

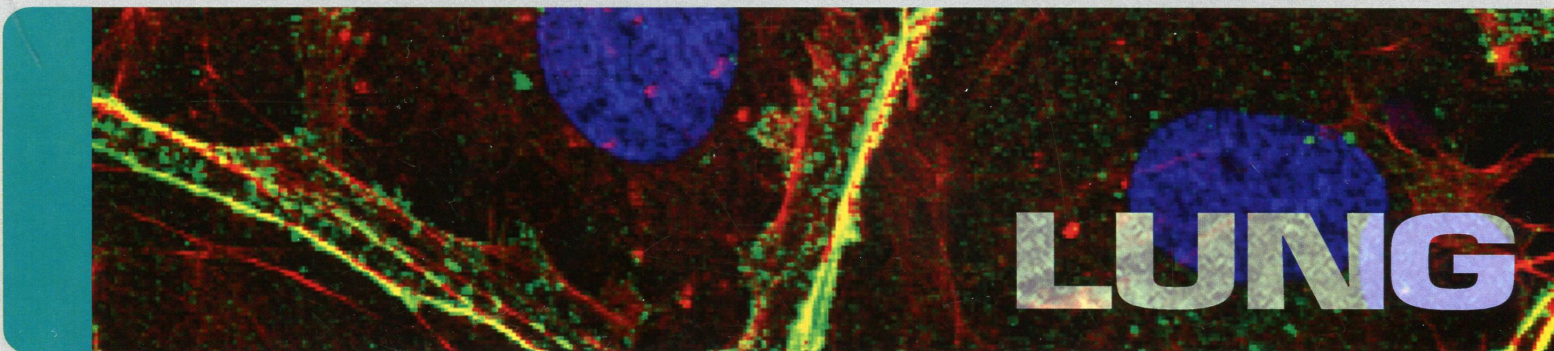
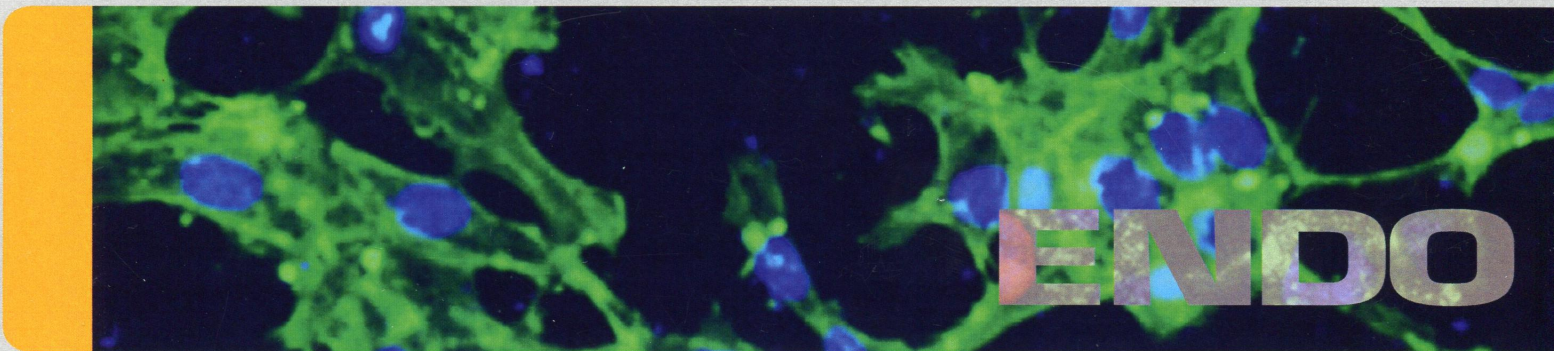
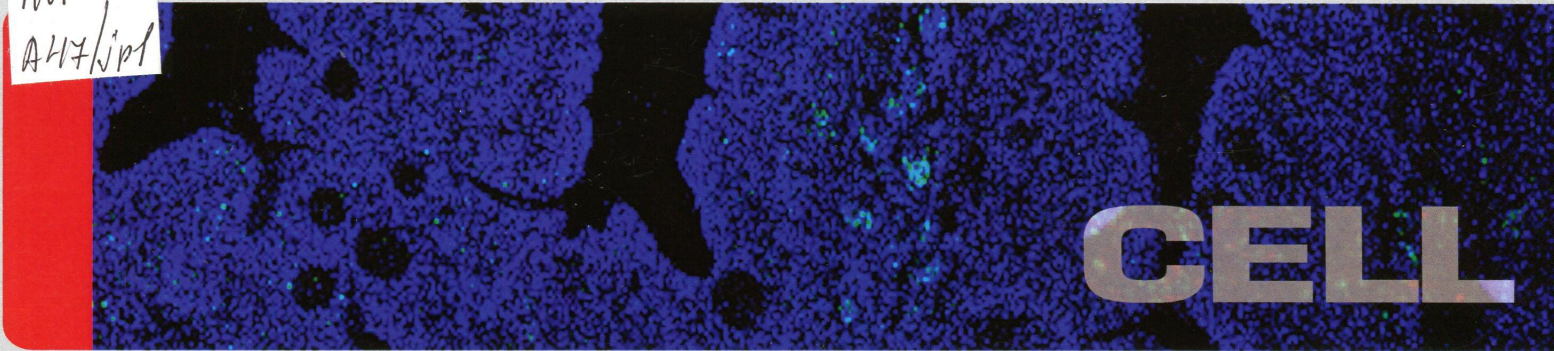
AMERICAN JOURNAL OF PHYSIOLOGY®

