



Cover image: Pictured is a Spanish silver “piece of eight” struck in Potosi, Bolivia, under the reign of Philip II. Researchers have recently questioned the centuries-old idea that European currency inflation in the 16th and 17th centuries resulted from an influx of silver originating in Mexico and Peru. Using lead, copper, and silver isotopes to trace the coins’ origins, Anne-Marie Desautly et al. found that European silver dominated Spanish coinage until the reign of Philip III, who died in 1621, but in the next 80 years, Mexican silver had replaced coins of European ancestry. See the article on pages 9002–9007. Image courtesy of Daniel Frank Sedwick, LLC.

From the Cover

- 9002 Origins of Spanish silver
- 8966 Biomass burning and human health
- 9055 Deconstructing DNA methylation
- 9166 Comparative genomics on rust fungi
- 9262 Anti-inflammatory drugs and depression

Contents

THIS WEEK IN PNAS

8917 In This Issue

LETTERS (ONLINE ONLY)

- E145 **Ancient starch: Cooked or just old?**
Matthew J. Collins and Les Copeland
- E146 **Reply to Collins and Copeland: Spontaneous gelatinization not supported by evidence**
Amanda G. Henry, Alison S. Brooks, and Dolores R. Piperno
- E147 **What about European alvarezsauroids?**
Gareth J. Dyke and Darren Naish
- E148 **Reply to Dyke and Naish: European alvarezsauroids do not change the picture**
Xing Xu, Corwin Sullivan, Michael Pittman, Jonah N. Choiniere, David Hone, Paul Upchurch, Qingwei Tan, Dong Xiao, Lin Tan, and Fenglu Han

COMMENTARIES

- 8919 **Twists and turns of DNA methylation**
Carina Frauer and Heinrich Leonhardt
→ See companion article on page 9055



Free online through the PNAS open access option.

- 8921 **Genomes of obligate plant pathogens reveal adaptations for obligate parasitism**
John M. McDowell
→ See companion article on page 9166
- 8923 **Serotonin, cytokines, p11, and depression**
Solomon H. Snyder
→ See companion article on page 9262

PNAS PLUS (AUTHOR SUMMARIES)

BIOLOGICAL SCIENCES

BIOCHEMISTRY

- 8925 **Genome-wide remodeling of the epigenetic landscape during myogenic differentiation**
 Patrik Asp, Roy Blum, Vasupradha Vethantham, Fabio Parisi, Mariann Micsinai, Jemmie Cheng, Christopher Bowman, Yuval Kluger, and Brian David Dynlacht
→ See full research article on page E149 of www.pnas.org
- 8927 **Bromodomain protein Brd3 associates with acetylated GATA1 to promote its chromatin occupancy at erythroid target genes**
Janine M. Lamonica, Wulan Deng, Stephan Kadauke, Amy E. Campbell, Roland Gamsjaeger, Hongxin Wang, Yong Cheng, Andrew N. Billin, Ross C. Hardison, Joel P. Mackay, and Gerd A. Blobel
→ See full research article on page E159 of www.pnas.org

BIOPHYSICS AND COMPUTATIONAL BIOLOGY

- 8929 **Intra- and intermolecular translocation of the bi-domain transcription factor Oct1 characterized by liquid crystal and paramagnetic NMR**
Yuki Takayama and G. Marius Clore
→ See full research article on page E169 of www.pnas.org

ENVIRONMENTAL SCIENCES

- 8931 **Tracking Baltic hypoxia and cod migration over millennia with natural tags**
Karin E. Limburg, Carina Olson, Yvonne Walther, Darren Dale, Caroline P. Slomp, and Hans Høie
→ See full research article on page E177 of www.pnas.org

NEUROSCIENCE


- 8932 **Targeted mini-strokes produce changes in interhemispheric sensory signal processing that are indicative of disinhibition within minutes**
Majid H. Mohajerani, Khatereh Aminoltejari, and Timothy H. Murphy
→ See full research article on page E183 of www.pnas.org

PROFILE

- 8934 **Profile of Stephen E. Plog**
Tinsley H. Davis
→ See Inaugural Article on page 19619 in issue 46 of volume 107

