

Purvesh Khatri

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Academic Appointments

- 2018 Associate Professor (May 1, 2018 – Present)
Stanford Institute for Immunity, Transplantation and Infection
Center for Biomedical Informatics Research
Department of Medicine, Stanford University
- 2014 Assistant Professor (October 1, 2014 – April 30, 2018)
Stanford Institute for Immunity, Transplantation and Infection
Center for Biomedical Informatics Research
Department of Medicine, Stanford University
- 2013 Acting Assistant Professor (April 1, 2013 – September 30, 2014)
Stanford Institute for Immunity, Transplantation and Infection
Center for Biomedical Informatics Research
Department of Medicine, Stanford University
- 2011 Research Associate (April 1, 2011 - March 31, 2013)
Divisions of Systems Medicine and Nephrology
Department of Pediatrics, Stanford University
- 2008 Postdoctoral Scholar (July 1, 2008 - March 31, 2011)
Center for Biomedical Informatics Research (BMIR)
Departments of Pediatrics and Medicine, Stanford University
- 2008 Part-time Faculty (January 2008 - April 2008)
Department of Computer Science, Wayne State University
- 2006 Postdoctoral Fellow (August 2006 - June 2008)
Intelligent Systems and Bioinformatics Laboratory
Department of Computer Science, Wayne State University
- 2000 Research Assistant (July 2000 - August 2006)
Intelligent Systems and Bioinformatics Laboratory
Department of Computer Science, Wayne State University
- 2003 Research Scientist (January 2003 - June 2004)
Bioinformatics cell, Telemedicine and Advanced Technology Research Center, US Army Medical
Research and Materiel Command
- 2002 Teaching Assistant (August 2002 - December 2002)
Department of Computer Science, Wayne State University
- 2000 Research Assistant (July 2000 - August 2002)
Center for Molecular Medicine and Genetics, Wayne State University

Education

- 2008 Postdoctoral Scholar
Stanford University, Stanford, CA
- 2006 Ph.D. in Computer Science
Wayne State University, Detroit, MI
Thesis: Onto-Tools: Tools for Functional Design and Interpretation of High Throughput Gene
Expression Data

- 2006 M.S. Computer Science
Wayne State University, Detroit, MI
Thesis: Onto-Express: Tool for Functional Profiling of Gene Expression Data
- 1998 B.Eng. in Electronics Engineering
B.V.M. Engineering College, Sardar Patel University, Gujarat, India

Awards and Honors

- 2016 Selected one of the top 10 science advances of 2016 by NIAID for Andres-Terre *et al.* Immunity 2015
- 2016 Teaching award, Department of Medicine, Stanford University
- 2010 “Young Investigator Award” at American Transplant Congress 2010 for Meta-analysis of Solid Organ Transplant Data Sets Identifies Differentially Expressed microRNAs common in Heart, Kidney and Liver Allografts. (35 recipients out of more than 4,400 applicants worldwide)
- 2005 “Fast Breaking Paper” award in the field of Computer Science (Bioinformatics) for Khatri *et al.* Bioinformatics 2005 Sep; 21(18): 3587-3595 by ISI Thomson-Scientific Essential Science Indicator. According to ISI Thomson, these papers comprise the top 1% of papers in each field and each year (<http://esi-topics.com/fbp/2006/october06-SorinDraghici.html>)
- 2004 Graduate Research Assistant Recognition Award. Department of Computer Science, Wayne State University, Detroit, MI, April 2004
- 2003 Graduate Research Assistant Recognition Award. Department of Computer Science, Wayne State University, Detroit, MI, April 2003
- 2002 Graduate Research Assistant Recognition Award. Department of Computer Science, Wayne State University, Detroit, MI, April 2002

Scientific Committee Member

- 2012 Scientific Program Committee member for the Eighth International Conference on Data Integration in the Life Sciences (DILS 2012). June 28-29, 2012, University of Maryland, College Park, MD, USA.
- 2012 Scientific Program Committee member for the AMIA Summit on Translational Bioinformatics (TBI 2012). March 18-20, 2012. San Francisco, CA, USA.
- 2010 Chair for Special session on Machine Learning Applications in Bioinformatics and Computational Biology for the International Conference on Machine Learning and Applications (ICMLA) 2010. 12-14 Dec. 2010, Washington D.C., USA.
(http://www.icmla-conference.org/icmla10/CFP_SpecialSession7.html)
- 2009 Technical committee member for Special session on Machine Learning Applications in Bioinformatics and Computational Biology for the International Conference on Machine Learning and Applications (ICMLA) 2009.

