE. Hyperspectral imaging microscopy for identification and quantitative analysis of fluorescently-labeled cells in a highly autofluorescent tissue. *J Biophotonics.* 2012 Jan;5(1):67-84.

Ochoa CD, Alexeyev M, Pastukh V, Balczon R, Stevens T. *Pseudomonas aeruginosa* exotoxin Y is a promiscuous cyclase that increases endothelial Tau phosphorylation and permeability. *J Biol Chem.* 2012 Jul 20;287(30):25407-18.

Ochoa CD, Stevens T. Studies on the cell biology of interendothelial cell gaps. *Am J Physiol Lung Cell Mol Physiol.* 2012 Feb;302(3):L275-86.

Pitt BR, Christman JW, Gunst SJ, Matthay MA, Stevens T, Ware LB. Physiology, reductionism, and translational medicine: the right mix. *Am J Physiol Lung Cell Mol Physiol.* 2011 Oct;301(4):L389-90.

Poon SH, Baliog CR Jr, Sams RN, Robinson-Bostom L, Telang GH, Reginato AM. Syndrome of cocaine-levamisole induced cutaneous vasculitis and immune-mediated leukopenia. *Semin Arthritis Rheum.* 2011 Dec;41(3):434-4.

Rabieyousefi M, Soroosh P, Satoh K, Date F, Ishii N, Yamashita M, Oka M, McMurtry IF, Shimokawa H, Nose M, Sugamura K, Ono M. Indispensable roles of OX40L-derived signal and epistatic genetic effect in immune-mediated pathogenesis of spontaneous pulmonary hypertension. *BMC Immunol.* 2011 Dec 15;12:67-79.

Roath MC, Di Palma JA. Genetics in gastroenterology: what you need to know. Part I. *Consultant.* 2012 Feb;52(2):99-105.

Roath MC, Di Palma JA. Genetics in gastroenterology: what you need to know. Part II. *Consultant.* 2012 Mar;52(3):185-95.

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Stevens T. Functional and molecular heterogeneity of pulmonary endothelial cells. *Proc Am Thorac Soc.* 2011 Nov;8(6):453-7.

Tissier R, Ghaleh B, Cohen MV, Downey JM, Berdeaux A. Myocardial protection with mild hypothermia. *Cardiovasc Res.* 2012 May 1;94(2):217-25.

Townsley MI. Structure and composition of pulmonary arteries, capillaries, and veins. *Compr Physiol.* 2012 Jan;2(1):675-709. Available from: <http://www.comprehensivephysiology.com/WileyCDA/CompPhysArticle/refId-c100081.html>

Xin W, Yang X, Rich TC, Krieg T, Barrington R, Cohen MV, Downey JM. All preconditioning-related G protein-coupled receptors can be demonstrated in the rabbit cardiomyocyte. *J Cardiovasc Pharmacol Ther.* 2012 Jun;17(2):190-8.

Zeng H, Pappas C, Belser JA, Houser KV, Zhong W, Wadford DA, Stevens T, Balczon R, Katz JM, Tumpey TM. Human pulmonary microvascular endothelial cells support replication of highly pathogenic avian influenza viruses: possible involvement in the pathogenesis of human H5N1 virus infection. *J Virol.* 2012 Jan;86(2):667-78.

## II. PUBLISHED ABSTRACTS

Alzoubi A, Almalouf P, Toba M, O'Neill K, Matsumoto Y, Oka M, McMurtry IF, Stevens T. TRPC4 channels and pulmonary arterial hypertension: observations from study of TRPC4 knockout rats. *Am J Respir Crit Care Med.* 2012 May 1;185:A3437. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A3437](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A3437)

Alzoubi A, Toba M, Abe K, Bauer NN, Fagan K, McMurtry IF, Oka M. Dehydroepiandrosterone restores right ventricular structure and function in a pre-clinical model of severe pulmonary arterial hypertension. *Am J Respir Crit Care Med.* 2012 May 1;185:A3449. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A3449](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A3449)

Black T, Manolakis C, Di Palma J. "Red flag" evaluation yield in irritable bowel syndrome. Am J Gastroenterol. 2011 Oct;106(Suppl 2):S496. Abstract no. 1304.