volume 307

no. 3

September 2014

FM
AH7/jpt



1 of 2

PUBLISHED BY THE AMERICAN PHYSIOLOGICAL SOCIETY

American Journal of Physiology

September 2014/Volume 307, Issues 3

Issues are published online twice monthly;
complete contents are listed below.

American Journal of Physiology- Cell Physiology

September 1, 2014

EDITORIAL FOCUS

Investigating pulmonary arterial hypertension from “stem” to stern. Focus on “Identification of a common Wnt-associated genetic signature across multiple cell types in pulmonary arterial hypertension”

K. A. Cottrill and S. Y. Chan

C413

CALL FOR PAPERS

Stem Cell Physiology and Pathophysiology

Identification of a common Wnt-associated genetic signature across multiple cell types in pulmonary arterial hypertension

J. D. West, E. D. Austin, C. Gaskill, S. Marriott, R. Baskir, G. Bilousova, J.-C. Jean, A. R. Hemnes, S. Menon, N. C. Bloodworth, J. P. Fessel, J. A. Kropski, D. Irwin, L. B. Ware, L. Wheeler, C. C. Hong, B. Meyrick, J. E. Loyd, A. B. Bowman, K. C. Ess, D. J. Klemm, P. P. Young, W. D. Merryman, D. Kotton, and S. M. Majka

C415

The transport mechanism of the human sodium/*myo*-inositol transporter 2 (SMIT2/SGLT6), a member of the LeuT structural family

L. J. Sasseville, J.-P. Longpré, B. Wallendorff, and J.-Y. Lapointe

C431

Global discovery of high-NaCl-induced changes of protein phosphorylation

R. Wang, J. D. Ferraris, Y. Izumi, N. Dmitrieva, K. Ramkissoon, G. Wang, M. Gucek, and M. B. Burg

C442

Hypoxia-elicited catecholamine release is controlled by L-type as well as N/PQ types of calcium channels in rat embryo chromaffin cells

J.-C. Fernández-Morales, J.-F. Padín, J.-A. Arranz-Tagarro, S. Vestring, A. G. García, and A. M. G. de Diego

C455

The mitosis-regulating and protein-protein interaction activities of Astrin are controlled by Aurora-A-induced phosphorylation

S.-C. Chiu, J.-M. M. Chen, T.-Y. W. Wei, T.-S. Cheng, Y.-H. C. Wang, C.-F. Ku, C.-H. Lian, C.-C. J. Liu, Y.-C. Kuo, and C.-T. R. Yu

C466

Differentiation between human ClC-2 and CFTR Cl⁻ channels with pharmacological agents