Reviewer

Nature Biotechnology, Science Translational Medicine, Nucleic Acids Research, Public Library of Science (PLOS) Computational Biology, Bioinformatics, BMC Bioinformatics, BMC Genomics, BMC Medical Genomics, IEEE/ACM Transactions on Computational Biology and Bioinformatics, Journal of Biomedical Informatics, EMBO Molecular Medicine, Infection, Genetics and Evolution, Computational Statistics and Data Analysis, Drug Discovery Today, BioSystems

Student Mentoring

1. Yiran Liu, Cancer Biology, Research co-advisor (August 2019 – Present)
2. Ananthakrishnan Ganesan, ICME, Research advisor (August 2017 – Present)
3. Aditya Rao, Immunology, PhD, Research advisor (January 2017 – Present)

4. Lawrence Bai, Immunology, PhD, Research co-advisor (June 2017 – Present)
5. Madeleine Scott, MSTP, Research advisor (July 2016 – Present)
6. Kelly McGill, Immunology, PhD, Research co-advisor (with PJ Utz; January 2016 – Present)
7. Jiaying Toh, Immunology, PhD, Research co-advisor (with Olivia Martinez; April 2016 – Present)
8. Winn Haynes, Biomedical Informatics, PhD, Research co-advisor (with PJ Utz; February 2014 – Present)
9. Erika Bongen, Immunology, PhD, Research co-advisor (with PJ Utz; March 2014 – Present)
10. Marta Andres-Terre, Immunology, PhD, Research co-advisor (with Denise Monack; December 2013 – Present)
11. Tim Sweeney, Biomedical Informatics and resident (surgery), Research advisor (August 2013 – September 2015)
12. Matthew Daniel Li, Stanford Medical Student, 2nd year, Research advisor (July 2013 – May 2016)
13. Charles Liu, Volunteer and Stanford SIMR program, Research advisor (January 2012 – January 2014)
14. Andrew Liu, Stanford SIMR program, Research advisor (June 2010 - April 2011)

Publications

Peer-reviewed Journal Publications (indexed in PubMed)

1. Winston A. Haynes, D. James Haddon, Vivian K. Diep, Avani Khatri, Erika Bongen, Gloria Yiu, Imelda Balboni, Christopher R. Bolen, Rong Mao, Paul J. Utz[§], and Purvesh Khatri[§]. *Integrated, multi-cohort analysis reveals unified signature of systemic lupus erythematosus*. JCI Insight 2020 (in press). [§]co-senior authors
2. Blake J Schultz, Timothy Sweeney, Malcolm R DeBaun, Melissa Rimmel, Uros Midic, Purvesh Khatri, Michael J Gardner. *Pilot study of a novel serum mRNA gene panel for diagnosis of acute septic arthritis*. World Journal of Orthopedics 2019, 10(12):424-433.
3. Vivian E. Saper*, Guangbo Chen*, Gail H. Deutsch[†], R Paul. Guillerman[†], Johannes Birgmeier^{||}, Karthik Jagadeesh^{||}, Scott Canna[‡], Grant Schulert[‡], Robin Deterding, Jianpeng Xu, Ann N. Leung, Layla Bouzoubaa, Khalid Abulaban, Kevin Baszis, Edward M Behrens, James Birmingham, Alicia Casey, Michal Cidon, Randy Cron, Aliva De, Fabrizio De Benedetti, Ian Ferguson, Martha P. Fishman, Steven I. Goodman, Brent Graham, Alexei Grom, Kathleen Haines, Melissa Hazen, Lauren A. Henderson, Assunta Ho, Maria Ibarra, CJ Inman, Rita Jerath, Khulood Walid Khawaja, Daniel J Kingsbury, Marisa Klein-Gitelman, Khan Lai, Sivia Lapidus, Clara Lin, Jenny Lin, Deborah R. Liptzin, Diana Milojevic, Joy Mombourquette, Karen Onel, Seza Ozen, Maria Perez, Kathryn Phillippi, Sampath Prahalad, Suhas Radhakrishna, Adam Reinhardt, Mona Riskalla, Natalie Rosenwasser, Johannes Roth, Rayfel Schneider, Dieneke Schonenberg-Meinema, Susan Sheno, Judith A Smith, Hafize Emine Sonmez, Matthew L. Stoll, Christopher Towe, Sara O. Vargas, Richard K. Vehe, Lisa R. Young, Jacqueline Yang, Tushar Desai, Raymond Balise, Ying Lu, Lu Tian, Gil Bejerano, Mark M. Davis, Purvesh Khatri[§], Elizabeth D. Mellins[§] and the Childhood Arthritis and Rheumatology Research Alliance Registry Investigators. *Emergent high fatality lung disease in systemic juvenile arthritis*. Annals of Rheumatic Diseases 2019 (online first). *Co-first authors. [§]co-senior authors.
4. Erika Bongen, Hayley Lucian, Avani Khatri, Gabriela K Fragiadakis, Zachary B Bjornson, Gary P Nolan, Paul J Utz[§], Purvesh Khatri[§]. *Sex Differences in the Blood Transcriptome Identify Robust Changes in Immune Cell Proportions with Aging and Influenza Infection*. Cell Reports 2019, 29(7):1961-1973. [§]Co-senior authors.
5. Mathieu Le Gars, Christof Seiler, Alexander W. Kay, Nicholas L. Bayless, Elina Starosvetsky, Lindsay Moore, Shai S. Shen-Orr, Natali Aziz, Purvesh Khatri, Cornelia L. Dekker, Gary E. Swan, Mark M. Davis, Susan Holmes, Catherine A. Blish. *Pregnancy-Induced Alterations in NK Cell Phenotype and Function*. Frontiers in Immunology 2019, 10:2469.
6. Zinaida Good, Jacob Glanville, Marvin H Gee, Mark M Davis, Purvesh Khatri. *Computational and Systems Immunology: A Student's Perspective*. Trends in immunology 2019, 40(8):665-668.

