View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by Elsevier - Publisher Connector

Contents of Volume 79

July 2006

i **This Month in the *Journal***
Robin E. Williamson

ARTICLES

1 **Reconstructing Genetic Ancestry Blocks in Admixed Individuals**
Hua Tang, Marc Coram, Pei Wang, Xiaofeng Zhu, and Neil Risch

13 **Mapping Tumor-Suppressor Genes with Multipoint Statistics from Copy-Number–Variation Data**
Iuliana Ionita, Raoul-Sam Daruwala, and Bud Mishra

23 **Distinct Expression Profiles for *PTEN* Transcript and Its Splice Variants in Cowden Syndrome and Bannayan-Riley-Ruvalcaba Syndrome**
Marta S. Sarquis, Shipra Agrawal, Lei Shen, Robert Pilarski, Xiao-Ping Zhou, and Charis Eng

31 **High Incidence of Later-Onset Fabry Disease Revealed by Newborn Screening**
Marco Spada, Severo Pagliardini, Makiko Yasuda, Turgut Tukel, Geetha Thiagarajan, Hitoshi Sakuraba, Alberto Ponzone, and Robert J. Desnick

41 **Human Genomic Deletions Mediated by Recombination between *Alu* Elements**
Shurjo K. Sen, Kyudong Han, Jianxin Wang, Jungnam Lee, Hui Wang, Pauline A. Callinan, Matthew Dyer, Richard Cordaux, Ping Liang, and Mark A. Batzer

54 **Comprehensive Association Testing of Common Mitochondrial DNA Variation in Metabolic Disease**
Richa Saxena, Paul I. W. de Bakker, Karyn Singer, Vamsi Mootha, Noël Burtt, Joel N. Hirschhorn, Daniel Gaudet, Bo Isomaa, Mark J. Daly, Leif Groop, Kristin G. Ardlie, and David Altshuler

62 **Using Genomic Inbreeding Coefficient Estimates for Homozygosity Mapping of Rare Recessive Traits: Application to Taybi-Linder Syndrome**
Anne-Louise Leutenegger, Audrey Labalme, Emmanuelle Génin, Annick Toutain, Elisabeth Steichen, Françoise Clerget-Darpoux, and Patrick Edery

67 **Intra- and Interindividual Epigenetic Variation in Human Germ Cells**
James M. Flanagan, Violeta Popendikyte, Natalija Pozdniakovaite, Martha Sobolev, Abbas Assadzadeh, Axel Schumacher, Masood Zangeneh, Lynette Lau, Carl Virtanen, Sun-Chong Wang, and Arturas Petronis

85 **Trait Components Provide Tools to Dissect the Genetic Susceptibility of Migraine**
V. Anttila, M. Kallela, G. Oswell, M. A. Kaunisto, D. R. Nyholt, E. Hämäläinen, H. Havanka, M. Ilmavirta, J. Terwilliger, E. Sobel, L. Peltonen, J. Kaprio, M. Färkkilä, M. Wessman, and A. Palotie

100 **Bayesian Graphical Models for Genomewide Association Studies**
Claudio J. Verzilli, Nigel Stallard, and John C. Whittaker

113 **Disruption of POF1B Binding to Nonmuscle Actin Filaments Is Associated with Premature Ovarian Failure**
Arnaud Lacombe, Hane Lee, Laila Zahed, Mahmoud Choucair, Jean-Marc Muller, Stanley F. Nelson, Wael Salameh, and Eric Vilain

120 Genetic Variation in the *CCL18-CCL3-CCL4* Chemokine Gene Cluster Influences HIV Type 1 Transmission and AIDS Disease Progression
William S. Modi, James Lautenberger, Ping An, Kevin Scott, James J. Goedert, Gregory D. Kirk, Susan Buchbinder, John Phair, Sharyne Donfield, Stephen J. O'Brien, and Cheryl Winkler

REPORTS

129 Germline Missense Mutations Affecting KRAS Isoform B Are Associated with a Severe Noonan Syndrome Phenotype
Claudio Carta, Francesca Pantaleoni, Gianfranco Bocchinfuso, Lorenzo Stella, Isabella Vasta, Anna Sarkozy, Cristina Digilio, Antonio Palleschi, Antonio Pizzuti, Paola Grammatico, Giuseppe Zampino, Bruno Dallapiccola, Bruce D. Gelb, and Marco Tartaglia

136 *DSG2* Mutations Contribute to Arrhythmogenic Right Ventricular Dysplasia/Cardiomyopathy
Mark M. Awad, Darshan Dalal, Eunpi Cho, Nuria Amat-Alarcon, Cynthia James, Crystal Tichnell, April Tucker, Stuart D. Russell, David A. Bluemke, Harry C. Dietz, Hugh Calkins, and Daniel P. Judge

143 Double Inactivation of *NF1* in Tibial Pseudarthrosis
David A. Stevenson, Holly Zhou, Shadi Ashrafi, Ludwine M. Messiaen, John C. Carey, Jacques L. D'Astous, Stephen D. Santora, and David H. Viskochil

149 *ELMOD2* Is a Candidate Gene for Familial Idiopathic Pulmonary Fibrosis
Ulla Hodgson, Ville Pulkkinen, Morag Dixon, Myriam Peyrard-Janvid, Marko Rehn, Päivi Lahermo, Vesa Ollikainen, Kaisa Salmenkivi, Vuokko Kinnula, Juha Kere, Pentti Tukiainen, and Tarja Laitinen

155 Increased DNA Methylation at the *AXIN1* Gene in a Monozygotic Twin from a Pair Discordant for a Caudal Duplication Anomaly
N. A. Oates, J. van Vliet, D. L. Duffy, H. Y. Kroes, N. G. Martin, D. I. Boomsma, M. Campbell, M. G. Coulthard, E. Whitelaw, and S. Chong

163 Familial Osteoarthritis of the Hip Joint Associated with Acetabular Dysplasia Maps to Chromosome 13q
Akihiko Mabuchi, Shigeru Nakamura, Yoshio Takatori, and Shiro Ikegawa

169 *NOTCH2* Mutations Cause Alagille Syndrome, a Heterogeneous Disorder of the Notch Signaling Pathway
Ryan McDaniell, Daniel M. Warthen, Pedro A. Sanchez-Lara, Athma Pai, Ian D. Krantz, David A. Piccoli, and Nancy B. Spinner

