

## SUPPLEMENTARY DATA

### **Supplementary Table 1. Variants with the strongest association with 24-h EE in Pima Indians.**

Position is based on human genome Build 37. Variant identification number (rs#) is based on dbSNP version 141. Risk allele is defined as the allele associated with lower 24-h EE. RAF: Risk allele frequency as calculated in full-heritage Pima Indians. SE: Standard Error. Beta coefficient is expressed per copy of the risk allele in kcal/day. Results are adjusted for age, sex, FM, FFM, SPA and the first 5 genetic principal components in a mixed model that accounted for genetic relationships among individuals. Variants are sorted by their *p*-value for the association with 24-h EE (all *p*<0.01).

### **Supplementary Table 2. Variants with the strongest association with RMR in Pima Indians.**

Position is based on human genome Build 37. Variant identification number (rs#) is based on dbSNP version 141. Risk allele is defined as the allele associated with lower RMR. RAF: Risk allele frequency as calculated in full-heritage Pima Indians. SE: Standard Error. Beta coefficient is expressed per copy of the risk allele in kcal/day. Results are adjusted for age, sex, FM, FFM and the first 5 genetic principal components in a mixed model that accounted for genetic relationships among individuals. Variants are sorted by their *p*-value for the association with RMR (all *p*<0.01).

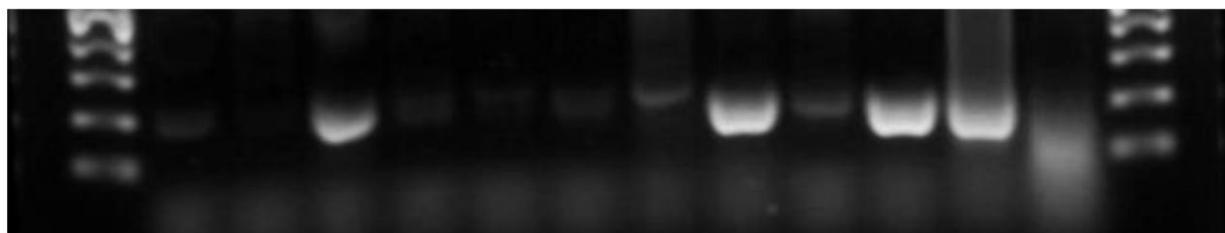
### **Supplementary Table 3. Associations of variants consistently associated with lower 24-h EE and RMR with maximum BMI and PFAT in Pima Indians.**

Position is based on human genome Build 37. Variant identification number (rs#) is based on dbSNP version 141. Risk allele is defined as the allele associated with lower 24-h EE and lower RMR. RAF: Risk allele frequency as calculated in full-heritage Pima Indians. SE: Standard Error. Beta coefficients are expressed per copy of the risk allele in kcal/day (24-h EE and RMR), logarithmic BMI units (maximum BMI) and percent body fat (PFAT). Results are adjusted for age, sex, body composition measures (FM and FFM, only for EE analyses), SPA (only for 24-h EE analysis), birth year (only for BMI analysis) and the first 5 genetic principal components in a mixed model that accounted for genetic relationships among individuals. Variants are sorted by their *p*-value for the association with maximum BMI and they all show concordant associations with 24-h EE and RMR with both *p*<0.01.

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**Supplementary Figure 1. Tissue distribution of human *GPR158* RNA.**

Human tissue cDNA panel was obtained from Clontech (Mountain View, CA). PCR shows that *GPR158* RNA is predominately expressed in whole brain, hypothalamus, pituitary gland and liver.



Placenta

Lung

Liver

Kidney

Heart

Colon

Skeletal muscle

Pituitary gland

Pancreas

Whole brain

Hypothalamus

Adipose tissue

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### The SIGMA Type 2 Diabetes Genetics Consortium

**Genetic analyses:** Josep M. Mercader<sup>1, 2, 3</sup>, Alicia Huerta-Chagoya<sup>4</sup>, Humberto García-Ortiz<sup>5</sup>, Hortensia Moreno-Macías<sup>4, 6</sup>, Alisa Manning<sup>3, 7, 8</sup>, Lizz Caulkins<sup>3</sup>, Noël P. Burt<sup>3</sup>, Jason Flannick<sup>3, 9</sup>, Nick Patterson<sup>10</sup>, Carlos A. Aguilar-Salinas<sup>4</sup>, Teresa Tusié-Luna<sup>4, 11</sup>, David Altshuler<sup>3, 9, 12</sup>, Jose C. Florez<sup>1, 3, 8, 13</sup>

