

IN THIS ISSUE

1909 In This Issue of *Diabetes*

PERSPECTIVES IN DIABETES

- 1911** A Global Overview of Precision Medicine in Type 2 Diabetes
H. Fitipaldi, M.I. McCarthy, J.C. Florez, and P.W. Franks
- 1923** Epigenetics and Epigenomics: Implications for Diabetes and Obesity
E.D. Rosen, K.H. Kaestner, R. Natarajan, M.-E. Patti, R. Sallari, M. Sander, and K. Susztak

COMMENTARY

- 1932** Fatty Acids and Insulin Secretion: From FFAR and Near?
V. Poitout

METABOLISM

- 1935** Coordination Among Lipid Droplets, Peroxisomes, and Mitochondria Regulates Energy Expenditure Through the CIDE-ATGL-PPAR α Pathway in Adipocytes
L. Zhou, M. Yu, M. Arshad, W. Wang, Y. Lu, J. Gong, Y. Gu, P. Li, and L. Xu
- 1949** Liver Glutamate Dehydrogenase Controls Whole-Body Energy Partitioning Through Amino Acid-Derived Gluconeogenesis and Ammonia Homeostasis
M. Karaca, J. Martin-Levilain, M. Grimaldi, L. Li, E. Dizin, Y. Emre, and P. Maechler
- 1962** Acute Nitric Oxide Synthase Inhibition Accelerates Transendothelial Insulin Efflux In Vivo
I.M. Williams, P.M. McClatchey, D.P. Bracy, F.A. Valenzuela, and D.H. Wasserman
- 1976** Interaction of GLP-1 and Ghrelin on Glucose Tolerance in Healthy Humans
L.C. Page, A. Gastaldelli, S.M. Gray, D.A. D'Alessio, and J. Tong

SIGNAL TRANSDUCTION

- 1986** Endogenous Fatty Acids Are Essential Signaling Factors of Pancreatic β -Cells and Insulin Secretion
S. Hauke, K. Keutler, P. Phapale, D.A. Yushchenko, and C. Schultz

ISLET STUDIES

- 1999** Restoration of Glucose-Stimulated Cdc42-Pak1 Activation and Insulin Secretion by a Selective Epac Activator in Type 2 Diabetic Human Islets
R. Veluthakal, O.G. Chepurny, C.A. Leech, F. Schwede, G.G. Holz, and D.C. Thurmond
- 2012** Validation of ^{111}In -Exendin SPECT for the Determination of the β -Cell Mass in BioBreeding Diabetes-Prone Rats
M. Brom, L. Joosten, C. Frielink, H. Peeters, D. Bos, M. van Zanten, O. Boerman, and M. Gotthardt
- 2019** The No-Go and Nonsense-Mediated RNA Decay Pathways Are Regulated by Inflammatory Cytokines in Insulin-Producing Cells and Human Islets and Determine β -Cell Insulin Biosynthesis and Survival
S.M. Ghiasi, N. Krogh, B. Tyrberg, and T. Mandrup-Poulsen

IMMUNOLOGY AND TRANSPLANTATION

- 2038** Islet-Derived eATP Fuels Autoreactive CD8 $^{+}$ T Cells and Facilitates the Onset of Type 1 Diabetes
S. Tezza, M. Ben Nasr, F. D'Addio, A. Vergani, V. Uselli, S. Falzoni, R. Bassi, S. Dellepiane, C. Fotino, C. Rossi, A. Maestroni, A. Solini, D. Corradi, E. Giani, C. Mameli, F. Bertuzzi, M.G. Pezzolesi, C.H. Wasserfall, M.A. Atkinson, E.-M. Fuchtbauer, C. Ricordi, F. Folli, F. Di Virgilio, A. Pileggi, S. Dhe-Paganon, G.V. Zuccotti, and P. Fiorina

PATHOPHYSIOLOGY

- 2054** PDK4 Deficiency Suppresses Hepatic Glucagon Signaling by Decreasing cAMP Levels
B.-Y. Park, J.-H. Jeon, Y. Go, H.J. Ham, J.-E. Kim, E.K. Yoo, W.H. Kwon, N.-H. Jeoung, Y.H. Jeon, S.-H. Koo, B.-G. Kim, L. He, K.-G. Park, R.A. Harris, and I.-K. Lee

COMPLICATIONS

- 2069** ADAMTS13 Deficiency Shortens the Life Span of Mice With Experimental Diabetes
P. Cassis, D. Cerullo, C. Zanchi, D. Corna, V. Lionetti, F. Giordano, R. Novelli, S. Conti, V. Casieri, M. Matteucci, M. Locatelli, G. Tarabozetti, S. Villa, S. Gastoldi, G. Remuzzi, A. Benigni, and C. Zoja

Keep up with the latest information for *Diabetes* and other ADA titles via Facebook (/ADAJournals) and Twitter (@ADA_Journals).

