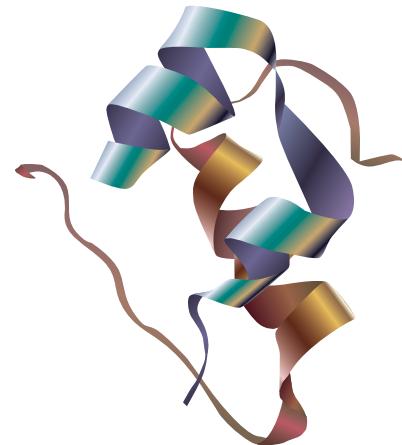


# diabetes

A JOURNAL OF THE  
AMERICAN DIABETES  
ASSOCIATION®

[www.diabetes.org/diabetes](http://www.diabetes.org/diabetes)



## COMMENTARY

- Postprandial insulin secretion after gastric bypass surgery: the role of glucagon-like peptide 1  
J.J. HOLST 2203

## METABOLISM

- NOD1 activators link innate immunity to insulin resistance  
J.D. SCHERTZER, A.K. TAMRAKAR, J.G. MAGALHÃES, S. PEREIRA, P.J. BILAN, M.D. FULLERTON, Z. LIU, G.R. STEINBERG, A. GIACCA, D.J. PHILPOTT, AND A. KLIP 2206

- Oxidative phosphorylation flexibility in the liver of mice resistant to high-fat diet-induced hepatic steatosis  
C. POUSSIN, M. IBBERSON, D. HALL, J. DING, J. SOTO, E.D. ABEL, AND B. THORENS 2216

- Defective glycogenogenesis contributes toward the inability to suppress hepatic glucose production in response to hyperglycemia and hyperinsulinemia in Zucker diabetic fatty rats  
T.P. TORRES, Y. FUJIMOTO, E.P. DONAHUE, R.L. PRINTZ, K.L. HOUSEKNECHT, J.L. TREADWAY, AND M. SHIOTA 2225

- Cyanidin-3-O- $\beta$ -glucoside and protocatechuic acid exert insulin-like effects by upregulating PPAR $\gamma$  activity in human omental adipocytes  
B. SCAZZOCCHIO, R. VARÌ, C. FILESI, M. D'ARCHIVIO, C. SANTANGELO, C. GIOVANNINI, A. IACOVELLI, G. SILECCHIA, G. LI VOLTI, F. GALVANO, AND R. MASELLA 2234

- Brain GLP-1 signaling regulates femoral artery blood flow and insulin sensitivity through hypothalamic PKC- $\delta$   
C. CABOU, C. VACHOUX, G. CAMPISTRON, D.J. DRUCKER, AND R. BURCELIN 2245

- Increased VLDL-triglyceride secretion precedes impaired control of endogenous glucose production in obese, normoglycemic men  
L.P. SØRENSEN, E. SØNDERGAARD, B. NELLEMAN, J.S. CHRISTIANSEN, L.C. GORMSEN, AND S. NIELSEN 2257

- Therapeutic impact of leptin on diabetes, diabetic complications, and longevity in insulin-deficient diabetic mice  
M. NAITO, J. FUJIKURA, K. EBIHARA, F. MIYANAGA, H. YOKOI, T. KUSAKABE, Y. YAMAMOTO, C. SON, M. MUKOYAMA, K. HOSODA, AND K. NAKAO 2265

- Continued postnatal administration of resveratrol prevents diet-induced metabolic syndrome in rat offspring born growth restricted  
V.W. DOLINSKY, C.F. RUEDA-CLAUSEN, J.S. MORTON, ST. DAVIDGE, AND J.R.B. DYCK 2274

Apolipoprotein E4 exaggerates diabetic dyslipidemia and atherosclerosis in mice lacking the LDL receptor

L.A. JOHNSON, J.M. ARBONES-MAINAR, R.G. FOX, A.A. PENDSE, M.K. ALTERNBURG, H.-S. KIM, AND N. MAEDA 2285

Physical activity attenuates the effect of low birth weight on insulin resistance in adolescents: findings from two observational studies

F.B. ORTEGA, J.R. RUIZ, A. HURTIG-WENNÖF, A. MEIRHAEGHE, M. GONZÁLEZ-GROSS, L.A. MORENO, D. MOLNAR, A. KAFATOS, F. GOTTRAND, K. WIDHALM, I. LABAYEN, AND M. SJÖSTRÖM 2295