Black T, Manolakis C, Di Palma J. Diagnostic yield of testing in diarrhea-predominant irritable bowel syndrome. Am J Gastroenterol. 2011 Oct;106(Suppl 2):S496-7. Abstract no. 1305.

Bryan KR, Green BT, Teplick RS, Culpepper RM. Hepatitis C prevalence and risk factors in incident dialysis patients in 2 decades. Am J Kidney Dis. 2012 Apr;59(4):A25. Abstract no. 42.

Comer BS, Kogut P, Camoretti-Mercado B, Halayko A, Solway J, Gerthoffer WT. MiR-146a reduces cyclooxygenase-2 expression in human airway smooth muscle cells. Am J Respir Crit Care Med. 2012 May 1;185:A4992. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A4992](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A4992)

Gairhe S, Alzoubi A, Toba M, Oka M, McMurtry I. Effect of dehydroepiandrosterone on the expression of sphingosine kinases in pulmonary arteries of Sugden hypoxia rat model of pulmonary arterial hypertension. Am J Respir Crit Care Med. 2012 May 1;185:A4777. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A4777](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A4777)

Gairhe S, Oka M, McMurtry I. Pulmonary arterial expression of sphingosine kinases is markedly increased in pulmonary arterial hypertension. Am J Respir Crit Care Med. 2012 May 1;185:A4752. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A4752](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A4752)

Hill JK, Kua J, Obaiko B, Pastukh VM, Gillespie MN. Mitochondrial DNA damage-associated molecular patterns released in response to *P. aeruginosa* contribute to endothelial barrier dysfunction in perfused rat lungs. Am J Respir Crit Care Med. 2012 May 1;185:A1866. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A1866](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A1866)

Hill JK, Mulekar S, Pastukh VM, Gillespie MN. Mitochondrial DNA damage-associated molecular patterns are released in response to oxidant stress in rat pulmonary artery endothelial cells. FASEB J. 2012 Apr 1;26:1130.12.

Hupp C, Culpepper RM. Outcomes of implementation of a fluid management program in 2 dialysis clinics. Adv Chronic Kidney Dis. 2012 Mar;19(2):122. Abstract no. A2.

Joshi SR, Abe K, Oka M, McMurtry I, Gerthoffer WT. Micro RNA 145 is differentially regulated in the progression of pulmonary arterial hypertension. Am J Respir Crit Care Med. 2012 May 1;185:A4772. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A4772](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A4772)

Krawiec JA, Thorneloe KS, Townsley MI, Toomey JR. Blockade of high vascular pressure activation of TRPV4 inhibits permeability in the isolated perfused rat lung: a novel strategy for treating pulmonary edema in heart failure. Mid Atlantic Pharmacological Society Conference Proceedings; 2011 Oct 27; Philadelphia, PA. Abstract no. 24.

McLendon JM, Joshi SR, Abe K, Oka M, McMurtry I, Gerthoffer WT. Dysregulated microRNA expression in peripheral blood mononuclear cells of experimental pulmonary arterial hypertension. Am J Respir Crit Care Med. 2012 May 1;185:A3407. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A3407](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A3407)

Morrow R, Fagan KA, Cioffi DL. Anti-endothelial cell antibodies (AECA) in pulmonary arterial hypertension (PAH). FASEB J. 2012 Apr 1;26:873.4.

Ochoa CD, Alexeyev M, Pastukh V, Balczon R, Stevens T. *Pseudomonas aeruginosa* exotoxin Y is a promiscuous cyclase that increases endothelial Tau phosphorylation and permeability: evidence for an infectious endothelial tauopathy. Am J Respir Crit Care Med. 2012 May 1;185:A5506. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A5506](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A5506)

Ochoa CD, Robson MJ, Stevens TC, Balczon R, Frank DW, Stevens T. *Pseudomonas aeruginosa* promotes microtubule-associated protein 6 binding to pulmonary microvascular endothelial cell microtubules. Am J Respir Crit Care Med. 2012 May 1;185:A1862. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A1862](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A1862)

O'Neill K, Reece A, Alzoubi A, Toba M, Oka M, McMurtry IF, Fagan KA. Blockade of either alpha-5 And beta-1 integrin inhibits pulmonary arterial contraction: possible role in PAH. Am J Respir Crit Care Med. 2012 May 1;185:A4829. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A4829](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A4829)

Pastukh VM, Bardwell GC, Patel M, Al-Mehdi AB, Gillespie MN. The DNA glycosylase Ogg1 is required for hypoxia-induced activation of VEGF transcription in pulmonary artery endothelial cells. FASEB J. 2012 Mar 29;26:699.8.