PHYSICAL SCIENCES


APPLIED PHYSICAL SCIENCES

- 8937 **Electrokinetic trapping at the one nanometer limit**
Alexander P. Fields and Adam E. Cohen
- 8943 **Deep-tissue anatomical imaging of mice using carbon nanotube fluorophores in the second near-infrared window**
Kevin Welscher, Sarah P. Sherlock, and Hongjie Dai
- 9107 **Integrin adhesion drives the emergent polarization of active cytoskeletal stresses to pattern cell delamination**
C. Meghana, Nisha Ramdas, Feroz Meeran Hameed, Madan Rao, G. V. Shivashankar, and Maithreyi Narasimha
- 9256 **Minimally invasive molecular delivery into the brain using optical modulation of vascular permeability**
 Myunghwan Choi, Taeyun Ku, Kyuha Chong, Jonghee Yoon, and Chulhee Choi

CHEMISTRY

- 8949 **Origins of saccharide-dependent hydration at aluminate, silicate, and aluminosilicate surfaces**
Benjamin J. Smith, Aditya Rawal, Gary P. Funkhouser, Lawrence R. Roberts, Vijay Gupta, Jacob N. Israelachvili, and Bradley F. Chmelka
- 8955 **Breaking the regioselectivity rule for acrylate insertion in the Mizoroki–Heck reaction**
Philipp Wucher, Lucia Caporaso, Philipp Roesle, Francesco Ragone, Luigi Cavallo, Stefan Mecking, and Inigo Göttker-Schnetmann

ENGINEERING

- 9008 **Role of design complexity in technology improvement**
 James McNerney, J. Doyne Farmer, Sidney Redner, and Jessika E. Trancik

ENVIRONMENTAL SCIENCES

- 8960 **Impacts of a recent storm surge on an Arctic delta ecosystem examined in the context of the last millennium**
Michael F. J. Pisaric, Joshua R. Thienpont, Steven V. Kokelj, Holly Nesbitt, Trevor C. Lantz, Steven Solomon, and John P. Smol
- 8966 **Isocyanic acid in the atmosphere and its possible link to smoke-related health effects**
James M. Roberts, Patrick R. Veres, Anthony K. Cochran, Carsten Warneke, Ian R. Burling, Robert J. Yokelson, Brian Lerner, Jessica B. Gilman, William C. Kuster, Ray Fall, and Joost de Gouw

GEOLOGY

- 8972 **Climatically driven biogeographic provinces of Late Triassic tropical Pangea**
Jessica H. Whiteside, Danielle S. Grogan, Paul E. Olsen, and Dennis V. Kent
- 9002 **Isotopic Ag–Cu–Pb record of silver circulation through 16th–18th century Spain**
Anne-Marie Desautly, Philippe Telouk, Emmanuelle Albalat, and Francis Albarède


GEOPHYSICS

- 8978 **Committed sea-level rise for the next century from Greenland ice sheet dynamics during the past decade**
Stephen F. Price, Antony J. Payne, Ian M. Howat, and Benjamin E. Smith

MATHEMATICS

- 8984 **KP solitons, total positivity, and cluster algebras**
Yuji Kodama and Lauren K. Williams

PHYSICS


- 8990 **Two-phase dynamics of p53 in the DNA damage response**
 Xiao-Peng Zhang, Feng Liu, and Wei Wang
- 8996 **Discontinuous shear thickening in confined dilute carbon nanotube suspensions**
Sayantan Majumdar, Rema Krishnaswamy, and A. K. Sood

SOCIAL SCIENCES

ANTHROPOLOGY

- 9002 **Isotopic Ag–Cu–Pb record of silver circulation through 16th–18th century Spain**
Anne-Marie Desautly, Philippe Telouk, Emmanuelle Albalat, and Francis Albarède


ECONOMIC SCIENCES

- 9008 **Role of design complexity in technology improvement**
 James McNerney, J. Doyne Farmer, Sidney Redner, and Jessika E. Trancik