174 Expression of *GJB2* and *GJB6* Is Reduced in a Novel *DFNB1* Allele
Ellen Wilch, Mei Zhu, Kirk B. Burkhart, Martha Regier, Jill L. Elfenbein, Rachel A. Fisher, and Karen H. Friderici

LETTERS TO THE EDITOR

180 Single-Nucleotide Polymorphism *rs498055* on Chromosome 10q24 Is Not Associated with Alzheimer Disease in Two Independent Family Samples
Lars Bertram, Monica Hsiao, Christoph Lange, Deborah Blacker, and Rudolph E. Tanzi

183 Reply to Bertram et al.
Andrew Grupe, Yonghong Li, Charles Rowland, Tony Hinrichs, Peter Holmans, John Hardy, Michael O'Donovan, Michael J. Owen, Julie Williams, and Alison Goate

184 The *SERPINE2* Gene and Chronic Obstructive Pulmonary Disease
Sally Chappell, Leslie Daly, Kevin Morgan, Tamar Guetta Baranes, Josep Roca, Roberto Rabinovich, Ann Millar, Seamas C. Donnelly, Vera Keatings, William MacNee, Jan Stolk, Pieter S. Hiemstra, Massimo Miniati, Simonetta Monti, Clare M. O'Connor, and Noor Kalsheker

186 **Reply to Chappell et al.**
Dawn L. DeMeo and Edwin K. Silverman

SOCIETY NEWS

188 **The Advocates Training Partnership Program**
Joann A. Boughman

ANNOUNCEMENTS

189 **Employment Opportunities; Meetings; Symposia**

August 2006

i **This Month in the *Journal***
Robin E. Williamson

PERSPECTIVES IN HUMAN GENETICS

193 **Introduction**
Arno G. Motulsky

194 **To Reveal the Genomes**
Robert L. Sinsheimer

ARTICLES

197 **The Alexander Disease–Causing Glial Fibrillary Acidic Protein Mutant, R416W, Accumulates into Rosenthal Fibers by a Pathway That Involves Filament Aggregation and the Association of αB-Crystallin and HSP27**
Ming Der Perng, Mu Su, Shu Fang Wen, Rong Li, Terry Gibbon, Alan R. Prescott, Michael Brenner, and Roy A. Quinlan

214 **Evidence That Translation Reinitiation Leads to a Partially Functional Menkes Protein Containing Two Copper-Binding Sites**
Marianne Paulsen, Connie Lund, Zarqa Akram, Jakob R. Winther, Nina Horn, and Lisbeth Birk Møller

230 **A Geographically Explicit Genetic Model of Worldwide Human-Settlement History**
Hua Liu, Franck Prugnolle, Andrea Manica, and François Balloux

238 **Accommodating Chromosome Inversions in Linkage Analysis**
Gary K. Chen, Erin Slaten, Roel A. Ophoff, and Kenneth Lange

252 **Genomewide Association Analysis of Human Narcolepsy and a New Resistance Gene**
Minae Kawashima, Gen Tamiya, Akira Oka, Hirohiko Hohjoh, Takeo Juji, Takashi Ebisawa, Yutaka Honda, Hidetoshi Inoko, and Katsushi Tokunaga

264 **Epigenetic Regulation of Human γ-Glutamyl Hydrolase Activity in Acute Lymphoblastic Leukemia Cells**
Qing Cheng, Cheng Cheng, Kristine R. Crews, Raul C. Ribeiro, Ching-Hon Pui, Mary V. Relling, and William E. Evans

275 **Linkage Disequilibrium and Heritability of Copy-Number Polymorphisms within Duplicated Regions of the Human Genome**
Devin P. Locke, Andrew J. Sharp, Steven A. McCarroll, Sean D. McGrath, Tera L. Newman, Ze Cheng, Stuart Schwartz, Donna G. Albertson, Daniel Pinkel, David M. Altshuler, and Evan E. Eichler

291 Mutation in *TRMU* Related to Transfer RNA Modification Modulates the Phenotypic Expression of the Deafness-Associated Mitochondrial 12S Ribosomal RNA Mutations
Min-Xin Guan, Qingfeng Yan, Xiaoming Li, Yelena Bykhovskaya, Jaime Gallo-Teran, Petr Hajek, Noriko Umeda, Hui Zhao, Gema Garrido, Emebet Mengesha, Tsutomu Suzuki, Ignacio del Castillo, Jennifer Lynne Peters, Ronghua Li, Yaping Qian, Xinjian Wang, Ester Ballana, Mordechai Shohat, Jianxin Lu, Xavier Estivill, Kimitsuna Watanabe, and Nathan Fischel-Ghodsian

303 Escobar Syndrome Is a Prenatal Myasthenia Caused by Disruption of the Acetylcholine Receptor Fetal γ Subunit
Katrin Hoffmann, Juliane S. Müller, Sigmar Stricker, Andre Megarbane, Anna Rajab, Tom H. Lindner, Monika Cohen, Eliane Chouery, Lynn Adaimy, Ismat Ghanem, Valerie Delague, Eugen Boltshauser, Beril Talim, Rita Horvath, Peter N. Robinson, Hanns Lochmüller, Christoph Hübner, and Stefan Mundlos

313 A Coalescence-Guided Hierarchical Bayesian Method for Haplotype Inference
Yu Zhang, Tianhua Niu, and Jun S. Liu

323 Linkage Analysis Using Co-Phenotypes in the BRIGHT Study Reveals Novel Potential Susceptibility Loci for Hypertension
Chris Wallace, Ming-Zhan Xue, Stephen J. Newhouse, Ana Carolina B. Marçano, Abiodun K. Onipinla, Beverley Burke, Johannie Gungadoo, Richard J. Dobson, Morris Brown, John M. Connell, Anna Dominiczak, G. Mark Lathrop, John Webster, Martin Farrall, Charles Mein, Nilesh J. Samani, Mark J. Caulfield, David G. Clayton, and Patricia B. Munroe

332 Submicroscopic Deletion in Patients with Williams-Beuren Syndrome Influences Expression Levels of the Nonhemizygous Flanking Genes
Giuseppe Merla, Cédric Howald, Charlotte N. Henrichsen, Robert Lyle, Carine Wyss, Marie-Thérèse Zabot, Stylianos E. Antonarakis, and Alexandre Reymond