7. Madeleine K D Scott, Katie Quinn, Qin Li, Robert Carroll, Hayley Warsinske, Francesco Vallania, Shirley Chen, Mary A Carns, Kathleen Aren, Jiehuan Sun, Kimberly Koloms, Jungwha Lee, Jessika Baral, Jonathan Kropski, Hongyu Zhao, Erica Herzog, Fernando J Martinez, Bethany B Moore, Monique Hinchcliff, Joshua Denny, Naftali Kaminski, Jose D Herazo-Maya, Nigam H Shah[§], Purvesh Khatri[§]. *Increased monocyte count as a cellular biomarker for poor outcomes in fibrotic diseases: a retrospective, multicentre cohort study*. The Lancet Respiratory Medicine 2019, 7(6):497-508. [§]Co-senior authors.
8. Peggie Cheung, Purvesh Khatri, Paul J Utz, Alex Kuo. *Single-cell technologies — studying rheumatic diseases one cell at a time*. Nature Reviews Rheumatology 2019, 15:340-354.
9. Lauren E Higdon*, Steven Schaffert*, Purvesh Khatri[§], Jonathan S Maltzman[§]. *Single-cell immune profiling in transplantation research*. American Journal of Transplantation 2019, 19:1278-1287. *Contributed equally. [§]Co-senior authors.
10. Hayley Warsinske, Rohit Vashisht, Purvesh Khatri. *Host-response-based gene signatures for tuberculosis diagnosis: A systematic comparison of 16 signatures*. PLoS Medicine 2019, 16(4):e1002786.
11. John V. Pluvinage, Michael S. Haney, Benjamin A. H. Smith, Jerry Sun, Tal Iram, Liana Bonanno, Lulin Li, Davis P. Lee, David W. Morgens, Andrew C. Yang, Steven R. Shuken, David Gate, Madeleine Scott, Purvesh Khatri, Jian Luo, Carolyn R. Bertozzi, Michael C. Bassik & Tony Wyss-Coray. *CD22 blockade restores homeostatic microglial phagocytosis in ageing brains*. Nature 2019, 558:187-192.
12. Ayelet Alpert, Yishai Pickman, Michael Leipold, Yael Rosenberg-Hasson, Xuhuai Ji, Renaud Gaujoux, Hadas Rabani, Elina Starosvetsky, Ksenya Kveler, Steven Schaffert, David Furman, Oren Caspi, Uri Rosenschein, Purvesh Khatri, Cornelia L. Dekker, Holden T. Maecker, Mark M. Davis, Shai S. Shen-Orr. *A clinically meaningful metric of immune age derived from high-dimensional longitudinal monitoring*. Nature Medicine 2019, 25:487-495.
13. Andrew J. Sweatt, Haley K. Hedlin, Vidhya Balasubramanian, Andrew Hsi, Lisa K. Blum, William H. Robinson, Francois Haddad, Allan Lawrie, Mark R. Nicolls, Marlene Rabinovitch, Purvesh Khatri, Roham T. Zamanian. *Identification of deep immune phenotypes in pulmonary arterial hypertension with unsupervised machine learning*. Circulation Research 2019, 124:904–919.
14. Makeda Robinson*, Timothy E. Sweeney*, Rina Barouch-Bentov, Malaya Kumar Sahoo, Larry Kalesinskas, Francesco Vallania, Ana Maria Sanz, Eliana Ortiz-Lasso, Ludwig Luis Albornoz, Fernando Rosso, Jose G. Montoya, Benjamin A. Pinsky, Purvesh Khatri[§], Shirit Einav[§]. *A novel prognostic gene set for the prediction of severe dengue*. Cell Reports 2019, 26(5):1104-1111. *Contributed equally. [§]Co-corresponding authors.
15. Svenja Dannewitz Prosseda, Xuefei Tian, Kazuya Kuramoto, Mario Boehm, Deepti Sudheendra, Kazuya Miyagawa, Fan Zhang, David Solow-Cordero, Joshua Saldivar, Eric Austin, James E. Loyd, Lisa Wheeler, Adam Andruska, Lingli Wang, Kay Huebner, Ross Metzger, Purvesh Khatri, Edda Spiekerkoetter. *Fragile Histidine Triad (FHIT), a novel modifier gene in pulmonary arterial hypertension*. American Journal of Respiratory and Critical Care Medicine 2019, 199(1):83-98.
16. Steven Schaffert, Purvesh Khatri. *Early life immunity in the era of systems biology: understanding development and disease*. Genome Medicine 2018 10:88.
17. Francesco Vallania, Andrew Tam, Shane Lofgren, Steven Schaffert, Tej D Azad, Erika Bongen, Winston Haynes, Meia Alsup, Michael Alonso, Mark Davis, Edgar Engleman, Purvesh Khatri. *Leveraging heterogeneity across multiple datasets increases cell-mixture deconvolution accuracy and reduces biological and technical biases*. Nature Communications 2018 9(4735).
18. Hayley C. Warsinske, Aditya M. Rao, Flora M. F. Moreira, Paulo Cesar P. Santos, Andrew B. Liu, Madeleine Scott, Stephaus T. Malherbe, Katharina Ronacher, Gerhard Walzl, Jill Winter, Timothy E. Sweeney, Julio Croda, Jason R. Andrews[§], Purvesh Khatri[§]. *Assessment of Validity of a Blood-Based 3-Gene Signature Score for Progression and Diagnosis of Tuberculosis, Disease Severity, and Treatment Response*. JAMA Network Open 2018 1(6):e183779. [§]Co-corresponding authors.
19. Roshni Roy Chowdhury, Francesco Vallania, Qiantian Yang, Fatoumatta Darboe, Adam Penn-Nicholson, Virginie Rozot, Cesar Joel Lopez Angel, Willem Hanekom, Mark M. Davis, Xinchun Chen,