PSYCHOLOGICAL AND COGNITIVE SCIENCES


- 9014 **How words can and cannot be learned by observation**
Tamara Nicol Medina, Jesse Snedeker, John C. Trueswell,
and Lila R. Gleitman

SOCIAL SCIENCES


-  9020 **How social influence can undermine the wisdom of crowd effect**
Jan Lorenz, Heiko Rauhut, Frank Schweitzer,
and Dirk Helbing

BIOLOGICAL SCIENCES

APPLIED BIOLOGICAL SCIENCES


-  9026 **Counting individual DNA molecules by the stochastic attachment of diverse labels**
Glenn K. Fu, Jing Hu, Pei-Hua Wang,
and Stephen P. A. Fodor
- 9032 **In vivo fluorescence imaging of exogenous enzyme activity in the gastrointestinal tract**
Gregor Fuhrmann and Jean-Christophe Leroux

BIOCHEMISTRY

- 9038 **Soluble epoxide hydrolase deficiency alters pancreatic islet size and improves glucose homeostasis in a model of insulin resistance**
Ayala Luria, Ahmed Bettaieb, Yannan Xi, Guang-Jong Shieh,
Hsin-Chen Liu, Hiromi Inoue, Hsing-Ju Tsai, John D. Imig,
Fawaz G. Haj, and Bruce D. Hammock
-  9044 **Regulation of human EGF receptor by lipids**
Ünal Coskun, Michał Grzybek, David Drechsel,
and Kai Simons
- 9049 **Peptide surfactants for cell-free production of functional G protein-coupled receptors**
Xiaoqiang Wang, Karolina Corin, Philipp Baaske,
Christoph J. Wienken, Moran Jerabek-Willemsen,
Stefan Duhr, Dieter Braun, and Shuguang Zhang
- 9055 **Structural insight into maintenance methylation by mouse DNA methyltransferase 1 (Dnmt1)**
Kohei Takeshita, Isao Suetake, Eiki Yamashita, Michihiro Suga, Hirotaka Narita, Atsushi Nakagawa, and Shoji Tajima
→ See Commentary on page 8919
- 9060 **Optimized clinical performance of growth hormone with an expanded genetic code**
Ho Cho, Tom Daniel, Ying Ji Buechler, David C. Litzinger,
Zhenwei Maio, Anna-Maria Hays Putnam, Vadim S. Kraynov,
Bee-Cheng Sim, Stuart Bussell, Tsotne Javahishvili, Sami Kaphle, Guillermo Viramontes, Mike Ong, Stephanie Chu,
Becky GC, Ricky Lieu, Nick Knudsen, Paola Castiglioni,
Thea C. Norman, Douglas W. Axelrod, Andrew R. Hoffman,
Peter G. Schultz, Richard D. DiMarchi, and Bruce E. Kimmel
- 9066 **Agonist trapped in ATP-binding sites of the P2X2 receptor**
Ruotian Jiang, Damien Lemoine, Adeline Martz,
Antoine Taly, Sophie Gonin, Lia Prado de Carvalho,
Alexandre Specht, and Thomas Grutter

- 9072 **Inhibition of autoprocessing of natural variants and multidrug resistant mutant precursors of HIV-1 protease by clinical inhibitors**
John M. Louis, Annie Aniana, Irene T. Weber,
and Jane M. Sayer


BIOPHYSICS AND COMPUTATIONAL BIOLOGY



-  8990 **Two-phase dynamics of p53 in the DNA damage response**
Xiao-Peng Zhang, Feng Liu, and Wei Wang
- 9078 **Measurement of protein unfolding/refolding kinetics and structural characterization of hidden intermediates by NMR relaxation dispersion**
Derrick W. Meinhold and Peter E. Wright
- 9084 **Mechanics of surface area regulation in cells examined with confined lipid membranes**
Margarita Staykova, Douglas P. Holmes, Clarke Read,
and Howard A. Stone
- 9089 **T-cell triggering thresholds are modulated by the number of antigen within individual T-cell receptor clusters**
Boryana N. Manz, Bryan L. Jackson, Rebecca S. Petit,
Michael L. Dustin, and Jay Groves
- 9095 **KCNE1 enhances phosphatidylinositol 4,5-bisphosphate (PIP₂) sensitivity of I_{Ks} to modulate channel activity**
Yang Li, Mark A. Zaydman, Dick Wu, Jingyi Shi,
Michael Guan, Brett Virgin-Downey, and Jianmin Cui
- 9101 **Structural topology of phospholamban pentamer in lipid bilayers by a hybrid solution and solid-state NMR method**
Raffaello Verardi, Lei Shi, Nathaniel J. Traaseth,
Naomi Walsh, and Gianluigi Veglia