## OBESITY STUDIES

Free fatty acid storage in human visceral and subcutaneous adipose tissue: role of adipocyte proteins

A.H. ALI, C. KOUTSARI, M. MUNDI, M.D. STEGALL, J.K. HEIMBACH, S.J. TALER, J. NYGREN, A. THORELL, L.D. BOGACHUS, L.P. TURCOTTE, D. BERNLOHR, AND M.D. JENSEN 2300

## ISLET STUDIES

Gastric bypass surgery enhances glucagon-like peptide 1-stimulated postprandial insulin secretion in humans

M. SALEHI, R.L. PRIGEON, AND D.A. D'ALESSIO 2308

Ghrelin attenuates cAMP-PKA signaling to evoke insulinostatic cascade in islet  $\beta$ -cells

K. DEZAKI, B. DAMDINDORJ, H. SONE, O. DYACHOK, A. TENGHOLM, E. GYLFE, T. KURASHINA, M. YOSHIDA, M. KAKEI, AND T. YADA 2315

## IMMUNOLOGY AND TRANSPLANTATION

Islet amyloid polypeptide is a target antigen for diabetogenic CD4 $^+$  T cells

T. DELONG, R.L. BAKER, N. REISDORPH, R. REISDORPH, R.L. POWELL, M. ARMSTRONG, G. BARBOUR, B. BRADLEY, AND K. HASKINS 2325

Immunosuppressive effects of streptozotocin-induced diabetes result in absolute lymphopenia and a relative increase of T regulatory cells

Y.D. MULLER, D. GOLSHAYAN, D. EHIRCHIOU, J.C. WYSS, L. GIOVANNONI, R. MEIER, V. SERRE-BEINIER, G. PUGA YUNG, P. MOREL, L.H. BÜHLER, AND J. D. SEEBAUGH 2331

Ganglioside GM1 deficiency in effector T cells from NOD mice induces resistance to regulatory T-cell suppression