Pelham R, Rex D, DiPalma JA, Cleveland M, McGowan J. What is the optimal interval between split-dose bowel preparation and colonoscopy for optimal cleansing? Am J Gastroenterol. 2011 Oct;106(Suppl 2):S160-1. Abstract no. 409.

Platt TA, Oka M, McMurtry I. Mechanism of contraction of hypoxia-induced hypertensive rat pulmonary arteries. Am J Respir Crit Care Med. 2012 May 1;185:A4769. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A4769](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A4769)

Robson MJ, Ochoa CD, Stevens TC, Alexeyev M, Frank DW, Stevens T. *Pseudomonas aeruginosa* impairs the activation of store operated calcium entry via microtubule associated protein 6. Am J Respir Crit Care Med. 2012 May 1;185:A5505. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A5505](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A5505)

Stevens TC, Ochoa CD, Frank DW, Robson MJ, Stevens T. The *Pseudomonas aeruginosa* exotoxin Y induces inter-endothelial cell gaps and impairs migration and proliferation. Am J Respir Crit Care Med. 2012 May 1;185:A3666. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/3666](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/3666)

Sykora J, Bell M, Rutecki GW. Eosinophilic coincidence or new disease: is there a Churg Strauss-Wells syndrome? Alabama Regional America College of Physicians' 2012 Annual Meeting; 2012 Jun 3, Orange Beach, AL. Abstract no. Poster no. 2.

Thorneloe KS, Bao W, Alsaid H, Jian MY, Costell M, Maniscalco K, Olzinski A, Gordon E, Lozinskaya I, Elefante L, Qin P, Matasic D, Kallal L, Waszkiewicz A, Davenport E, Larkin J, Burgert M, Eidam H, Goodman K, Toomey JR, Roethke T, Jucker B, Schnackenberg C, Cheung M, Townsley MI, Lepore JJ, Willette RN. Discovery of orally active transient receptor potential vanilloid 4 (TRPV4) blockers for the treatment of pulmonary edema in heart failure. Circulation. 2011 Nov 22;124(21 Suppl 1):A13510.

Toba M, Alzoubi A, Abe K, Urakami T, Komatsu M, Matsumoto Y, Alvarez D, Jarvinen TA, Mann D, Ruoslahti E, McMurtry IF, Oka M. The cell-penetrating homing peptide CAR selectively enhances pulmonary effects of systemically co-administered vasodilators in a preclinical model of severe pulmonary arterial hypertension. Am J Respir Crit Care Med. 2012 May 1;185:A1239. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A1239](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A1239)

Toba M, Alzoubi A, O'Neill K, Gairhe S, Matsumoto Y, Abe K, McMurtry IF, Oka M. Time-course of hemodynamic and histological progression in SU5416/hypoxia/normoxia-exposed pulmonary arterial hypertensive rats. Am J Respir Crit Care Med. 2012 May 1;185:A1244. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A1244](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A1244)

Townsley M, Alvarez D. *Pseudomonas aeruginosa*-induced pulmonary edema - early impact on periarterial cuffs independent of TRPV4. Am J Respir Crit Care Med. 2012 May 1;185:A5509. Available from: <http://ajrccm.atsjournals.org/cgi/reprint/185/MeetingAbstracts/A5509>

Townsley MI, Jian MY, Cheung M, Willette RN, Thorneloe KS. The selective TRPV4 antagonist GSK2263095A attenuates high venous pressure-induced lung injury in murine and canine lung. FASEB J. 2012 Mar 29;26:696.11.

Villalta PC, Rocic P, Townsley MI. Role of matrix metalloproteinases (MMP) 2 and 9 in TRPV4-induced lung injury. FASEB J. 2012 Mar 29;26:696.12.