All articles in *Diabetes* are available online at diabetes.org/diabetes, are available free to subscribers, or can be purchased as e-prints or reprints.

ADA's Diabetes Core Update podcast is available at diabetesjournals.org and through iTunes.

Icons shown below appear on the first page of an article if more information is available online.



Free Article



Video



Podcast



Supplementary Data



Companion Article

- 2084** GDF11 Improves Angiogenic Function of EPCs in Diabetic Limb Ischemia
J. Zhang, Y. Li, H. Li, B. Zhu, L. Wang, B. Guo, L. Xiang, J. Dong, M. Liu, and G. Xiang
- 2096** Inflammation and Immunity Pathways Regulate Genetic Susceptibility to Diabetic Nephropathy
S.B. Gurley, S. Ghosh, S.A. Johnson, K. Azushima, R.B. Sakban, S.E. George, M. Maeda, T.W. Meyer, and T.M. Coffman
- 2107** Prevention of Severe Hypoglycemia-Induced Brain Damage and Cognitive Impairment With Verapamil
D.A. Jackson, T. Michael, A. Vieira de Abreu, R. Agrawal, M. Bortolato, and S.J. Fisher

PHARMACOLOGY AND THERAPEUTICS

- 2113** Regulation of Human Adipose Tissue Activation, Gallbladder Size, and Bile Acid Metabolism by a β 3-Adrenergic Receptor Agonist
A.S. Baskin, J.D. Linderman, R.J. Brychta, S. McGehee, E. Anffick-Chames, C. Cero, J.W. Johnson, A.E. O'Mara, L.A. Fletcher, B.P. Leitner, C.J. Duckworth, S. Huang, H. Cai, H.M. Garraffo, C.M. Millo, W. Dieckmann, V. Tolstikov, E.Y. Chen, F. Gao, N.R. Narain, M.A. Kiebish, P.J. Walter, P. Herscovitch, K.Y. Chen, and A.M. Cypess

ISSUES AND EVENTS

- 2126** Issues and Events



The American Diabetes Association (ADA) is the nation's leading voluntary health organization supporting diabetes research, information, and advocacy. Its mission is to prevent and cure diabetes and to improve the lives of all people affected by diabetes. ADA is the leading publisher of comprehensive diabetes information. Its huge library of books and periodicals covers every aspect of diabetes and diabetes care.

To join ADA: Call 1-800-806-7801 or visit professional.diabetes.org/membership

To subscribe to ADA journals: Call 1-800-DIABETES or go to diabetesjournals.org

To order ADA books: Call 1-800-232-6733 or visit shopdiabetes.org

To access ADA's library of professional resources: Go to professional.diabetes.org

For more information about diabetes or ADA programs and services: Call 1-800-DIABETES. Email: AskADA@diabetes.org or visit diabetes.org

To locate an ADA/NCQA Recognized Provider of quality diabetes care in your area: Visit recognition.ncqa.org

To join the fight to increase funding for diabetes research, end discrimination, and improve insurance coverage: Call 1-800-DIABETES or visit diabetes.org/advocacy

To find out how you can get involved with the programs in your community: Call 1-800-DIABETES or visit diabetes.org/in-my-community

To find out about important research regarding diabetes: Go to diabetes.org/research-and-practice

To make a donation or memorial contribution: Call 1-800-DIABETES or visit diabetes.org/donate

On the cover: CIDE-deficient adipocytes had smaller lipid droplets and an increased number of mitochondria and peroxisomes. The functional coordination among lipid droplets, peroxisomes, and mitochondria promoted fatty acid oxidation in adipocytes. Adipocytes were stained with BODIPY (lipid droplets, blue), MitoTracker (mitochondria, red), and PMP70 (peroxisomes, green). Image courtesy of Linkang Zhou, State Key Laboratory of Membrane Biology and Tsinghua-Peking Center for Life Sciences, School of Life Sciences, Tsinghua University, Beijing, People's Republic of China. His article, "Coordination Among Lipid Droplets, Peroxisomes, and Mitochondria Regulates Energy Expenditure Through the CIDE-ATGL-PPAR α Pathway in Adipocytes," appears in this issue of *Diabetes* (p. 1935).