G. WU, Z.-H. LU, H.-J. GABIUS, R.W. LEDEEN, AND D. BLEICH 2341

Increased numbers of low-oxygenated pancreatic islets after intraportal islet transplantation R. OLSSON, J. OLERUD, U. PETTERSSON, AND P.-O. CARLSSON	2350
<b>COMPLICATIONS</b>	
Transcriptome analysis of human diabetic kidney disease K.I. WORONIECKA, A.S.D. PARK, D. MOHTAT, D.B. THOMAS, J.M. PULLMAN, AND K. SUSZTAK	2354
The unconventional role of acid sphingomyelinase in regulation of retinal microangiopathy in diabetic human and animal models M. OPREANU, M. TIKHONENKO, S. BOZACK, T.A. LYDIC, G.E. REID, K.M. MCSORLEY, A. SOCHACKI, G.I. PEREZ, W.J. ESSELMAN, T. KERN, R. KOLESNICK, M.B. GRANT, AND J.V. BUSIK	2370
Total soluble and endogenous secretory receptor for advanced glycation end products as predictive biomarkers of coronary heart disease risk in patients with type 2 diabetes: an analysis from the CARDs trial H.M. COLHOUN, D.J. BETTERIDGE, P. DURRINGTON, G. HITMAN, A. NEIL, S. LIVINGSTONE, V. CHARLTON-MENYS, W. BAO, D.A. DEMICCO, G.M. PRESTON, H. DESHMUKH, K. TAN, AND J.H. FULLER	2379
Protective role of cannabinoid receptor type 2 in a mouse model of diabetic nephropathy F. BARUTTA, F. PISCETTELLI, S. PINACH, G. BRUNO, R. GAMBINO, M.P. RASTALDI, G. SALVIDIO, V. DI MARZO, P. CAVALLO PERIN, AND G. GRUDEN	2386
Beneficial effects of exendin-4 on experimental polyneuropathy in diabetic mice T. HIMENO, H. KAMIYA, K. NARUSE, N. HARADA, N. OZAKI, Y. SEINO, T. SHIBATA, M. KONDO, J. KATO, T. OKAWA, A. FUKAMI, Y. HAMADA, N. INAGAKI, Y. SEINO, D.J. DRUCKER, Y. OISO, AND J. NAKAMURA	2397
<b>GENETICS</b>	
Total zinc intake may modify the glucose-raising effect of a zinc transporter ( <i>SLC30A8</i> ) variant: a 14-cohort meta-analysis S. KANONI, J.A. NETTLETON, M.-F. HIVERT, Z. YE, F.J.A. VAN ROOIJ, D. SHUNGIN, E. SONESTEDT, J.S. NGWA, M.K. WOJCZYNSKI, R.N. LEMAITRE, S. GUSTAFSSON, J.S. ANDERSON, T. TANAKA, G. HINDY, G. SAYLOR, F. RENSTROM, A.J. BENNETT, C.M. VAN DULJIN, J.C. FLOREZ, C.S. FOX, A. HOFMAN, R.C. HOOGEVEEN, D.K. HOUSTON, F.B. HU, P.F. JACQUES, I. JOHANSSON, L. LIND, Y. LIU, N. MCKEOWN, J. ORDOVAS, J.S. PANKOW, E.J.G. SJBRANDS, A.-C. SYVÄNEN, A.G. UITTERLINDEN, M. YANNAKOULIA, M.C. ZILLIKENS, THE MAGIC INVESTIGATORS, N.J. WAREHAM, I. PROKOPENKO, S. BANDINELLI, N.G. FOROUHI, L.A. CUPPLES, R.J. LOOS, G. HALLMANS, J. DUPUIS, C. LANGENBERG, L. FERRUCCI, S.B. KRITCHEVSKY, M.I. MCCARTHY, E. INGELSSON, I.B. BORECKI, J.C.M. WITTEMAN, M. ORHO-MELANDER, D.S. SISCOVICK, J.B. MEIGS, P.W. FRANKS, AND G.V. DEDOUSSIS	2407
A genome-wide association study reveals a quantitative trait locus of adiponectin on <i>CDH13</i> that predicts cardiometabolic outcomes C.-M. CHUNG, T.-H. LIN, J.-W. CHEN, H.-B. LEU, H.-C. YANG, H.-Y. HO, C.-T. TING, S.-H. SHEU, W.-C. TSAI, J.-H. CHEN, S.-J. LIN, Y.-T. CHEN, AND W.-H. PAN	2417
Pleiotropic effects of GIP on islet function involve osteopontin V. LYSSENKO, L. ELIASSON, O. KOTOVA, K. PILGAARD, N. WIERUP, A. SALEHI, A. WENDT, A. JONSSON, Y.Z. DE MARINIS, L.M. BERGLUND, J. TANEERA, A. BALHUIZEN, O. HANSSON, P. OSMARK, P. DUNÉR, C. BRÖNS, A. STANČÁKOVÁ, J. KUUSISTO, M. BUGLIANI, R. SAXENA, E. AHLQVIST, T.J. KIEFFER, T. TUOMI, B. ISOMAA, O. MELANDER, E. SONESTEDT, M. ORHO-MELANDER, P. NILSSON, S. BONETTI, R. BONADONNA, R. MICCOLI, S. DELPRATO, P. MARCHETTI, S. MADSBØD, P. POULSEN, A. VAAG, M. LAAKSO, M.F. GOMEZ, AND L. GROOP	2424
Does genetic ancestry explain higher values of glycated hemoglobin in African Americans? N.M. MARUTHUR, W.H.L. KAO, J.M. CLARK, F.L. BRANCATI, C.-Y. CHENG, J.S. PANKOW, AND E. SELVIN	2434
<b>ISSUES AND EVENTS</b>	
<b>ONLINE LETTERS TO THE EDITOR</b>	
Comment on: Høeg et al. Lipid-induced insulin resistance affects women less than men and is not accompanied by inflammation or impaired proximal insulin signaling. <i>Diabetes</i> 2011;60:64–73 K. CUSI	e23
Response to comment on: Høeg et al. Lipid-induced insulin resistance affects women less than men and is not accompanied by inflammation or impaired proximal insulin signaling. <i>Diabetes</i> 2011;60:64–73 B. KIENS, L.D. HØEG, AND K.A. SJØBERG	e24
Comment on: Berhan. Thirty years of prospective nationwide incidence of childhood type 1 diabetes: the accelerating increase by time tends to level off in Sweden. <i>Diabetes</i> 2011;60:577–581 S.G. HOWARD	e25