Xu N, Cioffi DL, Wang X, Cioffi EA, Alexeyev M, Stevens T. Orail is a critical determinant of sodium influx through store operated calcium entry channels. Am J Respir Crit Care Med. 2012 May 1;185:A5510. Available from: [http://ajrccm.atsjournals.org/cgi/reprint/185/1\\_MeetingAbstracts/A5510](http://ajrccm.atsjournals.org/cgi/reprint/185/1_MeetingAbstracts/A5510)

Yang X-M, Liu Y, Cui L, Yang X, Liu Y, Tandon N, Kambayashi J, Downey JM, Cohen MV. Does blockade of platelet aggregation after stenting for STEMI protect against reperfusion injury? Circulation. 2011 Nov 22;124(21 Suppl 1):A13478.

### III. PUBLISHED BOOKS

### IV. INVITED PRESENTATIONS

Alvarez DF. Invited speaker. NAP1 and NAP2 determine the highly proliferative behavior of endothelial cells. Rush University; 2012 Mar 21; Chicago, IL.

Alvarez DF. Invited speaker. Cellular and molecular signaling in the pulmonary endothelium regulating proliferation and programmed cell death. American Thoracic Society Mini Symposium; 2012 May 22; San Francisco, CA.

Crook ED. Invited speaker. Health disparities in diabetes, obesity and metabolic syndrome. Lunch and Learn, Our Neighborhood Health Clinic, College of Nursing; 2012 May 17; Mobile, AL.

Crook ED. Invited speaker. Health disparities in obesity, diabetes, and metabolic syndrome. Alabama Extension Service, Annual Diabetes Conference; 2012 Apr 23; Montgomery, AL.

Culpepper RM. Invited speaker. The case for dietary salt reduction in cardio-vascular disease. Mobile Infirmary Grand Rounds; 2012 Jun 19; Mobile, AL.

de Melo SW Jr. Invited speaker. Minimally invasive endoscopic techniques for the complications of acute pancreatitis. 3<sup>rd</sup> Greater Gulf Coast Trauma and Acute Care Surgery Symposium; 2012 Mar 22; Mobile, AL.

Di Palma JA. Invited speaker. Constipation. University of Texas Health Services Center at San Antonio Division of Gastroenterology Fellows; 2011 Oct 6; San Antonio, TX.

Di Palma JA. Invited speaker. Oral sodium sulfate. Annual Scientific Meeting of the American College of Gastroenterology 2011; 2011 Nov 11; Washington, DC.

Di Palma JA. Invited speaker. Prep them right. Breakfast symposium. Annual Scientific Meeting of the American College of Gastroenterology 2011; 2011 Nov 11; Washington, DC.



Di Palma JA. Invited speaker. Irritable bowel syndrome with constipation. University of Oklahoma, Division of Gastroenterology Fellows; 2011 Nov 15; Oklahoma City, OK.

Fagan KA. Invited speaker. Diagnosis and management of pulmonary arterial hypertension. National Jewish Medical and Research Center Medical Grand Rounds; 2012 Feb 6; Denver, CO.

Fagan KA. Invited speaker. Introduction to clinical phenotyping. Albert Fishman Symposium on Pulmonary Hypertension 2012; 2012 Apr 14; Philadelphia, PA.

Fagan KA. Invited speaker. South Alabama cases. Annual Tri-State Thoracic Conference 2012; 2012 Jan 14; New Orleans, LA.

Fagan KA. Invited speaker. Future of clinical trials in pulmonary arterial hypertension. NIH Pulmonary Vascular Disease Workshop 2012; 2012 Feb 17; Bethesda, MD.

Fagan KA. Invited speaker. Pulmonary vascular phenotypes. American Thoracic Society International Meeting Postgraduate Course 2012; 2012 May 19; San Francisco, CA.

Fagan KA. Invited speaker. Clinical research in pulmonary arterial hypertension. Pulmonary Hypertension International Conference 2012; 2012 Jun 23; Orlando, FL.

Fagan KA. Invited speaker. Pulmonary arterial hypertension. Tri-State Respiratory Therapy Annual Meeting 2012; 2012 Aug 3; New Orleans, LA.

Gerthoffer WT. Invited speaker. MicroRNAs and smooth muscle phenotype. Department of Cell Physiology and Molecular Biophysics, Texas Tech University; 2011 Oct 13; Lubbock, TX.

