Stanford

Dennis Wall

Professor of Pediatrics (Clinical Informatics), of Biomedical Data Science and, by courtesy, of Psychiatry and Behavioral Sciences

Peds/Clinical Informatics

CONTACT INFORMATION

- **Administrative Support**

  Harry Henderson - Admin, Wall Lab

  Email dpwall@stanford.edu

Bio

BIO

Dr. Wall runs a lab in Pediatric Innovation focused on developing methods in biomedical informatics to disentangle complex conditions that originate in childhood and perpetuate through the life course, including autism and related developmental delays. For over a decade, first on faculty at Harvard and now at Stanford University, and as healthcare has shifted increasingly to the use of digital technologies for data capture and finer resolutions of genomic scale, Dr. Wall has innovated, adapted and deployed bioinformatic strategies to enable precise and personalized interpretation of high resolution molecular and phenotypic data. Dr. Wall has pioneered the use of machine learning and artificial intelligence for fast, quantitative and mobile detection of neurodevelopmental disorders in children, as well as the use of use of machine learning systems on wearable devices, such as Google Glass, for real-time “exclinical" therapy. These same precision health approaches enable quantitative tracking of progress during treatment throughout an individual’s life enabling big data generation of a type and scale never before possible, and have defined a new paradigm for behavioral detection and therapy that has won Dr. Wall several awards including a spot in the top ten of the World’s top 30 autism researchers. Dr. Wall has acted as science advisor to several biotechnology and pharmaceutical companies, has created and advised on cutting-edge approaches to cloud computing, and has received numerous awards, including the Fred R. Cagle Award for Outstanding Achievement in Biology, the Vice Chancellor's Award for Research, three awards for excellence in teaching, the Harvard Medical School Leadership award, and the Slifka/Ritvo Clinical Innovation in Autism Research Award for outstanding advancements in clinical translation. He completed his PhD at the University of California, Berkeley and a National Science Foundation postdoctoral fellowship in Computational Genetics at Stanford University before joining the faculty at Harvard Medical School.

ACADEMIC APPOINTMENTS

- Professor, Peds/Clinical Informatics
- Professor, Biomedical Data Science
- Professor (By courtesy), Psychiatry and Behavioral Sciences
- Member, Bio-X
- Faculty Affiliate, Institute for Human-Centered Artificial Intelligence (HAI)
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Wu Tsai Neurosciences Institute

PROFESSIONAL EDUCATION

- Fellow, Stanford University , Bioinformatics and Computational Genetics (2003)

- Ph.D., University of California, Berkeley , Integrative Biology (2001)

LINKS

- Wall Lab Website: http://wall-lab.stanford.edu/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Systems biology for design of clinical solutions that detect and treat disease

CLINICAL TRIALS

- Evaluating Efficacy of GuessWhat Mobile App Therapy for Children With Autism, Recruiting
- Examining the Efficacy of a Mobile Therapy for Children With Autism Spectrum Disorder, Not Recruiting
- Investigation of Mechanisms of Action in Superpower Glass, Not Recruiting
- Piloting a Mobile Game for Behavioral Therapy, Not Recruiting

Teaching

COURSES

2023-24

- Biomedical Informatics Student Seminar: BIODS 201, BIOMEDIN 201 (Aut, Win, Spr, Sum)

2022-23

- Biomedical Informatics Student Seminar: BIODS 201, BIOMEDIN 201 (Aut, Win, Spr, Sum)

2021-22

- Biomedical Informatics Student Seminar: BIOMEDIN 201 (Sum)
- Translational Bioinformatics: BIOE 217, BIOMEDIN 217, CS 275, GENE 217 (Win)

2020-21

- Translational Bioinformatics: BIOE 217, BIOMEDIN 217, CS 275, GENE 217 (Win)

STANFORD ADVISEES

Doctoral Dissertation Advisor (AC)

Mohammadmahdi Honarmand, Onur Cezmi Mutlu, Nate Stockham

Master's Program Advisor

Henry Cousins, Camryn Franke

Doctoral (Program)

Rohan Koodli, Minh Nguyen

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biology (School of Humanities and Sciences) (Phd Program)
- Biomedical Informatics (Phd Program)
- Biomedical Informatics (Masters Program)

Publications

PUBLICATIONS

- **Digitally Diagnosing Multiple Developmental Delays Using Crowdsourcing Fused With Machine Learning: Protocol for a Human-in-the-Loop Machine Learning Study.** *JMIR research protocols*
  Jaiswal, A., Kruiper, R., Rasool, A., Nandkeolyar, A., Wall, D. P., Washington, P.
  2024; 13: e52205

- **Localizing unmapped sequences with families to validate the Telomere-to-Telomere assembly and identify new hotspots for genetic diversity.** *Genome research*
  Chrisman, B., He, C., Jung, J. Y., Stockham, N., Paskov, K., Washington, P., Petereit, J., Wall, D. P.
  2023

- **Identifying crossovers and shared genetic material in whole genome sequencing data from families.** *Genome research*
  Paskov, K., Chrisman, B., Stockham, N., Washington, P. Y., Dunlap, K., Jung, J. Y., Wall, D. P.
  2023

- **The contributions of rare inherited and polygenic risk to ASD in multiplex families.** *Proceedings of the National Academy of Sciences of the United States of America*
  Cirnigliaro, M., Chang, T. S., Arteaga, S. A., Pérez-Cano, L., Ruzzo, E. K., Gordon, A., Bicks, L. K., Jung, J. Y., Lowe, J. K., Wall, D. P., Geschwind, D. H.
  2023; 120 (31): e2215632120

- **Topic modeling for multi-omic integration in the human gut microbiome and implications for Autism.** *Scientific reports*
  Tataru, C., Peras, M., Rutherford, E., Dunlap, K., Yin, X., Chrisman, B. S., DeSantis, T. Z., Wall, D. P., Iwai, S., David, M. M.
  2023; 13 (1): 11353

- **Multi-level analysis of the gut-brain axis shows autism spectrum disorder-associated molecular and microbial profiles.** *Nature neuroscience*
  Morton, J. T., Jin, D. M., Mills, R. H., Shao, Y., Rahman, G., McDonald, D., Zhu, Q., Balaban, M., Jiang, Y., Cantrell, K., Gonzalez, A., Carmel, J., Frankiensztajn, et al
  2023

- **A Review of and Roadmap for Data Science and Machine Learning for the Neuropsychiatric Phenotype of Autism.** *Annual review of biomedical data science*
  Washington, P., Wall, D. P.
  2023

- **Racial and Ethnic Disparities in Geographic Access to Autism Resources Across the US.** *JAMA network open*
  Liu, B. M., Paskov, K., Kent, J., McNealis, M., Sutaria, S., Dods, O., Harjadi, C., Stockham, N., Ostrovsky, A., Wall, D. P.
  2023; 6 (1): e2251182

- **Transmission dynamics of human herpesvirus 6A, 6B and 7 from whole genome sequences of families.** *Virology journal*
  Chrisman, B. S., He, C., Jung, J. Y., Stockham, N., Paskov, K., Wall, D. P.
  2022; 19 (1): 225

- **An Introduction to Artificial Intelligence in Developmental and Behavioral Pediatrics.** *Journal of developmental and behavioral pediatrics : JDBP*
  Aylward, B. S., Abbas, H., Taraman, S., Salomon, C., Gal-Szabo, D., Kraft, C., Ehwerhemuepha, L., Chang, A., Wall, D. P.
  2022