J. Cuppoletti, J. Chakrabarti, K. P. Tewari, and D. H. Malinowska

C479

LETTERS TO THE EDITOR

Letter to the editor: “KDAC and the regulation of nonnuclear smooth muscle protein acetylation”

M. J. Taggart, M. Karolczak-Bayatti, and G. N. Europe-Finner

C493

Reply to “Letter to the editor: ‘KDAC and the regulation of nonnuclear smooth muscle protein acetylation’”

D. D. Tang, R. A. Cleary, R. Wang, and O. J. Gannon

C494

EDITORIAL FOCUS

Of mice and men: modeling cardiovascular complexity in diabetes. Focus on "Mitochondrial inefficiencies and anoxic ATP hydrolysis capacities in diabetic rat heart"

H. H. Patel and A. A. McDonough

C497

Mitochondrial inefficiencies and anoxic ATP hydrolysis capacities in diabetic rat heart

T. Pham, D. Loiselle, A. Power, and A. J. R. Hickey

C499

Alterations in the cholinergic system of brain stem neurons in a mouse model of Rett syndrome

M. F. Oginsky, N. Cui, W. Zhong, C. M. Johnson, and C. Jiang

C508

Reduced endoplasmic reticulum stress-induced apoptosis and impaired unfolded protein response in TRPC3-deficient M1 macrophages

S. Solanki, P. R. Dube, J.-Y. Tano, L. Birnbaumer, and G. Vazquez

C521

Uroguanylin inhibits H-ATPase activity and surface expression in renal distal tubules by a PKG-dependent pathway

V. da Silva Lima, R. O. Crajoinas, L. R. Carraro-Lacroix, A. N. Godinho, J. L. G. Dias, R. Dariolli, A. C. C. Girardi, M. C. Fonteles, G. Malnic, and L. M. A. Lessa

C532

Mechanical stretch upregulates proteins involved in Ca²⁺ sensitization in urinary bladder smooth muscle hypertrophy

E. Boopathi, C. Gomes, S. A. Zderic, B. Malkowicz, R. Chakrabarti, D. P. Patel, A. J. Wein, and S. Chacko

C542

Epidermal growth factor-induced proliferation of collecting duct cells from Oak Ridge polycystic kidney mice involves activation of Na⁺/H⁺ exchanger

S. D. Coaxum, M. G. Blanton, A. Joyner, T. Akter, P. D. Bell, L. M. Luttrell, J. R. Raymond Sr., M.-H. Lee, P. A. Blichmann, M. N. Garnovskaya, and T. Saigusa

C554

Platelet-derived growth factor receptor- α -positive cells and not smooth muscle cells mediate purinergic hyperpolarization in murine colonic muscles

M. Kurahashi, V. Mutafova-Yambolieva, S. D. Koh, and K. M. Sanders

C561

Inhibitors of the 5-lipoxygenase pathway activate pannexin1 channels in macrophages via the thromboxane receptor

H. A. da Silva-Souza, M. N. de Lira, N. K. Patel, D. C. Spray, P. M. Persechini, and E. Scemes

C571

**American Journal of Physiology-
Endocrinology and Metabolism**

September 1, 2014

Impaired mitochondrial function in human placenta with increased maternal adiposity

J. Mele, S. Muralimohanar, A. Maloyan, and L. Myatt

E419

FGF23 directly impairs endothelium-dependent vasorelaxation by increasing superoxide levels and reducing nitric oxide bioavailability

N. Silswal, C. D. Touchberry, D. R. Daniel, D. L. McCarthy, S. Zhang, J. Andresen, J. R. Stubbs, and M. J. Wacker

E426

Selective inhibition of sphingosine kinase-1 protects adipose tissue against LPS-induced inflammatory response in Zucker diabetic fatty rats

M. Tous, R. Ferrer-Lorente, and L. Badimon

E437

DPP IV inhibitor treatment attenuates bone loss and improves mechanical bone strength in male diabetic rats

L. Glorie, G. J. Behets, L. Baerts, I. De Meester, P. C. D'Haese, and A. Verhulst

E447

Testosterone alters iron metabolism and stimulates red blood cell production independently of dihydrotestosterone