342 Increased Sensitivity of the Neuronal Nicotinic Receptor α2 Subunit Causes Familial Epilepsy with Nocturnal Wandering and Ictal Fear
Paolo Aridon, Carla Marini, Chiara Di Resta, Elisa Brilli, Maurizio De Fusco, Fausta Politi, Elena Parrini, Irene Manfredi, Tiziana Pisano, Dario Pruna, Giulia Curia, Carlo Cianchetti, Massimo Pasqualetti, Andrea Becchetti, Renzo Guerrini, and Giorgio Casari

REPORTS

351 ZFYVE27 (SPG33), a Novel Spastin-Binding Protein, Is Mutated in Hereditary Spastic Paraplegia
Ashraf U. Mannan, Philip Krawen, Simone M. Sauter, Johann Boehm, Agnieszka Chronowska, Walter Paulus, Juergen Neesen, and Wolfgang Engel

358 Homozygous Nonsense Mutation in the *FOXE3* Gene as a Cause of Congenital Primary Aphakia in Humans
Sophie Valleix, Florence Niel, Brigitte Nedelec, Marie-Paule Algros, Claire Schwartz, Bernard Delbosc, Marc Delpech, and Bernadette Kantelip

365 Mutations in the Novel Mitochondrial Protein REEP1 Cause Hereditary Spastic Paraplegia Type 31
Stephan Züchner, Gaofeng Wang, Khanh-Nhat Tran-Viet, Martha A. Nance, Perry C. Gaskell, Jeffery M. Vance, Allison E. Ashley-Koch, and Margaret A. Pericak-Vance

370 Loss-of-Function Mutations in *Euchromatin Histone Methyl Transferase 1* (*EHMT1*) Cause the 9q34 Subtelomeric Deletion Syndrome
Tjitske Kleefstra, Han G. Brunner, Jeanne Amiel, Astrid R. Oudakker, Willy M. Nillesen, Alex Magee, David Geneviève, Valérie Cormier-Daire, Hilde van Esch, Jean-Pierre Fryns, Ben C. J. Hamel, Erik A. Sistermans, Bert B. A. de Vries, and Hans van Bokhoven

378 Linkage of Monogenic Infantile Hypertrophic Pyloric Stenosis to Chromosome 16p12-p13 and Evidence for Genetic Heterogeneity
Francesca Capon, Ashley Reece, Rathi Ravindrarajah, and Eddie Chung

383 Sequencing of the Reannotated *LMNB2* Gene Reveals Novel Mutations in Patients with Acquired Partial Lipodystrophy
Robert A. Hegele, Henian Cao, Dora M. Liu, Gary A. Costain, Valentine Charlton-Menys, N. Wilson Rodger, and Paul N. Durrington

390 **Mutations in the Embryonal Subunit of the Acetylcholine Receptor (*CHRNG*) Cause Lethal and Escobar Variants of Multiple Pterygium Syndrome**
Neil V. Morgan, Louise A. Brueton, Phillip Cox, Marie T. Greally, John Tolmie, Shanaz Pasha, Irene A. Aligianis, Hans van Bokhoven, Tamas Marton, Lihadh Al-Gazali, Jenny E. V. Morton, Christine Oley, Colin A. Johnson, Richard C. Trembath, Han G. Brunner, and Eamonn R. Maher

396 **The Affected-/Discordant-Sib-Pair Design Can Guarantee Validity of Multipoint Model-Free Linkage Analysis of Incomplete Pedigrees When There Is Marker-Marker Disequilibrium**
Chao Xing, Ritwik Sinha, Guan Xing, Qing Lu, and Robert C. Elston

402 **Mutations in *WNT7A* Cause a Range of Limb Malformations, Including Fuhrmann Syndrome and Al-Awadi/Raas-Rothschild/Schinzel Phocomelia Syndrome**
C. G. Woods, S. Stricker, P. Seemann, R. Stern, J. Cox, E. Sherridan, E. Roberts, K. Springell, S. Scott, G. Karbani, S. M. Sharif, C. Toomes, J. Bond, D. Kumar, L. Al-Gazali, and S. Mundlos

LETTERS TO THE EDITOR

409 **Characterization of *SHOX* Deletions in Léri-Weill Dyschondrosteosis (LWD) Reveals Genetic Heterogeneity and No Recombination Hotspots**
Sara Benito-Sanz, Darya Gorbenko del Blanco, Céline Huber, N. Simon Thomas, Miriam Aza-Carmona, David Bunyan, Vivienne Maloney, Jesús Argente, Valérie Cormier-Daire, Ángel Campos-Barros, and Karen E. Heath

414 **Reply to Benito-Sanz et al.**
Andrew R. Zinn, Purita Ramos, and Judith L. Ross

SOCIETY NEWS

415 **ASHG Honors Its Own**
Joann A. Boughman

ANNOUNCEMENTS

416 **Employment Opportunities; Meetings; Symposia**

September 2006

i **This Month in the *Journal***
Robin E. Williamson

2005 WILLIAM ALLAN AWARD ADDRESS

419 **Introductory Speech for Francis S. Collins**
Leon E. Rosenberg

421 **No Longer Just Looking under the Lamppost**
Francis S. Collins

2005 CURT STERN AWARD ADDRESS

427 **Introductory Speech for Patrick O. Brown**
Evan Eichler

429 **Exploring along a Crooked Path**
Patrick O. Brown

PERSPECTIVES IN HUMAN GENETICS

434 Medical Genetics in the Genomic Medicine of the 21st Century
Charles J. Epstein

ARTICLES

439 A Chromosome 8 Gene-Cluster Polymorphism with Low Human Beta-Defensin 2 Gene Copy Number Predisposes to Crohn Disease of the Colon
Klaus Fellermann, Daniel E. Stange, Elke Schaeffeler, Hartmut Schmalzl, Jan Wehkamp, Charles L. Bevins, Walter Reinisch, Alexander Teml, Matthias Schwab, Peter Lichter, Bernhard Radlwimmer, and Eduard F. Stange

