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**1886** Are Obesity-Related Insulin Resistance and Type 2 Diabetes Autoimmune Diseases?  
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**1901** AMPK-TBC1D4-Dependent Mechanism for Increasing Insulin Sensitivity of Skeletal Muscle  
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**1904** Role of Perivascular Adipose Tissue on Vascular Reactive Oxygen Species in Type 2 Diabetes: A Give-and-Take Relationship  
J. Padilla, V.J. Vieira-Potter, G. Jia, and J.R. Sowers

**1907** Pleiotropic Benefits of Metformin: Macrophage Targeting Its Anti-inflammatory Mechanisms  
Y. Hattori, K. Hattori, and T. Hayashi

**1910** Bleach in the Diabetic Kidney Destabilizes Basement Membrane Collagen  
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**1912** Therapeutic Window of Interleukin-2 for Autoimmune Diseases  
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**METABOLISM**

**1914** The RabGAP TBC1D1 Plays a Central Role in Exercise-Regulated Glucose Metabolism in Skeletal Muscle  
J. Stöckli, C.C. Meoli, N.J. Hoffman, D.J. Fazakerley, H. Pant, M.E. Cleasby, X. Ma, M. Kleinert, A.E. Brandon, J.A. Lopez, G.J. Cooney, and D.E. James

**1923** Liver-Specific Expression of Dominant-Negative Transcription Factor 7-Like 2 Causes Progressive Impairment in Glucose Homeostasis  
W. Ip, W. Shao, Z. Song, Z. Chen, M.B. Wheeler, and T. Jin

**1933** Insulin Resistance Predicts Medial Temporal Hypermetabolism in Mild Cognitive Impairment Conversion to Alzheimer Disease  
A.A. Willette, N. Modanlo, and D. Kapogiannis, for the Alzheimer's Disease Neuroimaging Initiative

**1941** Foregut Exclusion Disrupts Intestinal Glucose Sensing and Alters Portal Nutrient and Hormonal Milieu  
A. Pal, D.B. Rhoads, and A. Tavakkoli

**1951** A Mutant Allele Encoding DNA Binding-Deficient FoxO1 Differentially Regulates Hepatic Glucose and Lipid Metabolism  
J.R. Cook, M. Matsumoto, A.S. Banks, T. Kitamura, K. Tsuchiya, and D. Accili

**1966** Effects of Intranasal Insulin on Hepatic Fat Accumulation and Energy Metabolism in Humans  
S. Gancheva, C. Koliaki, A. Bierwagen, P. Nowotny, M. Heni, A. Fritsche, H.-U. Häring, J. Szendroedi, and M. Roden

**1976** Regulation of Glucose Tolerance and Sympathetic Activity by MC4R Signaling in the Lateral Hypothalamus  
D.A. Morgan, L.N. McDaniel, T. Yin, M. Khan, J. Jiang, M.R. Acevedo, S.A. Walsh, L.L.B. Ponto, A.W. Norris, M. Lutter, K. Rahmouni, and H. Cui

**1988** Dipeptidyl Peptidase-4 Inhibition Ameliorates Western Diet-Induced Hepatic Steatosis and Insulin Resistance Through Hepatic Lipid Remodeling and Modulation of Hepatic Mitochondrial Function  
A.R. Aroor, J. Habibi, D.A. Ford, R. Nistala, G. Lastra, C. Manrique, M.M. Dunham, K.D. Ford, J.P. Thyfault, E.J. Parks, J.R. Sowers, and R.S. Rector

**2002** A Novel Role for Subcutaneous Adipose Tissue in Exercise-Induced Improvements in Glucose Homeostasis  
K.I. Stanford, R.J.W. Middelbeek, K.L. Townsend, M.-Y. Lee, H. Takahashi, K. So, K.M. Hitchcox, K.R. Markan, K. Hellbach, M.F. Hirshman, Y.-H. Tseng, and L.J. Goodyear

**2015** Central Inhibition of IKK $\beta$ /NF- $\kappa$ B Signaling Attenuates High-Fat Diet-Induced Obesity and Glucose Intolerance  
J. Benzler, G.K. Ganjam, D. Pretz, R. Oelkrug, C.E. Koch, K. Legler, S. Stöhr, C. Culmsee, L.M. Williams, and A. Tups