- Thomas J. Scriba, Purvesh Khatri[§], Yueh-hsiu Chien[§]. *Immune system dynamics and protective correlates of M. tuberculosis infection*. Nature 2018 560:644-648. [§]Co-corresponding authors.
20. Erika Bongen, Francesco Vallania, Paul J Utz, Purvesh Khatri. *KLRD1-expressing natural killer cells predict influenza susceptibility*. Genome Medicine 2018 10(1):45.
 21. Peggie Cheung*, Francesco Vallania*, Mai Dvorak, Sarah E Chang, Steven Schaffert, Michele Donato, Aditya Rao, Rong Mao, Paul J. Utz[§], Purvesh Khatri[§], Alex J. Kuo[§]. *Single-cell epigenetics – Chromatin modification atlas unveiled by mass cytometry*. Clinical Immunology 2018 196:40-48. *Contributed equally. [§]Co-corresponding authors.
 22. Timothy E Sweeney[§], Tej D Azad, Michele Donato, Winston A Haynes, Thanneer M Perumal, Ricardo Henao, Jesús F Bermejo-Martin, Raquel Almansa, Eduardo Tamayo, Judith A Howrylak, Augustine Choi, Grant P Parnell, Benjamin Tang, Marshall Nichols, Christopher W Woods, Geoffrey S Ginsburg, Stephen F Kingsmore, Larsson Omberg, Lara M Mangravite, Hector R Wong, Ephraim L Tsalik, Raymond J Langley, Purvesh Khatri[§]. *Unsupervised analysis of transcriptomics in bacterial sepsis across multiple datasets reveals three robust clusters*. Critical Care Medicine. 2018, 46(6):915-925. [§]Co-corresponding authors.
 23. Peggie Cheung*, Francesco Vallania*, Hayley C. Warsinske, Michele Donato, Steven Schaffert, Sarah E. Chang, Mai Dvorak, Cornelia L. Dekker, Mark M. Davis, Paul J. Utz[§], Purvesh Khatri[§], Alex J. Kuo[§]. *Single-cell epigenetic landscape profiling of human immune system reveals increased variations at chromatin with aging*. Cell 2018, 173(6):1385-1397. *Contributed equally. [§]co-corresponding authors.
 24. Renaud Gaujoux*, Elina Starosvetsky*, Naama Maimon*, Francesco Vallania, Haggai Bar-Yosef, Sigal Pressman, Roni Weisshof, Idan Goren, Matti Waterman, Henit Yanai, Iris Dotan, Edmond Sabo, Yehuda Chowers[§], Purvesh Khatri[§], Shai S. Shen-Orr[§]. *A cell-centered meta-analysis reveals baseline predictors of anti-TNFa non-response in biopsy and blood of IBD patients*. Gut 2018. *Contributed equally, [§]Co-corresponding authors.
 25. Aurelie Tomczak, Jonathan M. Mortensen, Rainer Winnenburger, Charles Liu, Dominique T. Alessi, Varsha Swamy, Francesco Vallania, Shane Lofgren, Winston Haynes, Nigam H. Shah, Mark A. Musen, Purvesh Khatri. *Interpretation of biological experiments changes with evolution of Gene Ontology and its annotations*. Scientific Reports 2018, 8:5115.