CELL BIOLOGY

- 9107 **Integrin adhesion drives the emergent polarization of active cytoskeletal stresses to pattern cell delamination**
C. Meghana, Nisha Ramdas, Feroz Meeran Hameed,
Madan Rao, G. V. Shivashankar, and Maithreyi Narasimha
- 9113 **Cell-free sorting of peroxisomal membrane proteins from the endoplasmic reticulum**
Gaurav Agrawal, Saurabh Joshi, and Suresh Subramani
- 9119 **Ubiquitin-recognition protein Ufd1 couples the endoplasmic reticulum (ER) stress response to cell cycle control**
Meifan Chen, Gustavo J. Gutierrez, and Ze'ev A. Ronai

DEVELOPMENTAL BIOLOGY

-  9125 **Phosphorylation state of a Tob/BTG protein, FOG-3, regulates initiation and maintenance of the *Caenorhabditis elegans* sperm fate program**
Myon-Hee Lee, Kyung Won Kim, Clinton T. Morgan,
Dyan E. Morgan, and Judith Kimble
- 9131 **Doublesex and mab-3-related transcription factor 5 promotes midbrain dopaminergic identity in pluripotent stem cells by enforcing a ventral-medial progenitor fate**
Nicole Gennet, Emily Gale, Xinsheng Nan, Emma Farley,
Katalin Takacs, Barbara Oberwallner, David Chambers,
and Meng Li

- 9137 **Autoregulatory and repressive inputs localize *Hydra Wnt3* to the head organizer**
 Yukio Nakamura, Charisios D. Tsiairis, Suat Özbek, and Thomas W. Holstein
- 9143 **Direct development of neurons within foregut endoderm of sea urchin embryos**
 Zheng Wei, Robert C. Angerer, and Lynne M. Angerer


ECOLOGY

- 8960 **Impacts of a recent storm surge on an Arctic delta ecosystem examined in the context of the last millennium**
Michael F. J. Pisarcic, Joshua R. Thienpont, Steven V. Kokelj, Holly Nesbitt, Trevor C. Lantz, Steven Solomon, and John P. Smol
- 9148 **Hyperspectral imaging of cuttlefish camouflage indicates good color match in the eyes of fish predators**
Chuan-Chin Chiao, J. Kenneth Wickiser, Justine J. Allen, Brock Genter, and Roger T. Hanlon


EVOLUTION

- 8972 **Climatically driven biogeographic provinces of Late Triassic tropical Pangea**
Jessica H. Whiteside, Danielle S. Grogan, Paul E. Olsen, and Dennis V. Kent
- 9154 **Evolution of sodium channels predates the origin of nervous systems in animals**
Benjamin J. Liebeskind, David M. Hillis, and Harold H. Zakon
- 9160 **Amphioxus FGF signaling predicts the acquisition of vertebrate morphological traits**
Stephanie Bertrand, Alain Camasses, Ildiko Somorjai, Mohamed R. Belgacem, Olivier Chabrol, Marie-Line Escande, Pierre Pontarotti, and Hector Escriva