- **Multi-angle meta-analysis of the gut microbiome in Autism Spectrum Disorder: a step toward understanding patient subgroups.** *Scientific reports*
  West, K. A., Yin, X., Rutherford, E. M., Wee, B., Choi, J., Chrisman, B. S., Dunlap, K. L., Hannibal, R. L., Hartono, W., Lin, M., Raack, E., Sabino, K., Wu, et al
  2022; 12 (1): 17034

- **INTRODUCING KIDSFIRST: A DIVERSE, LONGITUDINAL PHENOTYPIC DATABASE FOR FAMILIES WITH ASD**
  McNealis, M., Kent, J., Dunlap, K., Abbeduto, L., Dimitropoulos, A., Dombrose, F., Hardan, A., Lane, J., Phillips, B., Rodriguez, N., Wall, D. P.
  ELSEVIER SCIENCE INC.2022: S245-S246

- **Machine learning models using mobile game play accurately classify children with autism.** *Intelligence-based medicine*
  Deveau, N., Washington, P., Leblanc, E., Husic, A., Dunlap, K., Penev, Y., Kline, A., Mutlu, O. C., Wall, D. P.
  2022: 100057

- **Training and Profiling a Pediatric Facial Expression Classifier for Children on Mobile Devices: Machine Learning Study.** *JMIR formative research*
  Banerjee, A., Mutlu, O. C., Kline, A., Washington, P., Wall, D., Surabhi, S.
  2022
- **The human "contaminome": bacterial, viral, and computational contamination in whole genome sequences from 1000 families.** *Scientific reports*
  Chrisman, B., He, C., Jung, J., Stockham, N., Paskov, K., Washington, P., Wall, D. P.
  2022; 12 (1): 9863
- **Causal Modeling to Mitigate Selection Bias and Unmeasured Confounding in Internet-Based Epidemiology of COVID-19: Model Development and Validation.** *JMIR public health and surveillance*
  Stockham, N., Washingon, P., Chrisman, B., Paskov, K., Jung, J. Y., Wall, D. P.
  2022
- **Evaluation of an artificial intelligence-based medical device for diagnosis of autism spectrum disorder.** *NPJ digital medicine*
  Megerian, J. T., Dey, S., Melmed, R. D., Coury, D. L., Lerner, M., Nicholls, C. J., Sohl, K., Rouhbakhsh, R., Narasimhan, A., Romain, J., Golla, S., Shareef, S., Ostrovsky, et al
  2022; 5 (1): 57
- **Classifying Autism From Crowdsourced Semistructured Speech Recordings: Machine Learning Model Comparison Study.** *JMIR pediatrics and parenting*
  Chi, N. A., Washington, P., Kline, A., Husic, A., Hou, C., He, C., Dunlap, K., Wall, D. P.
  2022; 5 (2): e35406
- **Improved Digital Therapy for Developmental Pediatrics Using Domain-Specific Artificial Intelligence: Machine Learning Study.** *JMIR pediatrics and parenting*
  Washington, P., Kalantarian, H., Kent, J., Husic, A., Kline, A., Leblanc, E., Hou, C., Mutlu, O. C., Dunlap, K., Penev, Y., Varma, M., Stockham, N. T., Chrisman, et al
  2022; 5 (2): e26760
- **Identification of Social Engagement Indicators Associated With Autism Spectrum Disorder Using a Game-Based Mobile App: Comparative Study of Gaze Fixation and Visual Scanning Methods.** *Journal of medical Internet research*
  Varma, M., Washington, P., Chrisman, B., Kline, A., Leblanc, E., Paskov, K., Stockham, N., Jung, J., Sun, M. W., Wall, D. P.
  2022; 24 (2): e31830
- **A Method for Localizing Non-Reference Sequences to the Human Genome.** *Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing*
  Chrisman, B. S., Paskov, K. M., He, C., Jung, J., Stockham, N., Washington, P. Y., Wall, D. P.
  2022; 27: 313-324
- **An Informatics Analysis to Identify Sex Disparities and Healthcare Needs for Autism across the United States.** *AMIA ... Annual Symposium proceedings. AMIA Symposium*
  Stockham, N. T., Paskov, K. M., Tabatabaei, K., Sutaria, S., Liu, B., Kent, J., Wall, D. P.
  2022; 2022: 456-465
- **TikTok for good: Creating a diverse emotion expression database**
  Surabhi, S., Shah, B., Washington, P., Mutlu, O., Leblanc, E., Mohite, P., Husic, A., Kline, A., Dunlap, K., McNealis, M., Liu, B., Deveaux, N., Sleiman, et al
  IEEE.2022: 2495-2505
- **HyperNetVec: Fast and Scalable Hierarchical Embedding for Hypergraphs**
  Maleki, S., Saless, D., Wall, D. P., Pingali, K., Ribeiro, P., Silva, F., Mendes, J. F., Laureano, R.
  SPRINGER INTERNATIONAL PUBLISHING AG.2022: 169-183
- **Crowd annotations can approximate clinical autism impressions from short home videos with privacy protections.** *Intelligence-based medicine*
  Washington, P., Chrisman, B., Leblanc, E., Dunlap, K., Kline, A., Mutlu, C., Stockham, N., Paskov, K., Wall, D. P.
  2022; 6
- **Longitudinal study of stool-associated microbial taxa in sibling pairs with and without autism spectrum disorder** *ISME COMMUNICATIONS*
  Bernhard, A. Z., Beltz, J., Giblin, A. P., Roberts, B. M.
  2021; 1 (1)
- **Longitudinal study of stool-associated microbial taxa in sibling pairs with and without autism spectrum disorder.** *ISME communications*
  Tataru, C., Martin, A., Dunlap, K., Peras, M., Chrisman, B. S., Rutherford, E., Deitzler, G. E., Phillips, A., Yin, X., Sabino, K., Hannibal, R. L., Hartono, W., Lin, et al

2021; 1 (1): 80

- **Improved detection of disease-associated gut microbes using 16S sequence-based biomarkers.** *BMC bioinformatics*
  Chrisman, B. S., Paskov, K. M., Stockham, N., Jung, J., Varma, M., Washington, P. Y., Tataru, C., Iwai, S., DeSantis, T. Z., David, M., Wall, D. P.
  2021; 22 (1): 509

- **A Mobile Game Platform for Improving Social Communication in Children with Autism: A Feasibility Study.** *Applied clinical informatics*
  Penev, Y., Dunlap, K., Husic, A., Hou, C., Washington, P., Leblanc, E., Kline, A., Kent, J., Ng-Thow-Hing, A., Liu, B., Harjadi, C., Tsou, M., Desai, et al
  2021; 12 (5): 1030-1040

- **Training Affective Computer Vision Models by Crowdsourcing Soft-Target Labels** *COGNITIVE COMPUTATION*
  Washington, P., Kalantarian, H., Kent, J., Husic, A., Kline, A., Leblanc, E., Hou, C., Mutlu, C., Dunlap, K., Penev, Y., Stockham, N., Chrisman, B., Paskov, et al
  2021

- **Training Affective Computer Vision Models by Crowdsourcing Soft-Target Labels.** *Cognitive computation*
  Washington, P., Kalantarian, H., Kent, J., Husic, A., Kline, A., Leblanc, E., Hou, C., Mutlu, C., Dunlap, K., Penev, Y., Stockham, N., Chrisman, B., Paskov, et al
  2021; 13 (5): 1363-1373

- **Performance of a Novel Software-Based Autism Spectrum Disorder Diagnostic Device for Use in a Primary Care Setting**
  Megerian, J., Dey, S., Melmed, R. D., Coury, D. L., Lerner, M., Nicholls, C., Sohl, K., Rouhbakhsh, R., Narasimhan, A., Romain, J., Golla, S., Shareef, S., Ostrovsky, et al
  QUADRANT HEALTHCOM INC.2021: 13