 26. Charles S. Dela Cruz, Richard G. Wunderink, David C. Christiani, Stephania A. Cormier, Kristina Crothers, Claire M. Doerschuk, Scott E. Evans, Daniel R. Goldstein, Purvesh Khatri, Lester Kobzik, Jay K. Kolls, Bruce D. Levy, Mark L. Metersky, Michael S. Niederman, Roomi Nusrat, Carlos J. Orihuela, Paula Peyrani, Alice S. Prince, Julio A. Ramirez, Karen M. Ridge, Sanjay Sethi, Benjamin T. Suratt, Jacob I. Sznajder, Ephraim L. Tsalik, Allan J. Walkey, Sachin Yende, Neil R. Aggarwal, Elisabet V. Caler, Joseph P. Mizgerd. *Future Research Directions in Pneumonia: NHLBI Working Group Report*. American Journal of Respiratory and Critical Care Medicine 2018.
 27. Timothy E Sweeney*, Thanneer M Perumal*, Ricardo Henao, Marshall Nichols, Judith A Howrylak, Augustine M Choi, Jesús F Bermejo-Martin, Raquel Almansa, Eduardo Tamayo, Emma E Davenport, Katie L Burnham, Charles J Hinds, Julian C Knight, Christopher W Woods, Stephen F Kingsmore, Geoffrey S Ginsburg, Hector R Wong, Grant P Parnell, Benjamin Tang, Lyle L Moldawer, Frederick E Moore, Larsson Omberg, Purvesh Khatri[§], Ephraim L Tsalik[§], Lara M Mangravite[§], Raymond J Langley[§]. *A community approach to mortality prediction in sepsis via gene expression analysis*. Nature Communications 2018, 9:694. *Contributed equally, [§]Co-corresponding authors.
 28. Timothy E. Sweeney, Neal J. Thomas, Judie A. Howrylak, Hector R. Wong, MD, Angela J. Rogers[§], Purvesh Khatri[§]. *Multi-cohort analysis of whole-blood gene expression data does not form a robust diagnostic for Acute Respiratory Distress Syndrome*. Critical Care Medicine 2018, 46(2):244-251. [§]Co-corresponding authors.
 29. Tej D. Azad*, Michele Donato*, Line Heylen, Shai S Shen-Orr, Timothy E. Sweeney, Jonathan Scott Maltzman, Maarten Naesens, Purvesh Khatri. *Early dysregulation of inflammatory macrophages is a robust predictor of subclinical allograft injury and graft survival across transplanted organs*. JCI Insight 2018, 3(2):1-12. *Contributed equally.
 30. Marvin H. Gee*, Arnold Han*, Shane M. Lofgren, John F. Beausang, Juan L. Mendoza, Michael E. Birnbaum, Michael T. Bethune, Suzanne Fischer, Xinbo Yang, Raquel Gomez-Eerland, David B.