GENETICS

- 9166 **Obligate biotrophy features unraveled by the genomic analysis of rust fungi**
 Sébastien Duplessis, Christina A. Cuomo, Yao-Cheng Lin, Andrea Aerts, Emilie Tisserant, Claire Veneault-Fourrey, David L. Joly, Stéphane Hacquard, Joëlle Amselem, Brandi L. Cantarel, Readman Chiu, Pedro M. Coutinho, Nicolas Feau, Matthew Field, Pascal Frey, Eric Gelhaye, Jonathan Goldberg, Manfred G. Grabherr, Chinnappa D. Kodira, Annegret Kohler, Ursula Kües, Erika A. Lindquist, Susan M. Lucas, Rohit Mago, Evan Mauceli, Emmanuelle Morin, Claude Murat, Jasmyn L. Pangilinan, Robert Park, Matthew Pearson, Hadi Quesneville, Nicolas Rouhier, Sharadha Sakthikumar, Asaf A. Salamov, Jeremy Schmutz, Benjamin Selles, Harris Shapiro, Philippe Tanguay, Gerald A. Tuskan, Bernard Henrissat, Yves Van de Peer, Pierre Rouzé, Jeffrey G. Ellis, Peter N. Dodds, Jacqueline E. Schein, Shaobin Zhong, Richard C. Hamelin, Igor V. Grigoriev, Les J. Szabo, and Francis Martin
→ See Commentary on page 8921
- 9172 **Recurrent chimeric RNAs enriched in human prostate cancer identified by deep sequencing**
Kalpana Kannan, Liguang Wang, Jianghua Wang, Michael M. Ittmann, Wei Li, and Laising Yen


IMMUNOLOGY

- 9178 **Systematic identification of immunodominant CD8⁺ T-cell responses to influenza A virus in HLA-A2 individuals**
Chao Wu, Damien Zanker, Sophie Valkenburg, Bee Tan, Katherine Kedzierska, Quan Ming Zou, Peter C. Doherty, and Weisan Chen
- 9184 **NF- κ B dysregulation in microRNA-146a-deficient mice drives the development of myeloid malignancies**
Jimmy L. Zhao, Dinesh S. Rao, Mark P. Boldin, Konstantin D. Taganov, Ryan M. O'Connell, and David Baltimore
- 9190 **Immune surveillance by mast cells during dengue infection promotes natural killer (NK) and NKT-cell recruitment and viral clearance**
 Ashley L. St. John, Abhay P. S. Rathore, Han Yap, Mah-Lee Ng, Dean D. Metcalfe, Subhash G. Vasudevan, and Soman N. Abraham
- 9196 **Control of *Toxoplasma* reactivation by rescue of dysfunctional CD8⁺ T-cell response via PD-1-PDL-1 blockade**
Rajarshi Bhadra, Jason P. Gigley, Louis M. Weiss, and Imtiaz A. Khan

MEDICAL SCIENCES

- 9202 **Role of low-frequency HIV-1 variants in failure of nevirapine-containing antiviral therapy in women previously exposed to single-dose nevirapine**
Valerie F. Boltz, Yu Zheng, Shahin Lockman, Feiyu Hong, Elias K. Halvas, James McIntyre, Judith S. Currier, Margret C. Chibowa, Cecelia Kanyama, Apsara Nair, Willis Owino-Ong'or, Michael Hughes, John M. Coffin, and John W. Mellors
- 9208 **Thermodynamic stability of small hairpin RNAs highly influences the loading process of different mammalian Argonautes**
Shuo Gu, Lan Jin, Feijie Zhang, Yong Huang, Dirk Grimm, John J. Rossi, and Mark A. Kay
- 9214 **Decellularized tissue-engineered blood vessel as an arterial conduit**
Clay Quint, Yuka Kondo, Roberto J. Manson, Jeffrey H. Lawson, Alan Dardik, and Laura E. Niklason
- 9220 **Regulation of type 17 helper T-cell function by nitric oxide during inflammation**
Wanda Niedbala, Jose C. Alves-Filho, Sandra Y. Fukada, Silvio Manfredo Vieira, Akio Mitani, Fabiane Sonogo, Ananda Mirchandani, Daniele C. Nascimento, Fernando Q. Cunha, and Foo Y. Liew
- 9226 **Repair of injured proximal tubule does not involve specialized progenitors**
Benjamin D. Humphreys, Suzanne Czerniak, Derek P. DiRocco, Wirasat Hasnain, Rabia Cheema, and Joseph V. Bonventre
- 9232 **miR-33a/b contribute to the regulation of fatty acid metabolism and insulin signaling**
Alberto Dávalos, Leigh Goedeke, Peter Smibert, Cristina M. Ramirez, Nikhil P. Warrier, Ursula Andreo, Daniel Cirera-Salinas, Katey Rayner, Uthra Suresh, José Carlos Pastor-Pareja, Enric Esplugues, Edward A. Fisher, Luiz O. F. Penalva, Kathryn J. Moore, Yajaira Suárez, Eric C. Lai, and Carlos Fernández-Hernando