- **A maximum flow-based network approach for identification of stable noncoding biomarkers associated with the multigenic neurological condition, autism.** *BioData mining*
  Varma, M., Paskov, K. M., Chrisman, B. S., Sun, M. W., Jung, J., Stockham, N. T., Washington, P. Y., Wall, D. P.
  2021; 14 (1): 28

- **Estimating sequencing error rates using families.** *BioData mining*
  Paskov, K., Jung, J., Chrisman, B., Stockham, N. T., Washington, P., Varma, M., Sun, M. W., Wall, D. P.
  2021; 14 (1): 27

- **Crowdsourced privacy-preserved feature tagging of short home videos for machine learning ASD detection.** *Scientific reports*
  Washington, P., Tariq, Q., Leblanc, E., Chrisman, B., Dunlap, K., Kline, A., Kalantarian, H., Penev, Y., Paskov, K., Voss, C., Stockham, N., Varma, M., Husic, et al
  2021; 11 (1): 7620

- **Children with Autism and Their Typically Developing Siblings Differ in Amplicon Sequence Variants and Predicted Functions of Stool-Associated Microbes.** *mSystems*
  David, M. M., Tataru, C., Daniels, J., Schwartz, J., Keating, J., Hampton-Marcell, J., Gottel, N., Gilbert, J. A., Wall, D. P.
  2021; 6 (2)

- **Indels in SARS-CoV-2 occur at template-switching hotspots.** *BioData mining*
  Chrisman, B. S., Paskov, K., Stockham, N., Tabatabaei, K., Jung, J., Washington, P., Varma, M., Sun, M. W., Maleki, S., Wall, D. P.
  2021; 14 (1): 20

- **Achieving Trustworthy Biomedical Data Solutions.** *Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing*
  Washington, P., Yeung, S., Percha, B., Tatonetti, N., Liphardt, J., Wall, D. P.
  2021; 26: 1–13

- **Selection of trustworthy crowd workers for telemedical diagnosis of pediatric autism spectrum disorder**
  Washington, P., Leblanc, E., Dunlap, K., Penev, Y., Varma, M., Jung, J., Chrisman, B., Sun, M., Stockham, N., Paskov, K., Kalantarian, H., Voss, C., Haber, et al
  WORLD SCIENTIFIC PUBL CO PTE LTD.2021: 14-25

- **Raising the stakeholders: Improving patient outcomes through interprofessional collaborations in AI for healthcare**
  Bobak, C. A., Svoboda, M., Giffin, K. A., Wall, D. P., Moore, J., Altman, R. B., Dunker, A. K., Hunter, L., Ritchie, M. D., Murray, T., Klein, T. E.
  WORLD SCIENTIFIC PUBL CO PTE LTD.2021: 351-355

- **Achieving Trustworthy Biomedical Data Solutions**
  Washington, P., Yeung, S., Percha, B., Tatonetti, N., Liphardt, J., Wall, D. P., Altman, R. B., Dunker, A. K., Hunter, L., Ritchie, M. D., Murray, T., Klein, T. E.
  WORLD SCIENTIFIC PUBL CO PTE LTD.2021: 1-13

- **Activity Recognition with Moving Cameras and Few Training Examples: Applications for Detection of Autism-Related Headbanging**
  Washington, P., Kline, A., Mutlu, O., Leblanc, E., Hou, C., Stockham, N., Paskov, K., Chrisman, B., Wall, D., ACM
  ASSOC COMPUTING MACHINERY.2021

- **Selection of trustworthy crowd workers for telemedical diagnosis of pediatric autism spectrum disorder.** *Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing*
  Washington, P., Leblanc, E., Dunlap, K., Penev, Y., Varma, M., Jung, J., Chrisman, B., Sun, M. W., Stockham, N., Paskov, K. M., Kalantarian, H., Voss, C., Haber, et al
  2021; 26: 14–25

- **Feature replacement methods enable reliable home video analysis for machine learning detection of autism.** *Scientific reports*
  Leblanc, E., Washington, P., Varma, M., Dunlap, K., Penev, Y., Kline, A., Wall, D. P.
  2020; 10 (1): 21245

- **Precision Telemedicine through Crowdsourced Machine Learning: Testing Variability of Crowd Workers for Video-Based Autism Feature Recognition.** *Journal of personalized medicine*
  Washington, P., Leblanc, E., Dunlap, K., Penev, Y., Kline, A., Paskov, K., Sun, M. W., Chrisman, B., Stockham, N., Varma, M., Voss, C., Haber, N., Wall, et al
  2020; 10 (3)

- **Game theoretic centrality: a novel approach to prioritize disease candidate genes by combining biological networks with the Shapley value.** *BMC bioinformatics*
  Sun, M. W., Moretti, S., Paskov, K. M., Stockham, N. T., Varma, M., Chrisman, B. S., Washington, P. Y., Jung, J., Wall, D. P.
  2020; 21 (1): 356

- **Toward Continuous Social Phenotyping: Analyzing Gaze Patterns in an Emotion Recognition Task for Children With Autism Through Wearable Smart Glasses.** *Journal of medical Internet research*
  Nag, A., Haber, N., Voss, C., Tamura, S., Daniels, J., Ma, J., Chiang, B., Ramachandran, S., Schwartz, J., Winograd, T., Feinstein, C., Wall, D. P.
  2020; 22 (4): e13810

- **The Performance of Emotion Classifiers for Children With Parent-Reported Autism: Quantitative Feasibility Study.** *JMIR mental health*
  Kalantarian, H., Jedoui, K., Dunlap, K., Schwartz, J., Washington, P., Husic, A., Tariq, Q., Ning, M., Kline, A., Wall, D. P.
  2020; 7 (4): e13174

- **Feature Selection and Dimension Reduction of Social Autism Data.** *Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing*
  Washington, P. n., Paskov, K. M., Kalantarian, H. n., Stockham, N. n., Voss, C. n., Kline, A. n., Patnaik, R. n., Chrisman, B. n., Varma, M. n., Tariq, Q. n., Dunlap, K. n., Schwartz, J. n., Haber, et al
  2020; 25: 707–18

- **Feature Selection and Dimension Reduction of Social Autism Data**
  Washington, P., Paskov, K., Kalantarian, H., Stockham, N., Voss, C., Kline, A., Patnaik, R., Chrisman, B., Varma, M., Tariq, Q., Dunlap, K., Schwartz, J., Haber, et al
  WORLD SCIENTIFIC PUBL CO PTE LTD.2020: 707-718

- **A Mobile Game for Automatic Emotion-Labeling of Images.** *IEEE transactions on games*
  Kalantarian, H. n., Jedoui, K. n., Washington, P. n., Wall, D. P.
  2020; 12 (2): 213–18

- **Multi-modular AI Approach to Streamline Autism Diagnosis in Young Children.** *Scientific reports*
  Abbas, H. n., Garberson, F. n., Liu-Mayo, S. n., Glover, E. n., Wall, D. P.
  2020; 10 (1): 5014

- **The conserved microRNA miR-34 regulates synaptogenesis via coordination of distinct mechanisms in presynaptic and postsynaptic cells.** *Nature communications*
  McNeill, E. M., Warinner, C. n., Alkins, S. n., Taylor, A. n., Heggeness, H. n., DeLuca, T. F., Fulga, T. A., Wall, D. P., Griffith, L. C., Van Vactor, D. n.
  2020; 11 (1): 1092