449 A New Autosomal Recessive Form of Stickler Syndrome Is Caused by a Mutation in the *COL9A1* Gene
Guy Van Camp, Rikkert L. Snoeckx, Nele Hilgert, Jenneke van den Ende, Hisakumi Fukuoka, Michio Wagatsuma, Hiroaki Suzuki, R. M. Erica Smets, Filip Vanhoenacker, Frank Declau, Paul Van De Heyning, and Shin-ichi Usami

458 The Value of Molecular Haplotypes in a Family-Based Linkage Study
E. M. Gillanders, J. V. Pearson, A. J. M. Sorant, J. M. Trent, J. R. O'Connell, and J. E. Bailey-Wilson

469 Mitochondrial DNA–Deletion Mutations Accumulate Intracellularly to Detrimental Levels in Aged Human Skeletal Muscle Fibers
Entela Bua, Jody Johnson, Allen Herbst, Bridget Delong, Debbie McKenzie, Shahriar Salamat, and Judd M. Aiken

481 A Fast Method for Computing High-Significance Disease Association in Large Population-Based Studies
Gad Kimmel and Ron Shamir

493 X Chromosome–Inactivation Patterns of 1,005 Phenotypically Unaffected Females
James M. Amos-Landgraf, Amy Cottle, Robert M. Plenge, Mike Friez, Charles E. Schwartz, John Longshore, and Huntington F. Willard

500 Oligonucleotide Microarray Analysis of Genomic Imbalance in Children with Mental Retardation
J. M. Friedman, Ágnes Baross, Allen D. Delaney, Adrian Ally, Laura Arbour, Jennifer Asano, Dione K. Bailey, Sarah Barber, Patricia Birch, Mabel Brown-John, Manqiu Cao, Susanna Chan, David L. Charest, Noushin Farnoud, Nicole Fernandes, Stephane Flibotte, Anne Go, William T. Gibson, Robert A. Holt, Steven J. M. Jones, Giulia C. Kennedy, Martin Krzywinski, Sylvie Langlois, Haiyan I. Li, Barbara C. McGillivray, Tarun Nayar, Trevor J. Pugh, Evica Rajcan-Separovic, Jacqueline E. Schein, Angelique Schnerch, Asim Siddiqui, Margot I. Van Allen, Gary Wilson, Siu-Li Yong, Farah Zahir, Patrice Eydoux, and Marco A. Marra

514 Molecular Characterization of Loss-of-Function Mutations in *PCSK9* and Identification of a Compound Heterozygote
Zhenze Zhao, Yetsa Tuakli-Wosornu, Thomas A. Lagace, Lisa Kinch, Nicholas V. Grishin, Jay D. Horton, Jonathan C. Cohen, and Helen H. Hobbs

524 Meiotic Recombination and Spatial Proximity in the Etiology of the Recurrent t(11;22)
Terry Ashley, Ann P. Gaeth, Hidehito Inagaki, Allen Seftel, Maimon M. Cohen, Lorinda K. Anderson, Hiroki Kurahashi, and Beverly S. Emanuel

REPORTS

539 An Expectation-Maximization Algorithm for the Analysis of Allelic Expression Imbalance
M. D. Teare, J. Heighway, and M. F. Santibáñez Koref

544 Navajo Neurohepatopathy Is Caused by a Mutation in the *MPV17* Gene
Charalampos L. Karadimas, Tuan H. Vu, Stephen A. Holve, Penelope Chronopoulou, Catarina Quinzii, Stanley D. Johnsen, Janice Kurth, Elizabeth Eggers, Lluis Palenzuela, Kurenai Tanji, Eduardo Bonilla, Darryl C. De Vivo, Salvatore DiMauro, and Michio Hirano

549 ***UBE2A,* Which Encodes a Ubiquitin-Conjugating Enzyme, Is Mutated in a Novel X-Linked Mental Retardation Syndrome**
Rafaella M. P. Nascimento, Paulo A. Otto, Arjan P. M. de Brouwer, and Angela M. Vianna-Morgante

556 **Mutations in the *CEP290* (*NPHP6*) Gene Are a Frequent Cause of Leber Congenital Amaurosis**
Anneke I. den Hollander, Robert K. Koenekoop, Suzanne Yzer, Irma Lopez, Maarten L. Arends, Krysta E. J. Voesenek, Marijke N. Zonneveld, Tim M. Strom, Thomas Meitinger, Han G. Brunner, Carel B. Hoyng, L. Ingeborgh van den Born, Klaus Rohrschneider, and Frans P. M. Cremers

562 **Peters Plus Syndrome Is Caused by Mutations in *B3GALTL,* a Putative Glycosyltransferase**
Saskia A. J. Lesnik Oberstein, Marjolein Kriek, Stefan J. White, Margot E. Kalf, Karoly Szuhai, Johan T. den Dunnen, Martijn H. Breuning, and Raoul C. M. Hennekam

567 **Monte Carlo Pedigree Disequilibrium Test for Markers on the X Chromosome**
Jie Ding, Shili Lin, and Yang Liu

574 **Mutations in the Gene *KCNV2* Encoding a Voltage-Gated Potassium Channel Subunit Cause "Cone Dystrophy with Supernormal Rod Electroretinogram" in Humans**
Huimin Wu, Jill A. Cowing, Michel Michaelides, Susan E. Wilkie, Glen Jeffery, Sharon A. Jenkins, Viktoria Mester, Alan C. Bird, Anthony G. Robson, Graham E. Holder, Anthony T. Moore, David M. Hunt, and Andrew R. Webster

580 **Genomewide Scan for Nonsyndromic Cleft Lip and Palate in Multigenerational Indian Families Reveals Significant Evidence of Linkage at 13q33.1-34**
Uppala Radhakrishna, Uppala Ratnamala, Mathew Gaines, Soraya Beiraghi, David Hutchings, Jeffrey Golla, Syed A. Husain, Prakash S. Gambhir, Jayesh J. Sheth, Frenny J. Sheth, Ghati K. Chetan, Mohammed Naveed, Jitendra V. Solanki, Uday C. Patel, Dilipkumar C. Master, Rafiq Memon, Gregory S. Antonarakis, Stylianos E. Antonarakis, and Swapan K. Nath

586 **Schizophrenia and Oxidative Stress: Glutamate Cysteine Ligase Modifier as a Susceptibility Gene**
Mirjana Tosic, Jurg Ott, Sandra Barral, Pierre Bovet, Patricia Deppen, Fulvia Gheorghita, Marie-Louise Matthey, Josef Parnas, Martin Preisig, Michael Saraga, Alessandra Solida, Sally Timm, August G. Wang, Thomas Werge, Michel Cuénod, and Kim Quang Do