MICROBIOLOGY

- 9238  ***Helicobacter pylori* cytotoxin-associated gene A (CagA) subverts the apoptosis-stimulating protein of p53 (ASPP2) tumor suppressor pathway of the host**
Ludovico Buti, Eric Spooner, Annemarthe G. Van der Veen, Rino Rappuoli, Antonello Covacci, and Hidde L. Ploegh
- 9244 **HIV DNA is heavily uracilated, which protects it from autointegration**
Nan Yan, Elizabeth O'Day, Lee Adam Wheeler, Alan Engelman, and Judy Lieberman
- 9250 ***Wolbachia* uses host microRNAs to manipulate host gene expression and facilitate colonization of the dengue vector *Aedes aegypti***
Mazhar Hussain, Francesca D. Frentiu, Luciano A. Moreira, Scott L. O'Neill, and Sassan Asgari


NEUROSCIENCE

- 9256  **Minimally invasive molecular delivery into the brain using optical modulation of vascular permeability**
Myunghwan Choi, Taeyun Ku, Kyuha Chong, Jonghee Yoon, and Chulhee Choi
- 9262 **Antidepressant effects of selective serotonin reuptake inhibitors (SSRIs) are attenuated by antiinflammatory drugs in mice and humans**
Jennifer L. Warner-Schmidt, Kimberly E. Vanover, Emily Y. Chen, John J. Marshall, and Paul Greengard
→ See Commentary on page 8923
- 9268 **Human Mu Opioid Receptor (OPRM1 A118G) polymorphism is associated with brain mu-opioid receptor binding potential in smokers**
Riju Ray, Kosha Ruparel, Andrew Newberg, E. Paul Wileyto, James W. Loughhead, Chaitanya Divgi, Julie A. Blendy, Jean Logan, Jon-Kar Zubieta, and Caryn Lerman
- 9274 **Genetic analysis of age-dependent defects of the *Caenorhabditis elegans* touch receptor neurons**
Chun-Liang Pan, Chiu-Ying Peng, Chun-Hao Chen, and Steven McIntire
- 9280 **Changes in striatal procedural memory coding correlate with learning deficits in a mouse model of Huntington disease**
Sebastien Cayzac, Sebastien Delcasso, Vietminh Paz, Yannick Jeantet, and Yoon H. Cho


PLANT BIOLOGY

- 9286  **The *Arabidopsis* flagellin receptor FLS2 mediates the perception of *Xanthomonas* Ax21 secreted peptides**
Cristian H. Danna, Yves A. Millet, Teresa Koller, Sang-Wook Han, Andrew F. Bent, Pamela C. Ronald, and Frederick M. Ausubel
- 9292 **Circadian oscillation of gibberellin signaling in *Arabidopsis***
María Verónica Arana, Nora Marín-de la Rosa, Julin N. Maloof, Miguel A. Blázquez, and David Alabadí
- 9298 **Cytochrome P450 CYP94B3 mediates catabolism and inactivation of the plant hormone jasmonoyl-L-isoleucine**
Abraham J. K. Koo, Thomas F. Cooke, and Gregg A. Howe

PSYCHOLOGICAL AND COGNITIVE SCIENCES

- 9020  **How social influence can undermine the wisdom of crowd effect**
Jan Lorenz, Heiko Rauhut, Frank Schweitzer, and Dirk Helbing