Bingham, Leah V. Sibener, Ricardo A. Fernandes, Andrew Velasco, David Baltimore, Ton N. Schumacher, Purvesh Khatri, Stephen R. Quake, Mark M. Davis, K. Christopher Garcia. *Antigen identification from orphan T cell receptors expressed on tumor-infiltrating lymphocytes*. Cell 2017, 172(3):549-563.
*Contributed equally

31. Winston A Haynes, Aurelie Tomczak, Purvesh Khatri. *Gene annotation bias impedes biomedical research*. Scientific Reports 2018, 8(1):1362.
32. Zhifen Yang, Jing Zhang, Dadi Jiang, Purvesh Khatri, David E. Solow-Cordero, Diego A.S. Toesca, Constantinos Koumenis, Nicholas C. Denko, Amato J. Giaccia, Quynh-Thu Le and Albert C. Koong. *A Human Genome-wide RNAi Screen Reveals Diverse Modulators that Mediate IRE1a-XBP1 Activation*. Molecular Cancer Research 2018, 16(5):745-753.
33. Hector R Wong, Timothy E Sweeney, Kimberly W Hart, Purvesh Khatri, Christopher J Lindsell. *Pediatric sepsis endotypes among adults with sepsis*. Crit Care Med. 2017, Dec;45(12):e1289-91.
34. Steven L. Raymond, María Cecilia López Henry V. Baker, Shawn D. Larson, Philip A. Efron, Timothy E. Sweeney, Purvesh Khatri, Lyle L. Moldawer, James L. Wynn. *Unique transcriptomic response to sepsis is observed among patients of different age groups*. PLOS One. 2017, 12(9): e0184159.
35. Timothy E Sweeney, Shane Lofgren, Purvesh Khatri[§], Angela J Rogers[§]. *Gene Expression Analysis to Assess the Relevance of Rodent Models to Human Lung Injury*. American Journal of Respiratory and Cellular Molecular Biology. 2017, 57(2):184-92. [§]Co-corresponding authors.
36. HIPC-CHI Signatures Team and HIPC-I Consortium. *Multicohort analysis reveals baseline transcriptional predictors of influenza vaccination responses*. Science Immunology 2017, 2: eaal4656.
37. Dadi Jiang, Brandon Turner, Jie Song, Ruijiang Li, Maximilian Diehn, Quynh-Thu Le, Purvesh Khatri, Albert C Koong. *Comprehensive Analysis of the Unfolded Protein Response in Breast Cancer Subtypes*. JCO Precision Oncology 2017, 1:1-9.
38. Mitchell E Garber, Alok Saldanha, Joel S Parker, Wendell D Jones, Katri Kaukinen, Kaija Laurila, Marja-Leena Lähdeaho, **Purvesh Khatri**, Chaitan Khosla, Daniel C Adelman, Markku Mäki. *A B-Cell Gene Signature Correlates with the Extent of Gluten-induced Intestinal Injury in Celiac Disease*. Cellular and Molecular Gastroenterology and Hepatology **2017**, 4(1):1:17.
39. Timothy E Sweeney and **Purvesh Khatri**. *Generalizable biomarkers in critical care: toward precision medicine*. Critical Care Medicine **2017**, 45(6):934-939.
40. Timothy E. Sweeney, James L. Wynn, María Cernada, Eva Serna, Hector R. Wong, Henry V. Baker, Máximo Vento, and **Purvesh Khatri**. *Validation of the Sepsis MetaScore for Diagnosis of Neonatal Sepsis*. Journal of the Pediatric Infectious Diseases Society **2017**.
41. Timothy E Sweeney, Purvesh Khatri. *The Authors' Reply to Turning a New Page in Sepsis Molecular Diagnostics Necessitates Context-Specific Biomarkers*. Critical Care Medicine. 2017, 45(4):e457.
42. Timothy E Sweeney, Purvesh Khatri. *The Authors' Reply to The Importance of Avoiding Conclusions for the Right Diagnostic in the Wrong Population*. Critical Care Medicine. 2017, 45(3):e341.
43. William Yuan, Dadi Jiang, Dhanya K. Nambiar, Lydia P. Liew, Michael Patrick Hay, Joshua Bloomstein, Peter Lu, Brandon Turner, Quynh-The Le, Robert Tibshirani, **Purvesh Khatri**, Mark Gerard Moloney, and Albert C. Koong. *Chemical Space Mimicry for Drug Discovery*. Journal of Chemical Information and Modeling **2017** 57(4):875-882.
44. Timothy E Sweeney and **Purvesh Khatri**. *Septic Cardiomyopathy: Getting to the Heart of the Matter*. Critical Care Medicine **2017**, 45(3):556-557.
45. Adrian Vallejo, Naiara Perurena, Elisabet Guruceaga, Pawel K Mazur, Susana Martinez-Canarias, Carolina Zandueta, Karmele Valencia, Andrea Arricibita, Dana Gwinn, Leanne C Sayles, Chen-Hua Chuang, Laura Guembe, Peter Bailey, David K Chang, Andrew Biankin, Mariano Ponz-Sarvisé, Jesper B Andersen, **Purvesh Khatri**, Aline Bozec, E Alejandro Sweet-Cordero, Julien Sage, Fernando Lecanda, Silve Vicent. *An integrative approach unveils FOSL1 as an oncogene vulnerability in KRAS-driven lung and pancreatic cancer*. Nature Communications **2017**, 8:14294.
46. Timothy E Sweeney, Winston A Haynes, Francesco Vallania, John P Ioannidis, **Purvesh Khatri**. *Methods to increase reproducibility in differential gene expression via meta-analysis*. Nucleic Acids Research **2016**:gkw797.