- **Data-Driven Diagnostics and the Potential of Mobile Artificial Intelligence for Digital Therapeutic Phenotyping in Computational Psychiatry.** *Biological psychiatry. Cognitive neuroscience and neuroimaging*
  Washington, P., Park, N., Srivastava, P., Voss, C., Kline, A., Varma, M., Tariq, Q., Kalantarian, H., Schwartz, J., Patnaik, R., Chrisman, B., Stockham, N., Paskov, et al
  2019

- **INHERITED AND DE NOVO GENETIC RISK FOR AUTISM IMPACTS SHARED BIOLOGICAL NETWORKS**
  Ruzzo, E., Perez-Cano, L., Jung, J., Wang, L., Kashef-Haghighi, D., Hartl, C., Lowe, J., Prober, D., Wall, D., Geschwind, D.
  ELSEVIER.2019: S35–S36

- **SUPERPOWER GLASS** *MOBILE COMPUTING AND COMMUNICATIONS REVIEW*
  Kline, A., Voss, C., Washington, P., Haber, N., Schwartz, J., Tariq, Q., Winograd, T., Feinstein, C., Wall, D. P.
  2019; 23 (2): 35–38

- **Validity of Online Screening for Autism: Crowdsourcing Study Comparing Paid and Unpaid Diagnostic Tasks.** *Journal of medical Internet research*
  Washington, P., Kalantarian, H., Tariq, Q., Schwartz, J., Dunlap, K., Chrisman, B., Varma, M., Ning, M., Kline, A., Stockham, N., Paskov, K., Voss, C., Haber, et al
  2019; 21 (5): e13668

- **Effect of Wearable Digital Intervention for Improving Socialization in Children With Autism Spectrum Disorder A Randomized Clinical Trial** *JAMA PEDIATRICS*
  Voss, C., Schwartz, J., Daniels, J., Kline, A., Haber, N., Washington, P., Tariq, Q., Robinson, T. N., Desai, M., Phillips, J. M., Feinstein, C., Winograd, T., Wall, et al
  2019; 173 (5): 446–54

- **Detecting Developmental Delay and Autism Through Machine Learning Models Using Home Videos of Bangladeshi Children: Development and Validation Study** *JOURNAL OF MEDICAL INTERNET RESEARCH*
  Tariq, Q., Fleming, S., Schwartz, J., Dunlap, K., Corbin, C., Washington, P., Kalantarian, H., Khan, N. Z., Darmstadt, G. L., Wall, D.
  2019; 21 (4)

- **Effect of Wearable Digital Intervention for Improving Socialization in Children With Autism Spectrum Disorder: A Randomized Clinical Trial.** *JAMA pediatrics*
  Voss, C., Schwartz, J., Daniels, J., Kline, A., Haber, N., Washington, P., Tariq, Q., Robinson, T. N., Desai, M., Phillips, J. M., Feinstein, C., Winograd, T., Wall, et al
  2019

- **Coalitional Game Theory Facilitates Identification of Non-Coding Variants Associated With Autism** *BIOMEDICAL INFORMATICS INSIGHTS*
  Sun, M., Gupta, A., Varma, M., Paskov, K. M., Jung, J., Stockham, N. T., Wall, D. P.
  2019; 11

- **Addendum to the Acknowledgements: Validity of Online Screening for Autism: Crowdsourcing Study Comparing Paid and Unpaid Diagnostic Tasks.** *Journal of medical Internet research*
  Washington, P. n., Kalantarian, H. n., Tariq, Q. n., Schwartz, J. n., Dunlap, K. n., Chrisman, B. n., Varma, M. n., Ning, M. n., Kline, A. n., Stockham, N. n., Paskov, K. n., Voss, C. n., Haber, et al
  2019; 21 (6): e14950

- **Inherited and De Novo Genetic Risk for Autism Impacts Shared Networks.** *Cell*
  Ruzzo, E. K., Pérez-Cano, L. n., Jung, J. Y., Wang, L. K., Kashef-Haghighi, D. n., Hartl, C. n., Singh, C. n., Xu, J. n., Hoekstra, J. N., Leventhal, O. n., Leppä, V. M., Gandal, M. J., Paskov, et al
  2019; 178 (4): 850–66.e26

- **Guess What?: Towards Understanding Autism from Structured Video Using Facial Affect.** *Journal of healthcare informatics research*
  Kalantarian, H., Washington, P., Schwartz, J., Daniels, J., Haber, N., Wall, D. P.
  2019; 3: 43–66

- **Labeling images with facial emotion and the potential for pediatric healthcare.** *Artificial intelligence in medicine*
  Kalantarian, H. n., Jedoui, K. n., Washington, P. n., Tariq, Q. n., Dunlap, K. n., Schwartz, J. n., Wall, D. P.
  2019; 98: 77–86

- **Detecting Developmental Delay and Autism Through Machine Learning Models Using Home Videos of Bangladeshi Children: Development and Validation Study.** *Journal of medical Internet research*
  Tariq, Q. n., Fleming, S. L., Schwartz, J. N., Dunlap, K. n., Corbin, C. n., Washington, P. n., Kalantarian, H. n., Khan, N. Z., Darmstadt, G. L., Wall, D. P.
  2019; 21 (4): e13822

- **Outgroup Machine Learning Approach Identifies Single Nucleotide Variants in Noncoding DNA Associated with Autism Spectrum Disorder**
  Varma, M., Paskov, K., Jung, J., Chrisman, B., Stockham, N., Washington, P., Wall, D., Altman, R. B., Dunker, A. K., Hunter, L., Ritchie, M. D., Murray, T., Klein, et al

WORLD SCIENTIFIC PUBL CO PTE LTD.2019: 260–71

- **Outgroup Machine Learning Approach Identifies Single Nucleotide Variants in Noncoding DNA Associated with Autism Spectrum Disorder.** *Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing*
  Varma, M., Paskov, K. M., Jung, J., Sierra Chrisman, B., Stockham, N. T., Washington, P. Y., Wall, D. P.
  2019; 24: 260–71

- **Coalitional Game Theory Facilitates Identification of Non-Coding Variants Associated With Autism.** *Biomedical informatics insights*
  Sun, M. W., Gupta, A., Varma, M., Paskov, K. M., Jung, J., Stockham, N. T., Wall, D. P.
  2019; 11: 1178222619832859

- **Identification and Quantification of Gaps in Access to Autism Resources in the United States: An Infodemiological Study.** *Journal of medical Internet research*
  Ning, M. n., Daniels, J. n., Schwartz, J. n., Dunlap, K. n., Washington, P. n., Kalantarian, H. n., Du, M. n., Wall, D. P.
  2019; 21 (7): e13094

- **The Potential for Machine Learning-Based Wearables to Improve Socialization in Teenagers and Adults With Autism Spectrum Disorder-Reply.** *JAMA pediatrics*
  Voss, C. n., Haber, N. n., Wall, D. P.
  2019

- **Mobile detection of autism through machine learning on home video: A development and prospective validation study** *PLOS MEDICINE*
  Tariq, Q., Daniels, J., Schwartz, J., Washington, P., Kalantarian, H., Wall, D.
  2018; 15 (11)

- **Mobile detection of autism through machine learning on home video: A development and prospective validation study.** *PLoS medicine*
  Tariq, Q., Daniels, J., Schwartz, J. N., Washington, P., Kalantarian, H., Wall, D. P.
  2018; 15 (11): e1002705

- **RAPID MOBILIZED VIDEO PHENOTYPING FOR ASD DIAGNOSIS**
  Wall, D. P.
  ELSEVIER SCIENCE INC.2018: S320

- **Exploratory study examining the at-home feasibility of a wearable tool for social-affective learning in children with autism** *NPJ DIGITAL MEDICINE*
  Daniels, J., Schwartz, J. N., Voss, C., Haber, N., Fazel, A., Kline, A., Washington, P., Feinstein, C., Winograd, T., Wall, D. P.
  2018; 1