SUSTAINABILITY SCIENCE

- 9304  **Genetic and expression analysis of cattle identifies candidate genes in pathways responding to *Trypanosoma congolense* infection**
Harry Noyes, Andy Brass, Isaiah Obara, Susan Anderson, Alan L. Archibald, Dan G. Bradley, Paul Fisher, Abigail Freeman, John Gibson, Michael Gicheru, Laurence Hall, Olivier Hanotte, Helen Hulme, Declan McKeever, Caitriona Murray, Sung Jung Oh, Catriona Tate, Ken Smith, Miika Tapio, John Wambugu, Diana J. Williams, Morris Agaba, and Stephen J. Kemp

SYSTEMS BIOLOGY

- 9310  **Continuous polo-like kinase 1 activity regulates diffusion to maintain centrosome self-organization during mitosis**
Robert Mahen, Anand D. Jeyasekharan, Nicholas P. Barry, and Ashok R. Venkitaraman

CORRECTION

GENETICS

- 9316 **Genome-wide association and genetic functional studies identify *autism susceptibility candidate 2* gene (AUTS2) in the regulation of alcohol consumption**
Gunter Schumann, Lachlan J. Coin, Anbarasu Lourdasamy, Pimphen Charoen, Karen H. Berger, David Stacey, Sylvane Desrivieres, Fazil A. Aliev, Anokhi A. Khan, Najaf Amin, Yurii S. Aulchenko, Georgy Bakalkin, Stephan J. Bakker, Beverley Balkau, Joline W. Beulens, Ainhoa Bilbao, Rudolf A. de Boer, Delphine Beury, Michiel L. Bots, Eleri J. Breetvelt, Stéphane Cauchi, Christine Cavalcanti-Proença, John C. Chambers, Toni-Kim Clarke, Norbert Dahmen, Eco J. de Geus, Danielle Dick, Francesca Ducci, Alanna Easton, Howard J. Edenberg, Tõnu Esk, Alberto Fernández-Medarde, Tatiana Foroud, Nelson B. Freimer, Jean-Antoine Girault, Diederick E. Grobbee, Simonetta Guarrera, Daniel F. Gudbjartsson, Anna-Liisa Hartikainen, Andrew C. Heath, Victor Hesselbrock, Albert Hofman, Jouke-Jan Hottenga, Matti K. Isohanni, Jaakko Kaprio, Kay-Tee Khaw, Brigitte Kuehnel, Jaana Laitinen, Stéphane Lobbens, Jian'an Luan, Massimo Mangino, Matthieu Maroteaux, Giuseppe Matullo, Mark I. McCarthy, Christian Mueller, Gerjan Navis, Mattijs E. Numans, Alejandro Núñez, Dale R. Nyholt, Charlotte N. Onland-Moret, Ben A. Oostra, Paul F. O'Reilly, Miklos Palkovits, Brenda W. Penninx, Silvia Polidoro, Anneli Pouta, Inga Prokopenko, Fulvio Ricceri, Eugenio Santos, Johannes H. Smit, Nicole Soranzo, Kijoung Song, Ulla Sovio, Michael Stumvoll, Ida Surakk, Thorgeir E. Thorgerirsson, Unnur Thorsteinsdottir, Claire Troakes, Thorarinn Tyrfinngsson, Anke Tönjes, Cuno S. Uiterwaal, Andre G. Uitterlinden, Pim van der Harst, Yvonne T. van der Schouw, Oliver Staehlin, Nicole Vogelzangs, Peter Vollenweider, Gerard Waeber, Nicholas J. Wareham, Dawn M. Waterworth, John B. Whitfield, Erich H. Wichmann, Gonneke Willemssen, Jacqueline C. Witteman, Xin Yuan, Guangju Zhai, Jing H. Zhao, Weihua Zhang, Nicholas G. Martin, Andres Metspalu, Angela Doering, James Scott, Tim D. Spector, Ruth J. Loos, Dorret I. Boomsma, Vincent Mooser, Leena Peltonen, Kari Stefansson, Cornelia M. van Duijn, Paolo Vineis, Wolfgang H. Sommer, Jaspal S. Kooner, Rainer Spanagel, Ulrike A. Heberlein, Marjo-Riitta Jarvelin, and Paul Elliott