**Study cohorts:**

*Diabetes in Mexico Study:* Humberto García-Ortiz<sup>5</sup>, Angélica Martínez-Hernández<sup>5</sup>, Federico Centeno-Cruz<sup>5</sup>, Francisco Martín Barajas-Olmos<sup>5</sup>, Carlos Zerrweck<sup>14</sup>, Cecilia Contreras-Cubas<sup>5</sup>, Elvia Mendoza-Caamal<sup>5</sup>, Cristina Revilla-Monsalve<sup>15</sup>, Sergio Islas-Andrade<sup>15</sup>, Emilio Córdova<sup>5</sup>, Xavier Soberón<sup>5</sup>, Lorena Orozco<sup>5</sup>

*Mexico City Diabetes Study:* Clicerio González-Villalpando<sup>16</sup>, María Elena González-Villalpando<sup>16</sup>

*Multiethnic Cohort Study:* Christopher A. Haiman<sup>17</sup>, Lynne Wilkens<sup>18</sup>, Loic Le Marchand<sup>18</sup>, Kristine Monroe<sup>17</sup>, Laurence Kolonel<sup>18</sup>

*UNAM/INCMNSZ Diabetes Study:* Olimpia Arellano-Campos<sup>4</sup>, Alicia Huerta-Chagoya<sup>4</sup>, María L. Ordóñez-Sánchez<sup>4</sup>, Maribel Rodríguez-Torres<sup>4</sup>, Yayoi Segura-Kato<sup>4</sup>, Rosario Rodríguez-Guillén<sup>4</sup>, Ivette Cruz-Bautista<sup>4</sup>, Linda Liliana Muñoz-Hernández<sup>4</sup>, Tamara Sáenz<sup>4</sup>, Donají Gómez<sup>4</sup>, Ulices Alvirde<sup>4</sup>, Paloma Almeda-Valdés<sup>4</sup>, Hortensia Moreno-Macías<sup>4, 6</sup>, Teresa Tusié-Luna<sup>4, 11</sup>, Carlos A. Aguilar-Salinas<sup>4</sup>

**Scientific and project management:** Noël P. Burt<sup>3</sup>, Lizz Caulkins<sup>3</sup>, María L. Cortes<sup>10</sup>

**Steering committee:** David Altshuler<sup>3, 9, 12</sup>, Jose C. Florez<sup>1, 3, 8, 13</sup>, Christopher A. Haiman<sup>17</sup>, Carlos A. Aguilar-Salinas<sup>4</sup>, Clicerio González-Villalpando<sup>16</sup>, Lorena Orozco<sup>5</sup>, Teresa Tusié-Luna<sup>4, 11</sup>

<sup>1</sup> Diabetes Unit and Center for Human Genetic Research, Massachusetts General Hospital, Boston, Massachusetts, 02114, USA.

<sup>2</sup> Joint BSC-CRG-IRB Research Program in Computational Biology. Barcelona Supercomputing Center, 08034 Barcelona.

<sup>3</sup> Program in Medical and Population Genetics, Broad Institute of Harvard and MIT, Cambridge, Massachusetts, 02142, USA.

<sup>4</sup> Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Sección XVI, Tlalpan, 14000 Mexico City, Mexico.

<sup>5</sup> Instituto Nacional de Medicina Genómica, Tlalpan, 14610, Mexico City, Mexico.

<sup>6</sup> Universidad Autónoma Metropolitana, Tlalpan 14387, Mexico City, Mexico.

<sup>7</sup> Center for Human Genetic Research, Massachusetts General Hospital, Boston, Massachusetts, 02114, USA.

<sup>8</sup> Department of Medicine, Harvard Medical School, Boston, Massachusetts, USA.

<sup>9</sup> Department of Molecular Biology, Massachusetts General Hospital, Boston, Massachusetts, 02114, USA.

<sup>10</sup> Broad Institute of Harvard and MIT, Cambridge, Massachusetts, 02142, USA.

<sup>11</sup> Instituto de Investigaciones Biomédicas, UNAM Unidad de Biología Molecular y Medicina Genómica, UNAM/INCMNSZ, Coyoacán, 04510 Mexico City, Mexico.

<sup>12</sup> Department of Genetics, Harvard Medical School, Boston, Massachusetts, 02115, USA.

<sup>13</sup> Metabolism Program, Broad Institute of Harvard and MIT, Cambridge, Massachusetts, 02142, USA.

<sup>14</sup> Clínica de Integral de Cirugía para la Obesidad y Enfermedades Metabólicas, Hospital General Tláhuac, Secretaría de Salud del GDF. México City.

<sup>15</sup> Instituto Mexicano del Seguro Social SXXI, Mexico City, Mexico.

<sup>16</sup> Centro de Estudios en Diabetes, Unidad de Investigación en Diabetes y Riesgo Cardiovascular, Centro de Investigación en Salud Poblacional, Instituto Nacional de Salud Pública, Mexico City, Mexico.

<sup>17</sup> Department of Preventive Medicine, Keck School of Medicine, University of Southern California, Los Angeles, California, 90033, USA.

<sup>18</sup> Epidemiology Program, University of Hawaii Cancer Center, Honolulu, Hawaii, USA.