- **Exploratory study examining the at-home feasibility of a wearable tool for social-affective learning in children with autism.** *NPJ digital medicine*
  Daniels, J., Schwartz, J. N., Voss, C., Haber, N., Fazel, A., Kline, A., Washington, P., Feinstein, C., Winograd, T., Wall, D. P.
  2018; 1: 32

- **Machine learning approach for early detection of autism by combining questionnaire and home video screening** *JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION*
  Abbas, H., Garberson, F., Glover, E., Wall, D. P.
  2018; 25 (8): 1000–1007

- **Brain-specific functional relationship networks inform autism spectrum disorder gene prediction** *TRANSLATIONAL PSYCHIATRY*
  Duda, M., Zhang, H., Li, H., Wall, D. P., Burmeister, M., Guan, Y.
  2018; 8: 56

- **Feasibility Testing of a Wearable Behavioral Aid for Social Learning in Children with Autism** *APPLIED CLINICAL INFORMATICS*
  Daniels, J., Haber, N., Voss, C., Schwartz, J., Tamura, S., Fazel, A., Kline, A., Washington, P., Phillips, J., Winograd, T., Feinstein, C., Wall, D. P.
  2018; 9 (1): 129–40

- **A Gamified Mobile System for Crowdsourcing Video for Autism Research**
  Kalantarian, H., Washington, P., Schwartz, J., Daniels, J., Haber, N., Wall, D., IEEE Comp Soc
  IEEE COMPUTER SOC.2018: 350-352

- **Coalitional game theory as a promising approach to identify candidate autism genes**
  Gupta, A., Sun, M., Paskov, K., Stockham, N., Jung, J., Wall, D., Altman, R. B., Dunker, A. K., Hunter, L., Ritchie, M. D., Murray, T., Klein, T. E.
  WORLD SCIENTIFIC PUBL CO PTE LTD.2018: 436–47

- **Coalitional game theory as a promising approach to identify candidate autism genes.** *Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing*
  Gupta, A., Sun, M. W., Paskov, K. M., Stockham, N. T., Jung, J., Wall, D. P.
  2018; 23: 436–47

- **Analysis of Sex and Recurrence Ratios in Simplex and Multiplex Autism Spectrum Disorder Implicates Sex-Specific Alleles as Inheritance Mechanism**
  Chrisman, B., Varma, M., Washington, P., Paskov, K., Stockham, N., Jung, J., Wall, D. P., Zheng, H., Callejas, Z., Griol, D., Wang, H., Hu, Schmidt, H., et al
  IEEE.2018: 1470–77

- **A Low Rank Model for Phenotype Imputation in Autism Spectrum Disorder.** *AMIA Joint Summits on Translational Science proceedings. AMIA Joint Summits on Translational Science*
  Paskov, K. M., Wall, D. P.
  2018; 2017: 178–87

- **Sparsifying machine learning models identify stable subsets of predictive features for behavioral detection of autism** *MOLECULAR AUTISM*
  Levy, S., Duda, M., Haber, N., Wall, D. P.
  2017; 8: 65

- **The GapMap project: a mobile surveillance system to map diagnosed autism cases and gaps in autism services globally** *MOLECULAR AUTISM*
  Daniels, J., Schwartz, J., Albert, N., Du, M., Wall, D. P.
  2017; 8: 55

- **Human Genome Sequencing at the Population Scale: A Primer on High-Throughput DNA Sequencing and Analysis** *AMERICAN JOURNAL OF EPIDEMIOLOGY*
  Goldfeder, R. L., Wall, D. P., Khoury, M. J., Ioannidis, J. A., Ashley, E. A.
  2017; 186 (8): 1000–1009

- **ONE IN THREE DE NOVO VARIANTS SEEN IN AUTISM SPECTRUM DISORDER PROBANDS ARE PRESENT AS STANDING VARIATION IN A COHORT OF MORE THAN 60,000 NON-ASD INDIVIDUALS**
  Kosmicki, J., Samocha, K., Lek, M., MacArthur, D., Wall, D., Robinson, E., Daly, M.
  ELSEVIER SCIENCE BV.2017: S280–S281

- **DESIGN AND EFFICACY OF A WEARABLE DEVICE FOR SOCIAL AFFECTIVE LEARNING IN CHILDREN WITH AUTISM**
  Daniels, J., Schwartz, J., Haber, N., Voss, C., Kline, A., Fazel, A., Washington, P., De, T., Feinstein, C., Winograd, T., Wall, D.
  ELSEVIER SCIENCE INC.2017: S257

- **Crowdsourced validation of a machine-learning classification system for autism and ADHD.** *Translational psychiatry*
  Duda, M., Haber, N., Daniels, J., Wall, D. P.
  2017; 7 (5)

- **Cross-disorder comparative analysis of comorbid conditions reveals novel autism candidate genes** *BMC GENOMICS*
  Diaz-Beltran, L., Esteban, F. J., Varma, M., Ortuzk, A., David, M., Wall, D. P.
  2017; 18

- **Refining the role of de novo protein-truncating variants in neurodevelopmental disorders by using population reference samples.** *Nature genetics*
  Kosmicki, J. A., Samocha, K. E., Howrigan, D. P., Sanders, S. J., Slowikowski, K., Lek, M., Karczewski, K. J., Cutler, D. J., Devlin, B., Roeder, K., Buxbaum, J. D., Neale, B. M., MacArthur, et al
  2017

- **MC-GenomeKey: a multicloud system for the detection and annotation of genomic variants.** *BMC bioinformatics*
  Elshazly, H., Souilmi, Y., Tonellato, P. J., Wall, D. P., Abouelhoda, M.
  2017; 18 (1): 49-?

- **Machine learning for early detection of autism (and other conditions) using a parental questionnaire and home video screening**
  Abbas, H., Garberson, F., Glover, E., Wall, D. P., Nie, J. Y., Obradovic, Z., Suzumura, T., Ghosh, R., Nambiar, R., Wang, C., Zang, H., BaezaYates, R., Hu, et al
  IEEE.2017: 3558–61

- **GapMap: Enabling Comprehensive Autism Resource Epidemiology.** *JMIR public health and surveillance*
  Albert, N. n., Daniels, J. n., Schwartz, J. n., Du, M. n., Wall, D. P.
  2017; 3 (2): e27

- **Can we accelerate autism discoveries through crowdsourcing?** *RESEARCH IN AUTISM SPECTRUM DISORDERS*
  David, M. M., Babineau, B. A., Wall, D. P.
  2016; 32: 80-83

- **Comorbid Analysis of Genes Associated with Autism Spectrum Disorders Reveals Differential Evolutionary Constraints** *PLOS ONE*
  David, M. M., Enard, D., Ozturk, A., Daniels, J., Jung, J., Diaz-Beltran, L., Wall, D. P.
  2016; 11 (7)

- **Clinical Evaluation of a Novel and Mobile Autism Risk Assessment** *JOURNAL OF AUTISM AND DEVELOPMENTAL DISORDERS*
  Duda, M., Daniels, J., Wall, D. P.
  2016; 46 (6): 1953-1961

- **Automated integration of continuous glucose monitor data in the electronic health record using consumer technology.** *Journal of the American Medical Informatics Association*
  Kumar, R. B., Goren, N. D., Stark, D. E., Wall, D. P., Longhurst, C. A.
  2016; 23 (3): 532-537