L. A. Beggs, J. F. Yarrow, C. F. Conover, J. R. Meuleman, D. T. Beck, M. Morrow, B. Zou, J. J. Shuster, and S. E. Borst

E456

Uncoupled skeletal muscle mitochondria contribute to hypermetabolism in severely burned adults

C. Porter, D. N. Herndon, E. Børshiem, T. Chao, P. T. Reidy, M. S. Borack, B. B. Rasmussen, M. Chondronikola, M. K. Saraf, and L. S. Sidossis

E462

REVIEW

- Skeletal muscle atrophy and the E3 ubiquitin ligases MuRF1 and MAFbx/atrogen-1
S. C. Bodine and L. M. Baehr E469
-
- FOXO1 activates glutamine synthetase gene in mouse skeletal muscles through a region downstream of 3'-UTR: possible contribution to ammonia detoxification
Y. Kamei, M. Hattori, Y. Hatazawa, T. Kasahara, M. Kanou, S. Kanai, X. Yuan, T. Suganami, W. H. Lamers, T. Kitamura, and Y. Ogawa E485
- Effects of delayed gastric emptying on postprandial glucose kinetics, insulin sensitivity, and β -cell function
L. Hinshaw, M. Schiavon, A. Mallad, C. Dalla Man, R. Basu, A. E. Bharucha, C. Cobelli, R. E. Carter, A. Basu, and Y. C. Kudva E494
- (Pro)renin receptor in skeletal muscle is involved in the development of insulin resistance associated with postinfarct heart failure in mice
A. Fukushima, S. Kinugawa, S. Takada, S. Matsushima, M. A. Sobirin, T. Ono, M. Takahashi, T. Suga, T. Homma, Y. Masaki, T. Furihata, T. Kadoguchi, T. Yokota, K. Okita, and H. Tsutsui E503
- Activation of growth hormone secretagogue receptor induces time-dependent clock phase delay in mice
L. Zhou, Q. Gao, P. Zhang, S. Guo, J. Gu, W. Hao, and J.-M. Cao E515
- Thyrostimulin deficiency does not alter peripheral responses to acute inflammation-induced nonthyroidal illness
C. J. J. van Zeijl, O. V. Surovtseva, J. Kwakkel, H. C. van Beeren, J. H. D. Bassett, G. R. Williams, W. M. Wiersinga, E. Fliers, and A. Boelen E527

**American Journal of Physiology-
 Gastrointestinal and Liver Physiology**

CALL FOR PAPERS

Intestinal Stem Cells in GI Physiology and Disease

- TCF-1-mediated Wnt signaling regulates Paneth cell innate immune defense effectors HD-5 and -6: implications for Crohn's disease
J. Beisner, Z. Teltschik, M. J. Ostaff, M. M. Tiemessen, F. J. T. Staal, G. Wang, M. Gersemann, G. Perminow, M. H. Vatn, M. Schwab, E. F. Stange, and J. Wehkamp G487

MUCOSAL BIOLOGY

- PPAR α -dependent exacerbation of experimental colitis by the hypolipidemic drug fenofibrate
Y. Qi, C. Jiang, N. Tanaka, K. W. Krausz, C. N. Brocker, Z.-Z. Fang, B. X. Bredell, Y. M. Shah, and F. J. Gonzalez G564
- Intestinal sweet-sensing pathways and metabolic changes after Roux-en-Y gastric bypass surgery
H. Y. Bhutta, T. E. Deelman, C. W. le Roux, S. W. Ashley, D. B. Rhoads, and A. Tavakkoli G588

INFLAMMATION/IMMUNITY/MEDIATORS

- Allergen-induced resistin-like molecule- α promotes esophageal epithelial cell hyperplasia in eosinophilic esophagitis
P. Mavi, R. Niranjana, P. Dutt, A. Zaidi, J. S. Shukla, T. Korfhagen, and A. Mishra G499

NEUROREGULATION AND MOTILITY

- Genetic variation in GPBAR1 predisposes to quantitative changes in colonic transit and bile acid excretion
M. Camilleri, A. Shin, I. Busciglio, P. Carlson, A. Acosta, A. E. Bharucha, D. Burton, J. Lamsam, A. Lueke, L. J. Donato, and A. R. Zinsmeister G508
- A detailed, conductance-based computer model of intrinsic sensory neurons of the gastrointestinal tract
J. D. Chambers, J. C. Bornstein, R. M. Gwynne, K. Koussoulas, and E. A. Thomas G517