LETTERS TO THE EDITOR

593 **Deletion of *PTEN* and *BMPR1A* on Chromosome 10q23 Is Not Always Associated with Juvenile Polyposis of Infancy**
Leonardo Salviati, Mariagrazia Patricelli, Graziella Guariso, Giacomo Carlo Sturniolo, Rita Alaggio, Franca Bernardi, Orsetta Zuffardi, and Romano Tenconi

596 **Reply to Salviati et al.**
Damien Sanlaville, Capucine Delnatte, Jean-François Mougenot, Joris-Robert Vermeesch, Claude Houdayer, Marie-Christine de Blois, David Genevieve, Olivier Goulet, Jean-Pierre Fryns, Francis Jaubert, Michel Vekemans, Stanislas Lyonnet, Serge Romana, Charis Eng, and Dominique Stoppa-Lyonnet

SOCIETY NEWS

598 **The Annual Meeting: From Conception to Birth**
Joann A. Boughman

ANNOUNCEMENTS

600 **Employment Opportunities; Meetings; Conferences**

October 2006

i **This Month in the *Journal***
Robin E. Williamson

PERSPECTIVES IN HUMAN GENETICS

603 **Origins of the Human Genome Project: Why Sequence the Human Genome When 96% of It Is Junk?**
Paul Berg

ARTICLES

606 **Reduction of Sample Heterogeneity through Use of Population Substructure: An Example from a Population of African American Families with Sarcoidosis**
Cheryl L. Thompson, Benjamin A. Rybicki, Michael C. Iannuzzi, Robert C. Elston, Sudha K. Iyengar, Courtney Gray-McGuire, and the Sarcoidosis Genetic Analysis Consortium (SAGA)

614 **Genetic Mapping at 3-Kilobase Resolution Reveals Inositol 1,4,5-Triphosphate Receptor 3 as a Risk Factor for Type 1 Diabetes in Sweden**
Jared C. Roach, Kerry Deutsch, Sarah Li, Andrew F. Siegel, Lynn M. Bekris, Derek C. Einhaus, Colleen M. Sheridan, Gustavo Glusman, Leroy Hood, Åke Lernmark, and Marta Janer, on behalf of the Swedish Childhood Diabetes Study Group and the Diabetes Incidence in Sweden Study Group

628 **A New Method for Detecting Human Recombination Hotspots and Its Applications to the HapMap ENCODE Data**
Jun Li, Michael Q. Zhang, and Xuegong Zhang

640 **A Genomewide Single-Nucleotide–Polymorphism Panel with High Ancestry Information for African American Admixture Mapping**
Chao Tian, David A. Hinds, Russell Shigeta, Rick Kittles, Dennis G. Ballinger, and Michael F. Seldin

650 **Mutations in *SLC34A2* Cause Pulmonary Alveolar Microlithiasis and Are Possibly Associated with Testicular Microlithiasis**
Ayse Corut, Abdurrahman Senyigit, Sibel Aylin Ugur, Sedat Altin, Ugur Ozcelik, Haluk Calisir, Zeki Yildirim, Ayhan Gocmen, and Aslihan Tolun

657 **Mutations in *CABP4,* the Gene Encoding the Ca^{2+}-Binding Protein 4, Cause Autosomal Recessive Night Blindness**
Christina Zeitz, Barbara Kloeckener-Gruissem, Ursula Forster, Susanne Kohl, István Magyar, Bernd Wissinger, Gábor Mátyás, François-Xavier Borruat, Daniel F. Schorderet, Eberhart Zrenner, Francis L. Munier, and Wolfgang Berger

668 ***Satb2* Haploinsufficiency Phenocopies 2q32-q33 Deletions, whereas Loss Suggests a Fundamental Role in the Coordination of Jaw Development**
Olga Britanova, Michael J. Depew, Manuela Schwark, Bethan L. Thomas, Isabelle Miletich, Paul Sharpe, and Victor Tarabykin

679 **A Flexible Bayesian Framework for Modeling Haplotype Association with Disease, Allowing for Dominance Effects of the Underlying Causative Variants**
Andrew P. Morris

REPORTS

695 **Genomewide Linkage Screen for Waldenström Macroglobulinemia Susceptibility Loci in High-Risk Families**
Mary L. McMaster, Lynn R. Goldin, Yan Bai, Monica Ter-Minassian, Stefan Boehringer, Therese R. Giambarresi, Linda G. Vasquez, and Margaret A. Tucker

702 *CRYBA4,* a Novel Human Cataract Gene, Is Also Involved in Microphthalmia
Gail Billingsley, Sathiyavedu T. Santhiya, Andrew D. Paterson, Koji Ogata, Shoshana Wodak, S. Mohsen Hosseini, Shyam Manohar Manisastry, Perumalsamy Vijayalakshmi, Pudhiya Mundyat Gopinath, Jochen Graw, and Elise Héon

710 HLA-B Maternal-Fetal Genotype Matching Increases Risk of Schizophrenia
Christina G. S. Palmer, Hsin-Ju Hsieh, Elaine F. Reed, Jouko Lonnqvist, Leena Peltonen, J. Arthur Woodward, and Janet S. Sinsheimer

716 Linkage Analysis Identifies a Novel Locus for Restless Legs Syndrome on Chromosome 2q in a South Tyrolean Population Isolate
Irene Pichler, Fabio Marroni, Claudia Beu Volpato, James F. Gusella, Christine Klein, Giorgio Casari, Alessandro De Grandi, and Peter P. Pramstaller

724 Naegeli-Franceschetti-Jadassohn Syndrome and Dermatopathia Pigmentosa Reticularis: Two Allelic Ectodermal Dysplasias Caused by Dominant Mutations in *KRT14*
Jennie Lugassy, Peter Itin, Akemi Ishida-Yamamoto, Kristen Holland, Susan Huson, Dan Geiger, Hans Christian Hennies, Margarita Indelman, Dani Bercovich, Jouni Uitto, Reuven Bergman, John A. McGrath, Gabriele Richard, and Eli Sprecher