- **Characterisation of agricultural drainage ditch sediments along the phosphorus transfer continuum in two contrasting headwater catchments** *JOURNAL OF SOILS AND SEDIMENTS*
  Shore, M., Jordan, P., Mellander, P., Kelly-Quinn, M., Daly, K., Sims, J. T., Wall, D. P., Melland, A. R.
  2016; 16 (5): 1643-1654

- **A research roadmap for next-generation sequencing informatics** *SCIENCE TRANSLATIONAL MEDICINE*
  Altman, R. B., Prabhu, S., Sidow, A., Zook, J. M., Goldfeder, R., Litwack, D., Ashley, E., Asimenos, G., Bustamante, C. D., Donigan, K., Giacomini, K. M., Johansen, E., Khuri, et al
  2016; 8 (335)

- **A Complex Systems Approach to Causal Discovery in Psychiatry** *PLOS ONE*
  Saxe, G. N., Statnikov, A., Fenyo, D., Ren, J., Li, Z., Prasad, M., Wall, D., Bergman, N., Briggs, E. C., Aliferis, C.
  2016; 11 (3)

- **A common molecular signature in ASD gene expression: following Root 66 to autism** *TRANSLATIONAL PSYCHIATRY*
  Diaz-Beltran, L., Esteban, F. J., Wall, D. P.
  2016; 6

- **The Quantified Brain: A Framework for Mobile Device-Based Assessment of Behavior and Neurological Function.** *Applied clinical informatics*
  Stark, D. E., Kumar, R. B., Longhurst, C. A., Wall, D. P.
  2016; 7 (2): 290–98

- **Superpower Glass: Delivering Unobtrusive Real-time Social Cues in Wearable Systems**
  Voss, C., Washington, P., Haber, N., Kline, A., Daniels, J., Fazel, A., De, T., McCarthy, B., Feinstein, C., Winograd, T., Wall, D., Assoc Comp Machinery
  ASSOC COMPUTING MACHINERY.2016: 1218–26

- **A Practical Approach to Real-Time Neutral Feature Subtraction for Facial Expression Recognition**
  Haber, N., Voss, C., Fazel, A., Winograd, T., Wall, D. P., IEEE
  IEEE.2016

- **DE NOVO MUTATIONS IN AUTISM IMPLICATE THE SYNAPTIC ELIMINATION NETWORK.** *Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing*
  Ram Venkataraman, G., O'Connell, C., Egawa, F., Kashef-Haghighi, D., Wall, D. P.
  2016; 22: 521-532

- **Use of machine learning for behavioral distinction of autism and ADHD.** *Translational psychiatry*
  Duda, M., Ma, R., Haber, N., Wall, D. P.
  2016; 6

- **Identification of Human Neuronal Protein Complexes Reveals Biochemical Activities and Convergent Mechanisms of Action in Autism Spectrum Disorders.** *Cell systems*
  Li, J., Ma, Z., Shi, M., Malty, R. H., Aoki, H., Minic, Z., Phanse, S., Jin, K., Wall, D. P., Zhang, Z., Urban, A. E., Hallmayer, J., Babu, et al
  2015; 1 (5): 361-374

- **Identification of Human Neuronal Protein Complexes Reveals Biochemical Activities and Convergent Mechanisms of Action in Autism Spectrum Disorders** *CELL SYSTEMS*
  Li, J., Ma, Z., Shi, M., Malty, R. H., Aoki, H., Minic, Z., Phanse, S., Jin, K., Wall, D. P., Zhang, Z., Urban, A. E., Hallmayer, J., Babu, et al
  2015; 1 (5): 361-374

- **Scalable and cost-effective NGS genotyping in the cloud** *BMC MEDICAL GENOMICS*
  Souilmi, Y., Lancaster, A. K., Jung, J., Rizzo, E., Hawkins, J. B., Powles, R., Amzazi, S., Ghazal, H., Tonellato, P. J., Wall, D. P.
  2015; 8

- **Rising interdisciplinary collaborations refine our understanding of autisms and give hope to more personalized solutions.** *Personalized medicine*
  Duda, M., Wall, D. P.
  2015; 12 (4): 359-369

- **A transgenic resource for conditional competitive inhibition of conserved Drosophila microRNAs** *NATURE COMMUNICATIONS*
  Fulga, T. A., McNeill, E. M., Binari, R., Yelick, J., Blanche, A., Booker, M., Steinkraus, B. R., Schnall-Levin, M., Zhao, Y., Deluca, T., Bejarano, F., Han, Z., Lai, et al
  2015; 6

- **Searching for a minimal set of behaviors for autism detection through feature selection-based machine learning** *TRANSLATIONAL PSYCHIATRY*
  Kosmicki, J. A., Sochat, V., Duda, M., Wall, D. P.
  2015; 5

- **COSMOS: cloud enabled NGS analysis**
  Souilmi, Y., Jung, J., Lancaster, A., Gafni, E., Amzazi, S., Ghazal, H., Wall, D., Tonellato, P.
  BIOMED CENTRAL LTD.2015

- **Rising interdisciplinary collaborations refine our understanding of autisms and give hope to more personalized solutions** *PERSONALIZED MEDICINE*
  Duda, M., Wall, D. P.
  2015; 12 (4): 359-369

- **Searching for a minimal set of behaviors for autism detection through feature selection-based machine learning.** *Translational psychiatry*
  Kosmicki, J. A., Sochat, V., Duda, M., Wall, D. P.
  2015; 5

- **SESSION INTRODUCTION: CHARACTERIZING THE IMPORTANCE OF ENVIRONMENTAL EXPOSURES, INTERACTIONS BETWEEN THE ENVIRONMENT AND GENETIC ARCHTECTURE, AND GENETC INTERACTIONS: NEW METHODS FOR UNDERSTANDING THE ETIOLOGY OF COMPLEX TRAITS AND DISEASE**
  Hall, M. A., Verma, S., Wall, D. P., Moore, J. H., Keating, B., Campbell, D. B., Gibson, G., Asselbergs, F. W., Pendergrass, S. A., Altman, R. B., Dunker, A. K., Hunter, L., Ritchie, et al
  WORLD SCIENTIFIC PUBL CO PTE LTD.2015: 156–60

- **Translational Meta-analytical Methods to Localize the Regulatory Patterns of Neurological Disorders in the Human Brain.** *AMIA ... Annual Symposium proceedings / AMIA Symposium. AMIA Symposium*
  Sochat, V., David, M., Wall, D. P.
  2015; 2015: 2073-2082

- **Testing the accuracy of an observation-based classifier for rapid detection of autism risk.** *Translational psychiatry*
  Duda, M., Kosmicki, J. A., Wall, D. P.
  2015; 5

- **COSMOS: Python library for massively parallel workflows** *BIOINFORMATICS*
  Gafni, E., Luquette, L. J., Lancaster, A. K., Hawkins, J. B., Jung, J., Souilmi, Y., Wall, D. P., Tonellato, P. J.
  2014; 30 (20): 2956-2958

- **A framework for the interpretation of de novo mutation in human disease** *NATURE GENETICS*
  Samocha, K. E., Robinson, E. B., Sanders, S. J., Stevens, C., Sabo, A., McGrath, L. M., Kosmicki, J. A., Rehnstrom, K., Mallick, S., Kirby, A., Wall, D. P., MacArthur, D. G., Gabriel, et al
  2014; 46 (9): 944-?

- **Evaluating the critical source area concept of phosphorus loss from soils to water-bodies in agricultural catchments.** *The Science of the total environment*
  Shore, M., Jordan, P., Mellander, P., Kelly-Quinn, M., Wall, D. P., Murphy, P. N., Melland, A. R.