47. Timothy E Sweeney and **Purvesh Khatri**. *Benchmarking sepsis gene expression diagnostics using public data*. *Critical Care Medicine* **2016**, 45(1):1-10.
48. Timothy E Sweeney and **Purvesh Khatri**. *Hospital-acquired Pneumonia: A Host of Factors*. *American Journal of Respiratory and Critical Care Medicine* **2017**, 194(11):1309-1311.
49. Madeleine Scott, Francesco Vallania, **Purvesh Khatri**. *Meta-analysis of continuous phenotypes identifies a gene signature that correlates with COPD disease status*. *Pacific Symposium on Biocomputing* **2017**, 22:266-275.
50. Winston A Haynes, Francesco Vallania, Charles Liu, Erika Bongen, Aurelie Tomczak, Marta Andres-Terrè, Shane Lofgren, Andrew Tam, Cole A Deisseroth, Matthew D Li, Timothy E Sweeney, **Purvesh Khatri**. *Empowering multi-cohort gene expression analysis to increase reproducibility*. *Pacific Symposium on Biocomputing* **2017**, 22:144-153.
51. Shane Lofgren*, Monique Hinchcliff*, Mary Carns, Tammara Wood, Kathleen Aren, Esperanza Arroyo, Peggie Cheung, Alex Kuo, Antonia Valenzuela, Anna Haemel, Paul J Wolters, Jessica Gordon, Robert Spiera, Shervin Assassi, Francesco Boin, Lorinda Chung, David Fiorentino, Paul J Utz, Michael Whitfield, **Purvesh Khatri**. *Integrated, Multi-cohort Analysis of Systemic Sclerosis Identifies Robust Transcriptional Signature of Disease Severity*. *JCI Insight* **2016**, 1(21):e89073. *Contributed equally.
52. Brooke A Napier, Sky W Brubaker, Timothy E Sweeney, Patrick Monette, Gregory H Rothmeier, Nina A Gertszov, Andreas Puschnik, Jan E Carette, **Purvesh Khatri**, Denise M Monack. *Complement pathway amplifies caspase-11-dependent cell death and endotoxin-induced sepsis severity*. *Journal of Experimental Medicine* **2016** 213(11): 2365-2382.
53. Timothy E Sweeney, Hector R Wong, **Purvesh Khatri**. *Robust classification of bacterial and viral infections via integrated host gene expression diagnosis*. *Science Translational Medicine* **2016**, 8(346):346ra91.
54. Timothy E Sweeney, Purvesh Khatri. *Blood transcriptional signatures for tuberculosis diagnosis: a glass half-empty perspective – Authors’ reply*. *The Lancet Respiratory Medicine*. 2016, 4(6):e29.
55. Timothy E Sweeney, Lindsay Braviak, Cristina M Tato, **Purvesh Khatri**. *Genome-wide expression for diagnosis of pulmonary tuberculosis: a multicohort analysis*. *Lancet Respiratory Medicine* **2016**, 4(3):213-224.
56. Marta Andres-Terre, Helen M McGuire, Yannick Pouliot, Erika Bongen, Timothy E Sweeney, Cristina M Tato, **Purvesh Khatri**. *Integrated, multi-cohort analysis identifies conserved transcriptional signature across multiple respiratory viruses*. *Immunity* **2015**, 43:1199-1211.
57. Timothy E Sweeney and **Purvesh Khatri**. *Comprehensive Validation of the FAIM3: PLAC8 Ratio in Time-matched Public Gene Expression Data*. *American Journal of Respiratory and Critical Care Medicine* **2015** 192(10):1260-1261.
58. Mark Musen, Carol A Bean, Kei-Hoi Cheung, Michel Dumontier, Kim A Durante, Olivier Gevaert, Alejandra Gonzalez-Beltran, **Purvesh Khatri**, Steven H Kleinstein, Martin J O’Connor, Yannick Pouliot, Philippe Rocca-Serra, Susanna-Assunta Sansone, Jeffrey A Wiser. *The center for expanded data annotation and retrieval*. *Journal of the American Medical Informatics Association* **2015**, 22(6):1148-1152.
59. Pawel K Mazur, Alexander Herner, Stephano S Mello, Matthias Wirth, Simone Hausmann, Francisco J Sánchez-Rivera, Shane M Lofgren, Timo Kuschma, Stephan A Hahn, Deepak Vangala, Marija Trajkovic-Arsic, Aayush Gupta, Irina Heid, Peter B Noël, Rickmer Braren, Mert Erkan, Jörg Kleeff, Bence Sipos, Leanne C Sayles, Mathias Heikenwalder, Elisabeth Heßmann, Volker Ellenrieder, Irene Esposito, Tyler Jacks, James E Bradner, **Purvesh Khatri**, E Alejandro Sweet-Cordero, Laura D Attardi, Roland M Schmid, Guenter Schneider, Julien Sage, Jens T Siveke. *Combined inhibition of BET family proteins and histone deacetylases as a potential epigenetics-based therapy for pancreatic ductal adenocarcinoma*. *Nature Medicine* **2015**, 21:1163-1171.
60. Timothy E. Sweeney, Aaditya Shidham, Hector R. Wong, **Purvesh Khatri**. *A Comprehensive Time-Course-Based Multi-Cohort Analysis of Sepsis and Sterile Inflammation Reveals a Robust Diagnostic Gene Set*. *Science Translational Medicine* **2015**, 7(287):287ra71.
61. Matthew D Li, Terry C Burns, Alexander A Morgan, and **Purvesh Khatri**. *Integrated Multi-Cohort Transcriptional Meta-Analysis of Neurodegenerative Diseases*. *Acta Neuropathologica Communications* **2014**, 2(1):1-23.