Gerthoffer WT. Invited speaker. MicroRNAs and smooth muscle phenotype. Stitzel Lecturer, West Virginia University; 2011 Oct 26; Morgantown, WV.

Gerthoffer WT. Invited speaker. Noncoding RNAs in normal functions and lung pathology. American Thoracic Society International Conference 2012, Scientific Symposium - Epigenetic targets for novel therapy of lung diseases, 2012; 2012 May 23; San Francisco, CA.

Gillespie MN. Invited speaker. Novel targets for pharmacologic intervention in acute lung injury. Regional Meeting, Gulf Coast Trauma Meeting 2012; 2012 Mar 22; Spanish Fort, AL.

Herrera JL. Invited speaker. Approach to abnormal liver tests. American College of Physicians, Alabama Chapter 2011; 2011 Oct 7; Point Clear, AL.

Herrera JL. Invited speaker. Future directions for finding a cure in hepatitis B. University of Virginia; 2011 Oct 10; Charlottesville, VA.

Herrera JL. Invited speaker. Difficult hepatitis B infection cases. University of Rochester; 2012 May 15; Rochester, NY.

Massey CM. Invited speaker. Heart disease in women. 2<sup>nd</sup> Annual Go Red for Women Symposium; 2012 Feb 14; Mobile, AL.

Townsley M. Invited speaker. TRPV4, lung endothelium, and acute lung injury, lessons in diversity. Department of Physiology, University of Mississippi Medical Center; 2012 May 16; Jackson, MS.

Townsley M. Invited speaker. Interstitial barriers and fluid balance in the lungs. The Lung In Congenital Heart Disease: Symposium. AHA Scientific Sessions 2011; 2011 Nov 15; Orlando, FL.

## V. NATIONAL PROFESSIONAL RECOGNITION

Ronald C. Allison: 1993 – present – Department of Medicine Resident Evaluation Committee; 1991 – present – Department of Medicine Education Committee; 2007 – present – CoARC.

Errol Crook: Community and academia: partners for eliminating health disparities and promoting equity in care. Center for Healthy Communities 2012 Annual Symposium Organizing Committee Meeting; 2012 Apr 13; Mobile, AL.

Diego F. Alvarez: Web Site Coordinator, Pulmonary Circulation Assembly-American Thoracic Society; Program Committee member, Pulmonary Circulation Assembly-American Thoracic Society; Planning Committee member, Pulmonary Circulation Assembly-American Thoracic Society; Program Committee member, Respiratory Section-American Physiological Society; Nominating Committee Chair, Respiratory Section-American Physiological Society; Abstract reviewer American Thoracic Society International Conference 2012; Abstract reviewer American Heart association International Conference 2011; American Thoracic Society Mini symposium – Chair (San Francisco, California): “Cellular and molecular signaling in the pulmonary endothelium regulating proliferation and programmed cell death” (Spring 2012); Peer reviewer for manuscripts submitted to *American Journal of Physiology-Lung Cellular and Molecular Physiology*, *Microvascular Research*, *Translational Research*, *American Journal of Respiratory Cell and Molecular Biology*, *American Journal of Respiratory and Critical Care Medicine*, *Pulmonary Circulation*, *Journal of Applied Physiology*. Chair; American Thoracic Society Mini symposium. 2012 May 22; San Francisco, CA.

Barney B. Beaver: Advisory Board: Boston Scientific Corporation.

Eduardo G. Calderón: Director, Tuberculosis Clinic at the Mobile County Health Department; Member, Tuberculosis Medical Advisory Council for the State of Alabama Department of Public Health.

Jack A. DiPalma: Foundation Board, World Gastroenterology Organization, 2008-2012, Treasurer, 2011-Present; World Gastroenterology Organization, Capital Campaign, National Society Division Chair, Campaign Executive Committee, 2010-2012; Editorial Board, *Gastroenterology and Hepatology*, 2004-2012; Editorial Board, *Nature Clinical Practice*, 2007-2012; Editorial Board, *Southern Medical Journal*, 2000-2012; Technical Advisory Panel, Bovie Medical Instruments, 2005-2012; Folgers Coffee Scientific Advisory Board, 2006-2012; Best Doctors in America, 2003-2012.