2014; 490: 405-415

- **A literature search tool for intelligent extraction of disease-associated genes** *JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION*
  Jung, J., DeLuca, T. F., Nelson, T. H., Wall, D. P.
  2014; 21 (3): 399-405

- **The Potential of Accelerating Early Detection of Autism through Content Analysis of YouTube Videos.** *PloS one*
  Fusaro, V. A., Daniels, J., Duda, M., DeLuca, T. F., D'Angelo, O., Tamburello, J., Maniscalco, J., Wall, D. P.
  2014; 9 (4)

- **Testing the accuracy of an observation-based classifier for rapid detection of autism risk.** *Translational psychiatry*
  Duda, M., Kosmicki, J. A., Wall, D. P.
  2014; 4

- **Responding to a Diagnosis of Localized Prostate Cancer Men's Experiences of Normal Distress During the First 3 Postdiagnostic Months** *CANCER NURSING*
  Wall, D. P., Kristjanson, L. J., Fisher, C., Boldy, D., Kendall, G. E.
  2013; 36 (6): E44-E50

- **Quantification of Phosphorus Transport from a Karstic Agricultural Watershed to Emerging Spring Water** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
  Mellander, P., Jordan, P., Melland, A. R., Murphy, P. N., Wall, D. P., Mechan, S., Meehan, R., Kelly, C., Shine, O., Shortle, G.
  2013; 47 (12): 6111-6119

- **Systems biology as a comparative approach to understand complex gene expression in neurological diseases.** *Behavioral sciences (Basel, Switzerland)*
  Diaz-Beltran, L., Cano, C., Wall, D. P., Esteban, F. J.
  2013; 3 (2): 253-272

- **Systems Biology as a Comparative Approach to Understand Complex Gene Expression in Neurological Diseases** *BEHAVIORAL SCIENCES*
  Diaz-Beltran, L., Cano, C., Wall, D. P., Esteban, F. J.
  2013; 3 (2): 253–72

- **Haplotype structure enables prioritization of common markers and candidate genes in autism spectrum disorder** *TRANSLATIONAL PSYCHIATRY*
  Vardarajan, B. N., Eran, A., Jung, J., KUNKEL, L. M., Wall, D. P.
  2013; 3

- **Genomics-Informed Pathology** *SCIENTIST*
  Wall, D. P., Tonellato, P. J.
  2013; 27 (1): 22-23

- **Autworks: a cross-disease analysis application for Autism and related disorders.** *AMIA Joint Summits on Translational Science proceedings. AMIA Joint Summits on Translational Science*
  Wall, D.
  2013; 2013: 42–43

- **Genetic Networks of Complex Disorders: from a Novel Search Engine for PubMed Article Database.** *AMIA Joint Summits on Translational Science proceedings AMIA Summit on Translational Science*
  Jung, J., Wall, D. P.
  2013; 2013: 99-?

- **Streaming Support for Data Intensive Cloud-Based Sequence Analysis** *BIOMED RESEARCH INTERNATIONAL*
  Issa, S. A., Kienzler, R., El-Kalioby, M., Tonellato, P. J., Wall, D., Bruggmann, R., Abouelhoda, M.
  2013

- **Personalized cloud-based bioinformatics services for research and education: use cases and the elasticHPC package** *Asia Pacific Bioinformatics Network (APBioNet) 11th International Conference on Bioinformatics (InCoB)*
  El-Kalioby, M., Abouelhoda, M., Krueger, J., Giegerich, R., Sczyrba, A., Wall, D. P., Tonellato, P.
  BIOMED CENTRAL LTD.2012

- **Autworks: a cross-disease network biology application for Autism and related disorders** *BMC MEDICAL GENOMICS*
  Nelson, T. H., Jung, J., DeLuca, T. F., Hinebaugh, B. K., St Gabriel, K. C., Wall, D. P.

2012; 5

- **Cross-pollination of research findings, although uncommon, may accelerate discovery of human disease genes** *BMC MEDICAL GENETICS*
  Duda, M., Nelson, T., Wall, D. P.
  2012; 13
- **Use of Artificial Intelligence to Shorten the Behavioral Diagnosis of Autism** *PLOS ONE*
  Wall, D. P., Dally, R., Luyster, R., Jung, J., DeLuca, T. F.
  2012; 7 (8)
- **Delivery and impact bypass in a karst aquifer with high phosphorus source and pathway potential** *WATER RESEARCH*
  Mellander, P., Jordan, P., Wall, D. P., Melland, A. R., Meehan, R., Kelly, C., Shortle, G.
  2012; 46 (7): 2225-2236
- **Deriving clinical action from whole-genome analysis** *PERSONALIZED MEDICINE*
  Wall, D. P., Tonellato, P. J.
  2012; 9 (3): 247–52
- **Systems analysis of inflammatory bowel disease based on comprehensive gene information** *BMC MEDICAL GENETICS*
  Suzuki, S., Takai-Igarashi, T., Fukuoka, Y., Wall, D. P., Tanaka, H., Tonellato, P. J.
  2012; 13
- **Use of machine learning to shorten observation-based screening and diagnosis of autism** *TRANSLATIONAL PSYCHIATRY*
  Wall, D. P., Kosmicki, J., DeLuca, T. F., Harstad, E., Fusaro, V. A.
  2012; 2
- **Roundup 2.0: enabling comparative genomics for over 1800 genomes** *BIOINFORMATICS*
  DeLuca, T. F., Cui, J., Jung, J., Gabriel, K. C., Wall, D. P.
  2012; 28 (5): 715-716
- **Cloud Computing for Comparative Genomics with Windows Azure Platform** *EVOLUTIONARY BIOINFORMATICS*
  Kim, I., Jung, J., DeLuca, T. F., Nelson, T. H., Wall, D. P.
  2012; 8: 527-534
- **The future of genomics in pathology.** *F1000 medicine reports*
  Wall, D. P., Tonellato, P. J.
  2012; 4: 14-?
- **Phylogenetically informed logic relationships improve detection of biological network organization** *BMC BIOINFORMATICS*
  Cui, J., DeLuca, T. F., Jung, J., Wall, D. P.
  2011; 12
- **Identification of autoimmune gene signatures in autism** *TRANSLATIONAL PSYCHIATRY*
  Jung, J., Kohane, I. S., Wall, D. P.
  2011; 1
- **Detecting biological network organization and functional gene orthologs** *BIOINFORMATICS*
  Cui, J., DeLuca, T. F., Jung, J., Wall, D. P.
  2011; 27 (20): 2919-2920
- **Biomedical Cloud Computing With Amazon Web Services** *PLOS COMPUTATIONAL BIOLOGY*
  Fusaro, V. A., Patil, P., Gafni, E., Wall, D. P., Tonellato, P. J.
  2011; 7 (8)
- **Using game theory to detect genes involved in Autism Spectrum Disorder** *TOP*
  Esteban, F. J., Wall, D. P.
  2011; 19 (1): 121-129
- **The semantic organization of the animal category: evidence from semantic verbal fluency and network theory** *COGNITIVE PROCESSING*
  Goni, J., Arrondo, G., Sepulcre, J., Martincorena, I., Velez de Mendizabal, N., Corominas-Murtra, B., Bejarano, B., Ardanza-Trevijano, S., Peraita, H., Wall, D. P., Villoslada, P.