731 Familial Chilblain Lupus, a Monogenic Form of Cutaneous Lupus Erythematosus, Maps to Chromosome 3p
Min Ae Lee-Kirsch, Maolian Gong, Herbert Schulz, Franz Rüschendorf, Annette Stein, Christiane Pfeiffer, Annalisa Ballarini, Manfred Gahr, Norbert Hubner, and Maja Linné

738 Identification of the Gene Encoding the Enzyme Deficient in Mucopolysaccharidosis IIIC (Sanfilippo Disease Type C)
Xiaolian Fan, Huiwen Zhang, Sunqu Zhang, Richard D. Bagshaw, Michael B. Tropak, John W. Callahan, and Don J. Mahuran

745 A Genomewide Search Finds Major Susceptibility Loci for Nicotine Dependence on Chromosome 10 in African Americans
Ming D. Li, Thomas J. Payne, Jennie Z. Ma, Xiang-Yang Lou, Dong Zhang, Randolph T. Dupont, Karen M. Crews, Grant Somes, Nancy J. Williams, and Robert C. Elston

752 *LRRK2* G2019S in Families with Parkinson Disease Who Originated from Europe and the Middle East: Evidence of Two Distinct Founding Events Beginning Two Millennia Ago
Cyrus P. Zabetian, Carolyn M. Hutter, Dora Yearout, Alexis N. Lopez, Stewart A. Factor, Alida Griffith, Berta C. Leis, Thomas D. Bird, John G. Nutt, Donald S. Higgins, John W. Roberts, Denise M. Kay, Karen L. Edwards, Ali Samii, and Haydeh Payami

759 A Deleterious Mutation in *SAMD9* Causes Normophosphatemic Familial Tumoral Calcinosis
Orit Topaz, Margarita Indelman, Ilana Chefetz, Dan Geiger, Aryeh Metzker, Yoram Altschuler, Mordechai Choder, Dani Bercovich, Jouni Uitto, Reuven Bergman, Gabriele Richard, and Eli Sprecher

LETTERS TO THE EDITOR

765 Parent-of-Origin Effect and Risk for Attention-Deficit/Hyperactivity Disorder: Balancing the Evidence against Bias and Chance Findings
Ridha Joober and Sarojini Sengupta

766 Reply to Joober and Sengupta
Ricardo Segurado, Ziarih Hawi, and Michael Gill

768 Colorectal Cancer Risk in Monoallelic Carriers of *MYH* Variants
Emily L. Webb, Mathew F. Rudd, and Richard S. Houlston

771 Reply to Webb et al.
Susan M. Farrington, Albert Tenesa, Rebecca Barnetson, Alice Wiltshire, James Prendergast, Mary Porteous, Harry Campbell, and Malcolm G. Dunlop

SOCIETY NEWS

773 **ASHG Takes Steps to Impact Undergraduate Genetics Education**
Kenna R. Mills Shaw, Ph.D.

ANNOUNCEMENTS

774 **Employment Opportunities; Meetings; Conference; DNA Samples; Coloquium**

November 2006

i **This Month in the *Journal***
Robin E. Williamson

ARTICLES

779 **Nucleotide-Resolution Mapping of Topoisomerase-Mediated and Apoptotic DNA Strand Scissions at or near an *MLL* Translocation Hotspot**
Marc-Edouard Mirault, Patrick Boucher, and Alain Tremblay

792 **Generalized Genomic Distance–Based Regression Methodology for Multilocus Association Analysis**
Jennifer Wessel and Nicholas J. Schork

807 **Mutations in *TMEM76* Cause Mucopolysaccharidosis IIIC (Sanfilippo C Syndrome)**
Martin Hřebíček, Lenka Mrázová, Volkan Seyrantepe, Stéphanie Durand, Nicole M. Roslin, Lenka Nosková, Hana Hartmannová, Robert Ivánek, Alena Čížková, Helena Poupětová, Jakub Sikora, Jana Uřinovská, Viktor Stránecký, Jiří Zeman, Pierre Lepage, David Roquis, Andrei Verner, Jérôme Ausseil, Clare E. Beesley, Irène Maire, Ben J. H. M. Poorthuis, Jiddeke van de Kamp, Otto P. van Diggelen, Ron A. Wevers, Thomas J. Hudson, T. Mary Fujiwara, Jacek Majewski, Kenneth Morgan, Stanislav Kmoch, and Alexey V. Pshezhetsky

820 **Molecular Population Genetics of the Gene Encoding the Human Fertilization Protein Zonadhesin Reveals Rapid Adaptive Evolution**
Joe Gasper and Willie J. Swanson

831 **Test for Interaction between Two Unlinked Loci**
Jinying Zhao, Li Jin, and Momiao Xiong

846 **Multipoint Linkage Analysis with Many Multiallelic or Dense Diallelic Markers: Markov Chain–Monte Carlo Provides Practical Approaches for Genome Scans on General Pedigrees**
Ellen M. Wijsman, Joseph H. Rothstein, and Elizabeth A. Thompson

859 **Epigenetic Allele Silencing Unveils Recessive *RYR1* Mutations in Core Myopathies**
Haiyan Zhou, Martin Brockington, Heinz Jungbluth, David Monk, Philip Stanier, Caroline A. Sewry, Gudrun E. Moore, and Francesco Muntoni

869 **Distinct Clinical Phenotypes Associated with a Mutation in the Mitochondrial Translation Elongation Factor EFTs**
Jan A. M. Smeitink, Orly Elpeleg, Hana Antonicka, Heleen Diepstra, Ann Saada, Paulien Smits, Florin Sasarman, Gert Vriend, Jasmine Jacob-Hirsch, Avraham Shaag, Gideon Rechavi, Brigitte Welling, Jürgen Horst, Richard J. Rodenburg, Bert van den Heuvel, and Eric A. Shoubridge

878 **Mutations of the Mitochondrial Holocytochrome *c*–Type Synthase in X-Linked Dominant Microphthalmia with Linear Skin Defects Syndrome**
Isabella Wimplinger, Manuela Morleo, Georg Rosenberger, Daniela Iaconis, Ulrike Orth, Peter Meinecke, Israela Lerer, Andrea Ballabio, Andreas Gal, Brunella Franco, and Kerstin Kutsche

