A JOURNAL OF THE AMERICAN DIABETES ASSOCIATION

July 2020 Volume 69, Number 7

IN THIS ISSUE

1309 In This Issue of Diabetes

PERSPECTIVES IN DIABETES

1311 T-cell Epitopes and Neo-epitopes in Type 1 Diabetes: A Comprehensive Update and Reappraisal
E.A. James, R. Mallone, S.C. Kent, and T.F. DiLorenzo

COMMENTARIES

1336 Blood Flow in the Pancreatic Islet: Not so Isolated Anymore
J. Almaça and A. Caicedo

1339 Dopamine and Early Retinal Dysfunction in Diabetes: Insights From a Phase 1 Study
T.J. Wubben

METABOLISM

1341 Glucose-Stimulated Insulin Secretion Fundamentally Requires H2O2 Signaling by NADPH Oxidase 4

1355 Transketolase Deficiency in Adipose Tissues Protects Mice From Diet-Induced Obesity by Promoting Lipolysis

1368 Central α-Klotho Suppresses NPY/AgRP Neuron Activity and Regulates Metabolism in Mice
T. Landry, B.T. Laing, P. Li, W. Bunner, Z. Rao, A. Prete, J. Sylvestri, and H. Huang

1382 Metabolic Responses to 24-Hour Fasting and Mild Cold Exposure in Overweight Individuals Are Correlated and Accompanied by Changes in FGF21 Concentration

SIGNAL TRANSDUCTION

1389 Maternal Obesity and Western-Style Diet Impair Fetal and Juvenile Offspring Skeletal Muscle Insulin-Stimulated Glucose Transport in Nonhuman Primates

OBESEITY STUDIES

1401 Elevated First-Trimester Neutrophil Count Is Closely Associated With the Development of Maternal Gestational Diabetes Mellitus and Adverse Pregnancy Outcomes

1411 Necrostatin-1 Mitigates Cognitive Dysfunction in Prediabetic Rats With No Alteration in Insulin Sensitivity

1424 Genetic Causes of Severe Childhood Obesity: A Remarkably High Prevalence in an Inbred Population of Pakistan

ISLET STUDIES

1439 Integrated Pancreatic Blood Flow: Bidirectional Microcirculation Between Endocrine and Exocrine Pancreas
M.P. Dybala, A. Kuznetsov, M. Motohu, B.K. Hendren-Santiago, L.H. Phillipson, A.V. Chervonsky, and M. Hara

1451 Revisiting Proinsulin Processing: Evidence That Human β-Cells Process Proinsulin With Prohormone Convertase (PC) 1/3 but Not PC2
A. Ramzy, A. Asadi, and T.J. Kieffer

1463 Lactogens Reduce Endoplasmic Reticulum Stress-Induced Rodent and Human β-Cell Death and Diabetes Incidence in Akita Mice
R. Li, N.G. Kondegowda, J. Filipowska, R.F. Hampton, S. Leblanc, A. Garcia-Ocana, and R.C. Vasavada

1476 Excitotoxicity and Overnutrition Additively Impair Metabolic Function and Identity of Pancreatic β-Cells
A.B. Osipovich, J.S. Stancil, J.-P. Cartailler, K.D. Dudek, and M.A. Magnuson

IMMUNOLOGY AND TRANSPLANTATION

1492 Hybrid Insulin Peptides Are Recognized by Human T Cells in the Context of DRB1*04:01

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.
On the cover: Three-dimensional confocal microscopic image of pancreatic tissue from a human donor. Islets are stained with a pan-endocrine antibody marker (HPi1, cyan). Capillaries are stained with an endothelial cell marker (CD31, red). Arterioles are indicated by α-smooth muscle actin staining (α-SMA, blue). Image courtesy of Bryce K. Hendren-Santiago, Michael P. Dybala, and Manami Hara, Department of Medicine, The University of Chicago, Chicago, IL. Their article, “Integrated Pancreatic Blood Flow: Bidirectional Microcirculation Between Endocrine and Exocrine Pancreas,” appears in this issue of Diabetes (p. 1439).