

IN THIS ISSUE

535 In This Issue of *Diabetes*

PERSPECTIVES IN DIABETES

537 New Understanding of β -Cell Heterogeneity and In Situ Islet Function
R.K.P. Benninger and D.J. Hodson

COMMENTARIES

548 A Weighty Matter: Can PUFAs in Pregnancy Prevent Obesity?
B.B. Albert and W.S. Cutfield

550 SRGAP2a: A New Player That Modulates Podocyte Cytoskeleton and Injury in Diabetes
M. Levi, K. Myakala, and X. Wang

552 Values and Limitations of Targeting lncRNAs in Diabetic Nephropathy
J. Long and F.R. Danesh

METABOLISM

554 The Diabetes Gene and Wnt Pathway Effector TCF7L2 Regulates Adipocyte Development and Function
X. Chen, I. Ayala, C. Shannon, M. Fourcaudot, N.K. Acharya, C.P. Jenkinson, S. Heikkinen, and L. Norton

569 SGK1/FOXO3 Signaling in Hypothalamic POMC Neurons Mediates Glucocorticoid-Increased Adiposity
Y. Deng, Y. Xiao, F. Yuan, Y. Liu, X. Jiang, J. Deng, G. Fejes-Toth, A. Naray-Fejes-Toth, S. Chen, Y. Chen, H. Ying, Q. Zhai, Y. Shu, and F. Guo

581 Long Noncoding RNA lncSHGL Recruits hnRNPA1 to Suppress Hepatic Gluconeogenesis and Lipogenesis
J. Wang, W. Yang, Z. Chen, J. Chen, Y. Meng, B. Feng, L. Sun, L. Dou, J. Li, Q. Cui, and J. Yang

594 Perilipin 5 Deletion Unmasks an Endoplasmic Reticulum Stress–Fibroblast Growth Factor 21 Axis in Skeletal Muscle
M.K. Montgomery, R. Mokhtar, J. Bayliss, H.C. Parkington, V.M. Suturin, C.R. Bruce, and M.J. Watt

SIGNAL TRANSDUCTION

607 Protein Kinase G Activation Reverses Oxidative Stress and Restores Osteoblast Function and Bone Formation in Male Mice With Type 1 Diabetes
H. Kalyanaraman, G. Schwaerzer, G. Ramdani, F. Castillo, B.T. Scott, W. Dillmann, R.L. Sah, D.E. Casteel, and R.B. Pilz

624 Skeletal Muscle–Specific Deletion of MKP-1 Reveals a p38 MAPK/JNK/Akt Signaling Node That Regulates Obesity-Induced Insulin Resistance
A. Lawan, K. Min, L. Zhang, A. Canfran-Duque, M.J. Jurczak, J.P.G. Camporez, Y. Nie, T.P. Gavin, G.I. Shulman, C. Fernandez-Hernando, and A.M. Bennett

636 Disruption of Mitochondria-Associated Endoplasmic Reticulum Membrane (MAM) Integrity Contributes to Muscle Insulin Resistance in Mice and Humans
E. Tubbs, S. Chanon, M. Robert, N. Bendridi, G. Bidaux, M.-A. Chauvin, J. Ji-Cao, C. Durand, D. Gauvrit-Ramette, H. Vidal, E. Lefai, and J. Rieusset

OBESITY STUDIES

651 Low Neonatal Plasma n-6/n-3 PUFA Ratios Regulate Offspring Adipogenic Potential and Condition Adult Obesity Resistance
M.C. Rudolph, M.R. Jackman, D.M. Presby, J.A. Houck, P.G. Webb, G.C. Johnson, T.K. Soderborg, B.A. de la Houssaye, I.V. Yang, J.E. Friedman, and P.S. MacLean

662 Modest Decreases in Endogenous All-*trans*-Retinoic Acid Produced by a Mouse *Rdh10* Heterozygote Provoke Major Abnormalities in Adipogenesis and Lipid Metabolism
D. Yang, M.G. Vuckovic, C.P. Smullin, M. Kim, C.P.-S. Lo, E. Devericks, H.S. Yoo, M. Tintcheva, Y. Deng, and J.L. Napoli