890 A Chromosomal Rearrangement Hotspot Can Be Identified from Population Genetic Variation and Is Coincident with a Hotspot for Allelic Recombination
Sarah J. Lindsay, Mehrdad Khajavi, James R. Lupski, and Matthew E. Hurles

903 Analysis of High-Resolution HapMap of *DTNBP1* (Dysbindin) Suggests No Consistency between Reported Common Variant Associations and Schizophrenia
Mousumi Mutsuddi, Derek W. Morris, Skye G. Waggoner, Mark J. Daly, Edward M. Scolnick, and Pamela Sklar

910 Mapping Trait Loci by Use of Inferred Ancestral Recombination Graphs
Mark J. Minichiello and Richard Durbin

923 Mutation-Positive and Mutation-Negative Patients with Cowden and Bannayan-Riley-Ruvalcaba Syndromes Associated with Distinct 10q Haplotypes
Marcus G. Pezzolesi, Yan Li, Xiao-Ping Zhou, Robert Pilarski, Lei Shen, and Charis Eng

REPORTS

935 A Novel Mutation in *FGFR3* Causes Camptodactyly, Tall Stature, and Hearing Loss (CATSHL) Syndrome
Reha M. Toydemir, Anna E. Brassington, Pınar Bayrak-Toydemir, Patrycja A. Krakowiak, Lynn B. Jorde, Frank G. Whitby, Nicola Longo, David H. Viskochil, John C. Carey, and Michael J. Bamshad

942 *PLA2G6* Mutation Underlies Infantile Neuroaxonal Dystrophy
Shareef Khateeb, Hagit Flusser, Rivka Ofir, Ilan Shelef, Ginat Narkis, Gideon Vardi, Zamir Shorer, Rachel Levy, Aharon Galil, Khalil Elbedour, and Ohad S. Birk

949 Mutations in the Tight-Junction Gene Claudin 19 (*CLDN19*) Are Associated with Renal Magnesium Wasting, Renal Failure, and Severe Ocular Involvement
Martin Konrad, André Schaller, Dominik Seelow, Amit V. Pandey, Siegfried Waldegger, Annegret Lesslauer, Helga Vitzthum, Yoshiro Suzuki, John M. Luk, Christian Becker, Karl P. Schlingmann, Marcel Schmid, Juan Rodriguez-Soriano, Gema Ariceta, Francisco Cano, Ricardo Enriquez, Harald Jüppner, Sevcan A. Bakkaloglu, Matthias A. Hediger, Sabina Gallati, Stephan C. F. Neuhauss, Peter Nürnberg, and Stefanie Weber

958 Detecting Disease-Causing Mutations in the Human Genome by Haplotype Matching
David H. Spencer, Kerry L. Bubb, and Maynard V. Olson

965 Absence of a Paternally Inherited *FOXP2* Gene in Developmental Verbal Dyspraxia
Lars Feuk, Aino Kalervo, Marita Lipsanen-Nyman, Jennifer Skaug, Kazuhiko Nakabayashi, Brenda Finucane, Danielle Hartung, Micheil Innes, Batsheva Kerem, Małgorzata J. Nowaczyk, Joseph Rivlin, Wendy Roberts, Lili Senman, Anne Summers, Peter Szatmari, Virginia Wong, John B. Vincent, Susan Zeesman, Lucy R. Osborne, Janis Oram Cardy, Juha Kere, Stephen W. Scherer, and Katariina Hannula-Jouppi

973 Mutation in the Auxiliary Calcium-Channel Subunit *CACNA2D4* Causes Autosomal Recessive Cone Dystrophy
Katharina Agnes Wycisk, Christina Zeitz, Silke Feil, Mariana Wittmer, Ursula Forster, John Neidhardt, Bernd Wissinger, Eberhart Zrenner, Robert Wilke, Susanne Kohl, and Wolfgang Berger

978 Arrhythmogenic Right Ventricular Dysplasia/Cardiomyopathy Associated with Mutations in the Desmosomal Gene Desmocollin-2
Petros Syrris, Deirdre Ward, Alison Evans, Angeliki Asimaki, Estelle Gandjbakhch, Srijita Sen-Chowdhry, and William J. McKenna

ERRATUM

985 Lesnik Oberstein et al. (September 2006 *79*:562–566)

SOCIETY NEWS

986 What is FASEB, Anyway?
Joann A. Boughman, Ph.D.

ANNOUNCEMENTS

987 **Employment Opportunities; Meetings; Conference; Colloquium**

December 2006

i **This Month in the *Journal***
Robin E. Williamson

ARTICLES

991 **A Common Haplotype of the Glucokinase Gene Alters Fasting Glucose and Birth Weight: Association in Six Studies and Population-Genetics Analyses**
Michael N. Weedon, Vanessa J. Clark, Yudong Qian, Yoav Ben-Shlomo, Nicholas Timpson, Shah Ebrahim, Debbie A. Lawlor, Marcus E. Pembrey, Susan Ring, Terry J. Wilkin, Linda D. Voss, Alison N. Jeffery, Brad Metcalf, Luigi Ferrucci, Anna Maria Corsi, Anna Murray, David Melzer, Bridget Knight, Bev Shields, George Davey Smith, Andrew T. Hattersley, Anna Di Rienzo, and Tim M. Frayling

1002 **Powerful Multilocus Tests of Genetic Association in the Presence of Gene-Gene and Gene-Environment Interactions**
Nilanjan Chatterjee, Zeynep Kalaylioglu, Roxana Moslehi, Ulrike Peters, and Sholom Wacholder

1017 **Biochemical and Genetic Analysis of *ANK* in Arthritis and Bone Disease**
Kyle A. Gurley, Richard J. Reimer, and David M. Kingsley

1030 **Mutations of Presenilin Genes in Dilated Cardiomyopathy and Heart Failure**
Duanxiang Li, Sharie B. Parks, Jessica D. Kushner, Deirdre Nauman, Donna Burgess, Susan Ludwigsen, Julie Partain, Randal R. Nixon, Charles N. Allen, Robert P. Irwin, Petra M. Jakobs, Michael Litt, and Ray E. Hershberger

1040 **Tricellulin Is a Tight-Junction Protein Necessary for Hearing**
Saima Riazuddin, Zubair M. Ahmed, Alan S. Fanning, Ayala Lagziel, Shin-ichiro Kitajiri, Khushnooda Ramzan, Shaheen N. Khan, Parna Chattaraj, Penelope L. Friedman, James M. Anderson, Inna A. Belyantseva, Andrew Forge, Sheikh Riazuddin, and Thomas B. Friedman