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## SIGNAL TRANSDUCTION

- 2028** Metformin Inhibits Monocyte-to-Macrophage Differentiation via AMPK-Mediated Inhibition of STAT3 Activation: Potential Role in Atherosclerosis  
S.B. Vasamsetti, S. Karnewar, A.K. Kanugula, A.R. Thatipalli, J.M. Kumar, and S. Kotamraju
- 2042** Prior AICAR Stimulation Increases Insulin Sensitivity in Mouse Skeletal Muscle in an AMPK-Dependent Manner  
R. Kjøbsted, J.T. Treebak, J. Fentz, L. Lantier, B. Viollet, J.B. Birk, P. Schjerling, M. Bjørnholm, J.R. Zierath, and J.F.P. Wojtaszewski
- 2056** miR-30 Promotes Thermogenesis and the Development of Beige Fat by Targeting RIP140  
F. Hu, M. Wang, T. Xiao, B. Yin, L. He, W. Meng, M. Dong, and F. Liu
- 2069** Enhancement of Hypothalamic STAT3 Acetylation by Nuclear Receptor Nur77 Dictates Leptin Sensitivity  
Y. Chen, R. Wu, H.-z. Chen, Q. Xiao, W.-j. Wang, J.-p. He, X.-x. Li, X.-w. Yu, L. Li, P. Wang, X.-c. Wan, X.-h. Tian, S.-j. Li, X. Yu, and Q. Wu

## OBESITY STUDIES

- 2082** Blunted Brain Energy Consumption Relates to Insula Atrophy and Impaired Glucose Tolerance in Obesity  
K. Jauch-Chara, F. Binkofski, M. Loebig, K. Reetz, G. Jahn, U.H. Melchert, U. Schweiger, and K.M. Oltmanns
- 2092** Overweight in Mice and Enhanced Adipogenesis In Vitro Are Associated With Lack of the Hedgehog Coreceptor Boc  
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- 2104** Defects in Mitochondrial Efficiency and H<sub>2</sub>O<sub>2</sub> Emissions in Obese Women Are Restored to a Lean Phenotype With Aerobic Exercise Training  
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- 2116** Monounsaturated Fatty Acid-Enriched High-Fat Diets Impede Adipose NLRP3 Inflammasome-Mediated IL-1 $\beta$  Secretion and Insulin Resistance Despite Obesity  
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- 2138** Manganese-Mediated MRI Signals Correlate With Functional  $\beta$ -Cell Mass During Diabetes Progression  
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- 2148** Distinct Roles of  $\beta$ -Cell Mass and Function During Type 1 Diabetes Onset and Remission  
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- 2172** Selective IL-2 Responsiveness of Regulatory T Cells Through Multiple Intrinsic Mechanisms Supports the Use of Low-Dose IL-2 Therapy in Type 1 Diabetes  
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- 2220** BAMBI Elimination Enhances Alternative TGF- $\beta$  Signaling and Glomerular Dysfunction in Diabetic Mice  
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- 2242** Hypohalous Acids Contribute to Renal Extracellular Matrix Damage in Experimental Diabetes  
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- 2279** Association Analysis of 29,956 Individuals Confirms That a Low-Frequency Variant at *CCND2* Halves the Risk of Type 2 Diabetes by Enhancing Insulin Secretion  
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- e7** Comment on Heni et al. Central Insulin Administration Improves Whole-Body Insulin Sensitivity via Hypothalamus and Parasympathetic Outputs in Men. *Diabetes* 2014;63:4083–4088  
S. Dhindsa, G. Dhindsa, and R. Chemitiganti
- e8** Response to Comment on Heni et al. Central Insulin Administration Improves Whole-Body Insulin Sensitivity

via Hypothalamus and Parasympathetic Outputs in Men. *Diabetes* 2014;63:4083–4088

M. Heni, R. Wagner, S. Kullmann, H. Preissl, and A. Fritsch

- e10** Comment on Smith et al. Protein Ingestion Induces Muscle Insulin Resistance Independent of Leucine-Mediated mTOR Activation. *Diabetes* 2015;64:1555–1563  
F.S. Dioguardi
- e11** Response to Comment on Smith et al. Protein Ingestion Induces Muscle Insulin Resistance Independent of Leucine-Mediated mTOR Activation. *Diabetes* 2015;64:1555–1563  
G.I. Smith and B. Mittendorfer
- e12** Comment on Chondronikola et al. Brown Adipose Tissue Improves Whole-Body Glucose Homeostasis and Insulin Sensitivity in Humans. *Diabetes* 2014;63:4089–4099  
F. Dela and J.W. Helge
- e14** Response to Comment on Chondronikola et al. Brown Adipose Tissue Improves Whole-Body Glucose Homeostasis and Insulin Sensitivity in Humans. *Diabetes* 2014;63:4089–4099  
M. Chondronikola, C. Porter, M.E. Lidell, and L.S. Sidossis
- e16** Comment on Gray et al. Insulin Regulates Brain Function, but How Does It Get There? *Diabetes* 2014;63:3992–3997  
K. Bloch, D. Lazard, and P. Vardi



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