Karen A. Fagan: Study sections for grant review, American Heart Association; Innovation Grants review panel member, American Heart Association; Molecular and cell signaling member, NIH; Special emphasis review panel – Clinical trials in lung disease member, American Thoracic Society; Proof of concept grant review panel – ad hoc member, journal editor or editorial board member Editorial Board – *Pulmonary Circulation Journal*; Editorial Board – *Advances in Pulmonary Hypertension*; Guest editor – *Advances in Pulmonary Hypertension*; Medical Editor – *Pathlights Journal of the Pulmonary Hypertension Association Journal*; peer review *Circulation Journal*, *American Journal of Physiology*, *American Journal of Respiratory Cell and Molecular Biology*, *American Journal of Respiratory and Critical Care Medicine*, *Chest Journal*, *European Respiratory Journal*. Speaker/organizer Annual Tri-State Thoracic Conference 2012; 2012 Jan 14; New Orleans, LA.

Brian W. Fouty: Study sections for grant review - National Institutes of Health, Small Business Respiratory Sciences Study Section; journal peer review - *American Journal of Physiology*; manuscript reviewer, *American Journal of Respiratory and Critical Care Medicine*.

William T. Gerthoffer: Editorial board member - *American Journal of Physiology*, *Cell Physiology*; editorial board member - *American Journal of Physiology*, *Lung Cell and Molecular*; editorial board member - *Cell Health and Cytoskeleton*; Associate Editor - *Comprehensive Physiology*, *Respiratory Physiology*;

Planning Committee chair, RSF Assembly of the American Thoracic Society; (ad hoc), reviewer - NIH VCMB study section; (ad hoc), reviewer - NIH Surgical Sciences, Biomedical Imaging, and Bioengineering SEP.

Mark N. Gillespie: Editorial board - *American Journal of Physiology*, *Lung Cell and Molecular Physiology*; Editorial board - *American Journal of Respiratory Cell and Molecular Biology*; Program, Leadership, and Long Range Planning Committees - American Thoracic Society; Ad hoc member of NIH study sections (1), Special Emphasis Panel (2), RIBT (1) American Lung Association Research Peer Review panel, Manuscript reviewer for all major journals relevant to my field of research.

William K. Green: Chairperson, Board of Directors at South Alabama Community AIDS Resources, Education and Support (CARES); Chairperson, Alabama Medicaid Drug Utilization Review Committee.

Jorge L. Herrera: Section Editor, *Practical Gastroenterology*, 2009-2011; Editorial Board, *Gastroenterology* and *Hepatology Journal*, 2008-2011; Best Doctor's in America, 2008-2009, 2009-2010, 2011-2012; Member, Safety Review Committee, BMS HCV Trial; Reviewer for the *American Journal of Gastroenterology*; Reviewer for *Journal of Clinical Gastroenterology*; Reviewer for *Southern Medical Journal*; Reviewer for *Journal of Clinical Gastroenterology* and *Hepatology*.

Grace Hundley: Invited Poster Judge. National Associate Poster Competition Internal Medicine Meeting. 2012 April 20; New Orleans, LA.

TJ Hundley: Invited Poster Judge. National Associate Poster Competition Internal Medicine Meeting. 2012 April 20; New Orleans, LA. Leadership Enrichment and Development (LEAD) certificate recipient. 2012 April 20; New Orleans, LA.

Ivan F. McMurtry: Study sections for grant review NHLBI Workgroup HLBP review of J. Garcia P01 entitled Cytoskeletal Regulation of Lung Endothelial Pathobiology (ad hoc), Canadian Institutes of Health Research review of W. Kuebler Operating Grant entitled Role of CFTR and Sphingolipids in Hypoxic Pulmonary Vasoconstriction (ad hoc), Journal editor or editorial board member Editor (along with M. Gillespie, T. Stevens, and W. Wagner) of American Physiology Society's online journal *Comprehensive Physiology*: Topic on Pulmonary Circulation and Non-Respiratory Functions; International Associate Editor - *Circulation Journal*; editorial board of *American Journal of Physiology Lung*; journal peer review - *American Journal of Physiology Lung*, *American Journal of Physiology Heart*, *Cardiovascular Research*, *Circulation*, *European Respiratory Journal*, *Nature Medicine*.