1052 **HLA and Genomewide Allele Sharing in Dizygotic Twins**
Grant W. Montgomery, Gu Zhu, Jouke Jan Hottenga, David L. Duffy, Andrew C. Heath, Dorret I. Boomsma, Nicholas G. Martin, and Peter M. Visscher

1059 **Premature Truncation of a Novel Protein, RD3, Exhibiting Subnuclear Localization Is Associated with Retinal Degeneration**
James S. Friedman, Bo Chang, Chitra Kannabiran, Christina Chakarova, Hardeep P. Singh, Subhadra Jalali, Norman L. Hawes, Kari Branham, Mohammad Othman, Elena Filippova, Debra A. Thompson, Andrew R. Webster, Sten Andréasson, Samuel G. Jacobson, Shomi S. Bhattacharya, John R. Heckenlively, and Anand Swaroop

1071 **Exact Tests of Hardy-Weinberg Equilibrium and Homogeneity of Disequilibrium across Strata**
Daniel J. Schaid, Anthony J. Batzler, Gregory D. Jenkins, and Michelle A. T. Hildebrandt

REPORTS

1081 **Mutant Desmocollin-2 Causes Arrhythmogenic Right Ventricular Cardiomyopathy**
Arnd Heuser, Eva R. Plovie, Patrick T. Ellinor, Katja S. Grossmann, Jordan T. Shin, Thomas Wichter, Craig T. Basson, Bruce B. Lerman, Sabine Sasse-Klaassen, Ludwig Thierfelder, Calum A. MacRae, and Brenda Gerull

1089 Human Adaptive Evolution at *Myostatin* (*GDF8*), a Regulator of Muscle Growth
Matthew A. Saunders, Jeffrey M. Good, Elizabeth C. Lawrence, Robert E. Ferrell, Wen-Hsiung Li, and Michael W. Nachman

1098 Increased Activity of Coagulation Factor XII (Hageman Factor) Causes Hereditary Angioedema Type III
Sven Cichon, Ludovic Martin, Hans Christian Hennies, Felicitas Müller, Karen Van Driessche, Anna Karpushova, Wim Stevens, Roberto Colombo, Thomas Renné, Christian Drouet, Konrad Bork, and Markus M. Nöthen

1105 Mutations in the Gene Encoding the Wnt-Signaling Component R-Spondin 4 (RSPO4) Cause Autosomal Recessive Anonychia
C. Bergmann, J. Senderek D. Anhuf, C. T. Thiel, A. B. Ekici, P. Poblete-Gutiérrez, M. van Steensel, D. Seelow, G. Nürnberg, H. H. Schild, P. Nürnberg, A. Reis, J. Frank, and K. Zerres

1110 Ribosomal Protein S24 Gene Is Mutated in Diamond-Blackfan Anemia
Hanna T. Gazda, Agnieszka Grabowska, Lilia B. Merida-Long, Elzbieta Latawiec, Hal E. Schneider, Jeffrey M. Lipton, Adrianna Vlachos, Eva Atsidaftos, Sarah E. Ball, Karen A. Orfali, Edyta Niewiadomska, Lydie Da Costa, Gil Tchernia, Charlotte Niemeyer, Joerg J. Meerpohl, Joachim Stahl, Gerhard Schratt, Bertil Glader, Karen Backer, Carolyn Wong, David G. Nathan, Alan H. Beggs, and Colin A. Sieff

1119 Mutations in the Gene Encoding the Sigma 2 Subunit of the Adaptor Protein 1 Complex, *AP1S2,* Cause X-Linked Mental Retardation
Patrick S. Tarpey, Claire Stevens, Jon Teague, Sarah Edkins, Sarah O'Meara, Tim Avis, Syd Barthorpe, Gemma Buck, Adam Butler, Jennifer Cole, Ed Dicks, Kristian Gray, Kelly Halliday, Rachel Harrison, Katy Hills, Jonathon Hinton, David Jones, Andrew Menzies, Tatiana Mironenko, Janet Perry, Keiran Raine, David Richardson, Rebecca Shepherd, Alexandra Small, Calli Tofts, Jennifer Varian, Sofie West, Sara Widaa, Andy Yates, Rachael Catford, Julia Butler, Uma Mallya, Jenny Moon, Ying Luo, Huw Dorkins, Deborah Thompson, Douglas F. Easton, Richard Wooster, Martin Bobrow, Nancy Carpenter, Richard J. Simensen, Charles E. Schwartz, Roger E. Stevenson, Gillian Turner, Michael Partington, Jozef Gecz, Michael R. Stratton, P. Andrew Futreal, and F. Lucy Raymond

1125 Leigh Syndrome with Nephropathy and CoQ_{10} Deficiency Due to *decaprenyl diphosphate synthase subunit 2* (*PDSS2*) Mutations
Luis Carlos López, Markus Schuelke, Catarina M. Quinzii, Tomotake Kanki, Richard J. T. Rodenburg, Ali Naini, Salvatore DiMauro, and Michio Hirano

1130 Genetic Heterogeneity in Italian Families with IgA Nephropathy: Suggestive Linkage for Two Novel IgA Nephropathy Loci
Luigi Bisceglia, Giuseppina Cerullo, Paola Forabosco, Diletta Domenica Torres, Francesco Scolari, Michele Di Perna, Marina Foramitti, Antonio Amoroso, Sara Bertok, Jürgen Floege, Peter Rene Mertens, Klaus Zerres, Efstathios Alexopoulos, Dimitrios Kirmizis, Mazzucco Ermelinda, Leopoldo Zelante, and Francesco Paolo Schena, on behalf of the European IgAN Consortium

ERRATUM

1135 Oligonucleotide Microarray Analysis of Genomic Imbalance in Children with Mental Retardation
Friedman et al. (September 2006 79:500–513)

SOCIETY NEWS

1136 ASHG Code of Ethics
Joann A. Boughman

EDITORIAL REVIEWERS FOR 2006

1138 Editorial Reviewers for 2006

ANNOUNCEMENTS

1144 **Employment Opportunities; Meetings; Conference; Colloquium**

1147 **Contents of Volume 79**