2011; 12 (2): 183-196

- **Genotator: A disease-agnostic tool for genetic annotation of disease** *BMC MEDICAL GENOMICS*
  Wall, D. P., Pivovarov, R., Tong, M., Jung, J., Fusaro, V. A., DeLuca, T. F., Tonellato, P. J.
  2010; 3
- **Cloud computing for comparative genomics** *BMC BIOINFORMATICS*
  Wall, D. P., Kudtarkar, P., Fusaro, V. A., Pivovarov, R., Patil, P., Tonellato, P. J.
  2010; 11
- **Cost-Effective Cloud Computing: A Case Study Using the Comparative Genomics Tool, Roundup** *EVOLUTIONARY BIOINFORMATICS*
  Kudtarkar, P., DeLuca, T. F., Fusaro, V. A., Tonellato, P. J., Wall, D. P.
  2010; 6: 197-203
- **Collaborative text-annotation resource for disease-centered relation extraction from biomedical text** *JOURNAL OF BIOMEDICAL INFORMATICS*
  Cano, C., Monaghan, T., Blanco, A., Wall, D. P., Peshkin, L.
  2009; 42 (5): 967-977
- **Reply to the "Letter to the Editors" by Steven Buyske** *NEUROGENETICS*
  Abu-Elneel, K., Liu, T., Gazzaniga, F. S., Nishimura, Y., Wall, D. P., Geschwind, D. H., Lao, K., Kosik, K. S.
  2009; 10 (2): 169–70
- **Comparative analysis of neurological disorders focuses genome-wide search for autism genes** *GENOMICS*
  Wall, D. P., Esteban, F. J., DeLuca, T. F., Huyck, M., Monaghan, T., de Mendizabal, N. V., Goni, J., Kohane, I. S.
  2009; 93 (2): 120-129
- **Heterogeneous dysregulation of microRNAs across the autism spectrum** *NEUROGENETICS*
  Abu-Elneel, K., Liu, T., Gazzaniga, F. S., Nishimura, Y., Wall, D. P., Geschwind, D. H., Lao, K., Kosik, K. S.
  2008; 9 (3): 153-161
- **Testing the Accuracy of Eukaryotic Phylogenetic Profiles for Prediction of Biological Function** *EVOLUTIONARY BIOINFORMATICS*
  Singh, S., Wall, D. P.
  2008; 4: 217-223
- **Phylogeny of the Calymperaceae with a rank-free systematic treatment** *BRYOLOGIST*
  Fisher, K. M., Wall, D. P., Yip, K., Mishler, B. D.
  2007; 110 (1): 46–73
- **Ortholog detection using the reciprocal smallest distance algorithm.** *Methods in molecular biology (Clifton, N.J.)*
  Wall, D. P., Deluca, T.
  2007; 396: 95-110
- **Roundup: a multi-genome repository of orthologs and evolutionary distances** *BIOINFORMATICS*
  DeLuca, T. F., Wu, I., Pu, J., Monaghan, T., Peshkin, L., Singh, S., Wall, D. P.
  2006; 22 (16): 2044-2046
- **Heparan sulfate proteoglycans and the emergence of neuronal connectivity** *CURRENT OPINION IN NEUROBIOLOGY*
  Van Vactor, D., Wall, D. P., Johnson, K. G.
  2006; 16 (1): 40-51
- **The role of selection in the evolution of human mitochondrial genomes** *GENETICS*
  Kivisild, T., Shen, P. D., Wall, D. P., Do, B., Sung, R., Davis, K., Passarino, G., Underhill, P. A., Scharfe, C., Torroni, A., Scozzari, R., Modiano, D., Coppa, et al
  2006; 172 (1): 373-387
- **Converging on a general model of protein evolution** *TRENDS IN BIOTECHNOLOGY*
  Herbeck, J. T., Wall, D. P.
  2005; 23 (10): 485-487
- **Origin and rapid diversification of a tropical moss** *EVOLUTION*
  Wall, D. P.

2005; 59 (7): 1413-1424

- **Conservation of the RBI gene in human and primates (vol 25, pg 396, 2005)** *HUMAN MUTATION*
  Sivakumaran, T. A., Shen, P. D., Wall, D. P., Do, B. H., Kucheria, K., Oefner, P. J.
  2005; 25 (5): 501
- **Functional genomic analysis of the rates of protein evolution** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Wall, D. P., Hirsh, A. E., Fraser, H. B., Kumm, J., Giaever, G., Eisen, M. B., Feldman, M. W.
  2005; 102 (15): 5483-5488
- **Conservation of the RB1 gene in human and primates** *HUMAN MUTATION*
  Sivakumaran, T. A., Shen, P. D., Wall, D. P., Do, B. H., Kucheria, K., Oefner, P. J.
  2005; 25 (4): 396-409
- **Adjusting for selection on synonymous sites in estimates of evolutionary distance** *MOLECULAR BIOLOGY AND EVOLUTION*
  Hirsh, A. E., Fraser, H. B., Wall, D. P.
  2005; 22 (1): 174-177
- **Improved haematopoietic recovery following transplantation with ex vivo-expanded mobilized blood cells** *45th Annual Meeting and Exhibition of the American-Society-of-Hematology*
  Prince, H. M., Simmons, P. J., Whitty, G., Wall, D. P., Barber, L., Toner, G. C., Seymour, J. F., Richardson, G., Mrongovius, R., Haylock, D. N.
  WILEY-BLACKWELL PUBLISHING, INC.2004: 536–45
- **Coevolution of gene expression among interacting proteins** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Fraser, H. B., Hirsh, A. E., Wall, D. P., Eisen, M. B.
  2004; 101 (24): 9033-9038
- **Extended haplotype block structure and evidence for selection in a 900 kb region of the ATM Gene in human and chimpanzee.**
  Thorstenson, Y. R., Shen, P., Wall, D. P., Wayne, T. L., Chou, Davis, R. W., Oefner, P. J.
  UNIV CHICAGO PRESS.2003: 427
- **Gene expression level influences amino acid usage, but not codon usage, in the tsetse fly endosymbiont Wigglesworthia** *MICROBIOLOGY-SGM*
  Herbeck, J. T., Wall, D. P., Wernegreen, J. J.
  2003; 149: 2585-2596
- **Detecting putative orthologs** *BIOINFORMATICS*
  Wall, D. P., Fraser, H. B., Hirsh, A. E.
  2003; 19 (13): 1710-1711
- **Evolutionary patterns of codon usage in the chloroplast gene rbcL** *JOURNAL OF MOLECULAR EVOLUTION*
  Wall, D. P., Herbeck, J. T.
  2003; 56 (6): 673-688
- **A simple dependence between protein evolution rate and the number of protein-protein interactions** *BMC EVOLUTIONARY BIOLOGY*
  Fraser, H. B., Wall, D. P., Hirsh, A. E.
  2003; 3
- **Use of the nuclear gene glyceraldehyde 3-phosphate dehydrogenase for phylogeny reconstruction of recently diverged lineages in Mitthyridium (Musci : Calymperaceae)** *MOLECULAR PHYLOGENETICS AND EVOLUTION*
  Wall, D. P.
  2002; 25 (1): 10-26
- **Phylogenetic relationships within the haplolepideous mosses** *BRYOLOGIST*
  La Farge, C., Mishler, B. D., Wheeler, J. A., Wall, D. P., Johannes, K., Schaffer, S., Shaw, A. J.
  2000; 103 (2): 257–76
- **Vegetation and elevational gradients within a bottomland hardwood forest of southeastern Louisiana** *AMERICAN MIDLAND NATURALIST*
  Wall, D. P., Darwin, S. P.
  1999; 142 (1): 17–30

- **SELLING EXPERIMENT TREATMENT** *HASTINGS CENTER REPORT*
  Oldham, R. K.
  1990; 20 (6): 43-44