Masahiko Oka: Served as ad hoc manuscript peer reviewer for the following journals - *American Journal of Physiology Lung*, *Cardiovascular Research*, *Circulation*, *Circulation Journal*, *European Respiratory Journal*; Expert Opinion On Investigational Drugs - J Throm Haemost, PLoS ONE; ad hoc grant peer reviewer - The French National Research Agency; facilitator - poster session at the ATS 2012 meeting.

GW Rutecki: Peer reviewer, *Academic Medicine Journal*, *Southern Medical Journal*; Editor, Consultant "Top Paper of the Month," Reviewer, Consultant Photo Quiz; Editor, Consultant Hypertension Section; Contributor, McMaster Online rating of Evidence; Consumers Research Council of America "Top Physicians."

Troy Stevens: Associate Editor - *American Journal of Physiology Lung* (term ended 2012); Program Project Grant Review – NIH Program; Project Grant External Advisor - Medical College of Georgia and University of Pennsylvania; SEP Grant Review – NIH; Ad Hoc Reviewer - RIBT.

Mary I. Townsley: Member: NHLBI NITM - Review of T32 applications; Editorial Boards - *Frontiers in Physiology: Vascular Physiology, Microvascular Research*, Journal peer review for the following journals - *American Journal of Physiology, American Journal of Respiratory and Critical Care Medicine, Circulation Research, Microcirculation, Respiratory Physiology*, AHA Task Force - Development of CME training program for new peer reviewers; Distinguished Achievement Award - AHA Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation, 2011 Nov 16.

John A. Vande Waa: Principal Investigator, Health Resources and Services Administration Grant for Ryan White Care Act IV Family HIV Clinic; Member, the American Society of Tropical Medicine and Hygiene; Member, the Infectious Disease Society of America.

## **VI. BRIEF SUMMARY OF ACTIVITIES AND PROGRESS**

### **Education**

The department has continued to receive excellent evaluations from medical students and residents for its educational activities. For over 10 consecutive years, the Internal Medicine Clerkship has been recognized as the best clerkship for third year medical students. The Class of 2012 again honored the department with this award. Several of the departmental faculty were recognized with the red sash award for their educational efforts.

Department members have been instrumental in developing the new curriculum for the medical school. Clearly, the department continues to meet its educational mission and is being recognized by its chief customer, the pupils, for success in this endeavor.

### **Scholarly Efforts**

The department has continued to be productive in scholarly achievements, particularly in the area of publications. Again, the Divisions of Gastroenterology, Pulmonary and Critical Care and Nephrology had particularly successful years in the arena. The residents have been active in scholarly activity primarily through case reports and presentations at regional meetings.

There are several clinical trials led by department of medicine faculty. The Division of Gastroenterology continues to have a robust clinical studies portfolio. Cardiology has six multi-center trials underway and have partnered with Dr. William Gerthoffer, Chair Department of Biochemistry, in a translational project funded through the Center for Healthy Communities P-20 Grant. This unique award examines the role of a protein, HSP27, as a unique marker of atherosclerosis and its potential contribution to health disparities seen in cardiovascular disease in African-American populations. The Division of Nephrology has several multi-center trials with newer ones focused in lupus nephritis and polycystic kidney disease. The Division of Pulmonary has continued its partnership with the Center for Lung Biology on studies in pulmonary hypertension. In addition,

members of the division have been instrumental in the development of a unique translational program project grant to be submitted to the NIH this fall.

### Service

The department continues to deliver excellent clinical service. There are some new services that are worthy of mention. Dr. Clara Massey, Chief Division of Cardiology, has led a significant effort to revamp cardiovascular services at the University of South Alabama Medical Center with a particular emphasis on cardio thoracic surgical cases. She has led the effort to reassemble a multi-disciplinary team which has led to improvement in outcomes in cardiovascular cases. The Division of Gastroenterology has continued to grow its services for advance endoscopy procedures. These advancements have enhanced partnerships with the Mitchell Cancer Institute and are able to address ablations of GI tumors and Barrett's esophagus through endoscope procedures. The Division of Nephrology continues to expand its options for renal replacement therapy for both in-center hemodialysis and home dialysis.

Departmental faculty continues to serve on editorial boards, as journal reviewers, on advisory boards, and on grant review panels. The faculty has contributed significantly to the University and Greater Mobile Community.