ISLET STUDIES

674 Highly Proliferative α -Cell–Related Islet Endocrine Cells in Human Pancreata
C.J. Lam, A.R. Cox, D.R. Jacobson, M.M. Rankin, and J.A. Kushner

IMMUNOLOGY AND TRANSPLANTATION

687 Molecular Pathways for Immune Recognition of Preproinsulin Signal Peptide in Type 1 Diabetes
D. Kronenberg-Versteeg, M. Eichmann, M.A. Russell, A. de Ru, B. Hehn, N. Yusuf, P.A. van Veelen, S.J. Richardson, N.G. Morgan, M.K. Lemberg, and M. Peakman

697 Loss of B-Cell Anergy in Type 1 Diabetes Is Associated With High-Risk HLA and Non-HLA Disease Susceptibility Alleles
M.J. Smith, M. Rihaneck, C. Wasserfall, C.E. Mathews, M.A. Atkinson, P.A. Gottlieb, and J.C. Cambier

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

PATHOPHYSIOLOGY

- 704** PDGF-BB Carried by Endothelial Cell-Derived Extracellular Vesicles Reduces Vascular Smooth Muscle Cell Apoptosis in Diabetes
G. Togliatto, P. Dentelli, A. Rosso, G. Lombardo, M. Gili, S. Gallo, C. Gai, A. Solini, G. Camussi, and M.F. Brizzi

COMPLICATIONS

- 717** Dissection of Glomerular Transcriptional Profile in Patients With Diabetic Nephropathy: SRGAP2a Protects Podocyte Structure and Function
Y. Pan, S. Jiang, Q. Hou, D. Qiu, J. Shi, L. Wang, Z. Chen, M. Zhang, A. Duan, W. Qin, K. Zen, and Z. Liu
- 731** Novel lncRNA Erbb4-IR Promotes Diabetic Kidney Injury in *db/db* Mice by Targeting miR-29b
S.F. Sun, P.M.K. Tang, M. Feng, J. Xiao, X.R. Huang, P. Li, R.C.W. Ma, and H.Y. Lan

- 745** Sirt1: A Guardian of the Development of Diabetic Retinopathy
M. Mishra, A.J. Duraisamy, and R.A. Kowluru
- 755** Diabetes Reduces Severity of Aortic Aneurysms Depending on the Presence of Cell Division Autoantigen 1 (CDA1)
J. Li, P. Huynh, A. Dai, T. Wu, Y. Tu, B. Chow, H. Kiriazis, X.-J. Du, L.A. Bach, J.L. Wilkinson-Berka, E. Biro, P. Walker, M. Nataatmadja, M. West, J. Golledge, T.J. Allen, M.E. Cooper, and Z. Chai
- 769** ELOVL4-Mediated Production of Very Long-Chain Ceramides Stabilizes Tight Junctions and Prevents Diabetes-Induced Retinal Vascular Permeability
N.M. Kady, X. Liu, T.A. Lydic, M.H. Syed, S. Navitskaya, Q. Wang, S.S. Hammer, S. O'Reilly, C. Huang, S.S. Seregin, A. Amalfitano, V.A. Chiodo, S.L. Boye, W.W. Hauswirth, D.A. Antonetti, and J.V. Busik

ISSUES AND EVENTS

- 782** 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: Immunofluorescence staining of transporter associated with antigen processing 1 (TAP1) (green), HLA-ABC (red), and insulin (cyan) on a human pancreas sample from a patient with type 1 diabetes shows high expression of TAP1 and HLA-ABC in an insulin-containing islet, indicative of a predisposition for immune recognition. Image courtesy of Mark A. Russell, Institute of Biomedical and Clinical Science, University of Exeter Medical School, Exeter, U.K. His article, "Molecular Pathways for Immune Recognition of Preproinsulin Signal Peptide in Type 1 Diabetes," appears in this issue of *Diabetes* (p. 687).