Comparison of manual and semiautomated techniques for analyzing gastric volumes with MRI in humans

A. E. Bharucha, R. A. Karwoski, J. Fidler, D. R. Holmes III, R. A. Robb, S. J. Riederer, and A. R. Zinsmeister

G582

PANCREAS

Acinar cell-specific knockout of the PTHrP gene decreases the proinflammatory and profibrotic responses in pancreatitis

V. Bhatia, C. Rastellini, S. Han, J. F. Aronson, G. H. Greeley, Jr., and M. Falzon

G533

Genetic inhibition of protein kinase C ϵ attenuates necrosis in experimental pancreatitis

Y. Liu, J. Yuan, T. Tan, W. Jia, A. Lugea, O. Mareninova, R. T. Waldron, and S. J. Pandol

G550

The ryanodine receptor is expressed in human pancreatic acinar cells and contributes to acinar cell injury

C. M. Lewarchik, A. I. Orabi, S. Jin, D. Wang, K. A. Muili, A. U. Shah, J. F. Eisses, A. Malik, R. Bottino, T. Jayaraman, and S. Z. Husain

G574

September 15, 2014

MUCOSAL BIOLOGY

Novel mechanisms and signaling pathways of esophageal ulcer healing: the role of prostaglandin EP2 receptors, cAMP, and pCREB

A. Ahluwalia, D. Baatar, M. K. Jones, and A. S. Tarnawski

G602

Lactobacillus acidophilus attenuates downregulation of DRA function and expression in inflammatory models

V. Singh, A. Kumar, G. Raheja, A. N. Anbazhagan, S. Priyamvada, S. Saksena, M. N. Jhandier, R. K. Gill, W. A. Alrefai, A. Borthakur, and P. K. Dudeja

G623

Tis7 deletion reduces survival and induces intestinal anastomotic inflammation and obstruction in high-fat diet-fed mice with short bowel syndrome

A. M. Garcia, D. Wakeman, J. Lu, C. Rowley, T. Geisman, C. Butler, S. Bala, E. A. Swietlicki, B. W. Warner, M. S. Levin, and D. C. Rubin

G642

NEUROREGULATION AND MOTILITY

Heme oxygenase-1 upregulation modulates tone and fibroelastic properties of internal anal sphincter

C. V. Krishna, J. Singh, S. Kumar, and S. Rattan

G595

LIVER AND BILIARY TRACT

Changes in glucose-6-phosphate dehydrogenase expression results in altered behavior of HBV-associated liver cancer cells

H. Hu, X. Ding, Y. Yang, H. Zhang, H. Li, S. Tong, X. An, Q. Zhong, X. Liu, L. Ma, Q. Liu, B. Liu, Z. Lu, D. Zhang, P. Hu, and H. Ren

G611

Decreasing mitochondrial fission alleviates hepatic steatosis in a murine model of nonalcoholic fatty liver disease

C. A. Galloway, H. Lee, P. S. Brookes, and Y. Yoon

G632

Interference of angiotensin II and enalapril with hepatic blood flow regulation

A. J. Pereira, V. Jeger, R. Fahrner, S. Djafarzadeh, M. Lensch, J. Takala, and S. M. Jakob

G655

CANCER BIOLOGY

Differential cell growth/apoptosis behavior of 13-hydroxyoctadecadienoic acid enantiomers in a colorectal cancer cell line

M. Cabral, R. Martín-Venegas, and J. J. Moreno

G664

American Journal of Physiology- Lung Cellular and Molecular Physiology

September 1, 2014

RAPID REPORTS

Postexposure aerosolized heparin reduces lung injury in chlorine-exposed mice

S. G. Zargiannis, B. M. Wagener, S. Basappa, S. Doran, C. A. Rodriguez, A. Jurkuvenaite, J. F. Pittet, and S. Matalon

L347

CALL FOR PAPERS
**Bioengineering the Lung: Molecules, Materials, Matrix,
Morphology, and Mechanics**

- Atg7 deficiency impairs host defense against *Klebsiella pneumoniae* by impacting bacterial clearance, survival and inflammatory responses in mice
Y. Ye, X. Li, W. Wang, K. C. Ouedraogo, Y. Li, C. Gan, S. Tan, X. Zhou, and M. Wu L355
-
- Fibroblasts that resist cigarette smoke-induced senescence acquire profibrotic phenotypes
N. Kanaji, H. Basma, A. Nelson, M. Farid, T. Sato, M. Nakanishi, X. Wang, J. Michalski, Y. Li, Y. Gunji, C. Feghali-Bostwick, X. Liu, and S. I. Rennard L364
- ENaC activity and expression is decreased in the lungs of protein kinase C- α knockout mice
A. F. Eaton, Q. Yue, D. C. Eaton, and H.-F. Bao L374
- How common is the lipid body-containing interstitial cell in the mammalian lung?
D. Tahedl, A. Wirkes, S. A. Tschanz, M. Ochs, and C. Mühlfeld L386
- Influenza causes prolonged disruption of the alveolar-capillary barrier in mice unresponsive to mesenchymal stem cell therapy
J. E. Gotts, J. Abbott, and M. A. Matthay L395
- Bile acids stimulate chloride secretion through CFTR and calcium-activated Cl⁻ channels in Calu-3 airway epithelial cells
S. M. Hendrick, M. S. Mroz, C. M. Greene, S. J. Keely, and B. J. Harvey L407
- Chronic hypoxia limits H₂O₂-induced inhibition of ASIC1-dependent store-operated calcium entry in pulmonary arterial smooth muscle
D. R. Plomaritas, L. M. Herbert, T. R. Yellowhair, T. C. Resta, L. V. Gonzalez Bosc, B. R. Walker, and N. L. Jernigan L419

September 15, 2014

EDITORIAL FOCUS

- Rescuing $\Delta F508$ CFTR with trimethylangelicin, a dual-acting corrector and potentiator
J. F. Collawn, L. Fu, R. Bartoszewski, and S. Matalon L431

CALL FOR PAPERS
Translational Research in Acute Lung Injury and Pulmonary Fibrosis

- Silencing Bruton's tyrosine kinase in alveolar neutrophils protects mice from LPS/immune complex-induced acute lung injury
A. Krupa, M. Fol, M. Rahman, K. Y. Stokes, J. M. Florence, I. L. Leskov, M. V. Khoretonenko, M. A. Matthay, K. D. Liu, C. S. Calfee, A. Tvinnereim, G. R. Rosenfield, and A. K. Kurdowska L435
- TRIM72 is required for effective repair of alveolar epithelial cell wounding
S. C. Kim, T. Kellelt, S. Wang, M. Nishi, N. Nagre, B. Zhou, P. Flodby, K. Shilo, S. N. Ghadiali, H. Takeshima, R. D. Hubmayr, and X. Zhao L449
-
- Unaffected contractility of diaphragm muscle fibers in humans on mechanical ventilation
P. E. Hooijman, M. A. Paul, G. J. M. Stienen, A. Beishuizen, H. W. H. Van Hees, S. Singhal, M. Bashir, M. T. Budak, J. Morgen, R. J. Barsotti, S. Levine, and C. A. C. Ottenheijm L460
- Ozone-induced airway epithelial cell death, the neurokinin-1 receptor pathway, and the postnatal developing lung
S. R. Murphy, K. L. Oslund, D. M. Hyde, L. A. Miller, L. S. Van Winkle, and E. S. Schelegle L471
- α -Tocopherol supplementation of allergic female mice inhibits development of CD11c⁺CD11b⁺ dendritic cells in utero and allergic inflammation in neonates
H. Abdala-Valencia, S. Berdnikovs, F. W. Soveg, and J. M. Cook-Mills L482
- Promotion of lung tumor growth by interleukin-17
B. Xu, J. F. Guenther, D. A. Pociask, Y. Wang, J. K. Kolls, Z. You, B. Chandrasekar, B. Shan, D. E. Sullivan, and G. F. Morris L497