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63. Ron Chen*, **Purvesh Khatri***, Pawel K. Mazur, Melanie Polin, Yanyan Zheng, Dedeepya Vaka, Chuong D. Hoang, Joseph Shrager, Yue Xu, Silvestre Vicent, Atul Butte, and Alejandro Sweet-Cordero. *A meta-analysis of lung cancer gene expression identifies PTK7 as a survival gene in lung adenocarcinoma*. Cancer Research **2014**, 74(10): 2892-2902. *Co-first authors.
64. Alexander A. Morgan, Matthew D Li, Achal S Achrol, **Purvesh Khatri**, and Samuel H Cheshier. *Multiplex meta-analysis of medulloblastoma expression studies with external controls*. Pacific Symposium on Biocomputing **2014**, 19:99-109.
65. Nadine S. Jahchan, Joel T. Dudley, Pawel K. Mazur, Natasha Flores, Dian Yang, Alec Palmerton, Anne-Flore Zmoos, Dedeepya Vaka, Kim Q.T. Tran, Margaret Zhou, Karolina Krasinska, Jonathan W. Riess, Joel W. Neal, **Purvesh Khatri**, Kwon S. Park, Atul J. Butte, and Julien Sage. *A Drug Repositioning Approach Identifies Tricyclic Antidepressants as Inhibitors of Small Cell Lung Cancer and Other Neuroendocrine Tumors*. Cancer Discovery **2013**, 3(12): 1364-1377.
66. **Purvesh Khatri**, Silke Roedder, Naoyuki Kimura, Alexander A Morgan, Matthew Vitalone, Michael P Fischbein, Robert C Robbins, Atul J Butte and Minnie M Sarwal. *Gene expression meta-analysis identifies core immune response module and suggests novel therapeutics in solid organ transplant rejection*. Journal of Experimental Medicine **2013**, 210:2205-2221. (Identified as “moving the field towards finishing line” in the accompanying editorial.)
67. Silvestre Vicent, Leanne C. Sayles, Dedeepya Vaka, **Purvesh Khatri**, Olivier Gevaert, Ron Chen, Yanyan Zheng, Anna K. Gillespie, Nicole Clarke, Yue Xu, Joseph Shrager, Choang Hoang, Sylvia Plevritis, Atul Butte, E. Alejandro Sweet-Cordero. *Cross-species functional analysis of cancer-associated fibroblasts identifies a critical role for CLCF1 and IL6 in non-small cell lung cancer in vivo*. Cancer Research **2012**, 72(22):5744-5756.
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69. Tara K Sigdel, Li Li, Tim Q Tran, **Purvesh Khatri**, Maarten Naesens, Poonam Sansanwal, Hong Dai, Szu-chuan Hsieh, and Minnie Sarwal. *Non-HLA Antibodies to Immunogenic Epitopes Predict the Evolution of Chronic Renal Allograft Injury*. Journal of the American Society of Nephrology **2012**, 23 (4), 750-763.
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71. Tara Sigdel, Sang Woo, Hong Dai, **Purvesh Khatri**, Bryan Myers, Minnie Sarwal, Richard Lafayette. *Integrative Antibiotics Identifies Novel Autoantibody Biomarkers for IgA nephropathy*. Clinical Journal of the American Society of Nephrology **2011**, 6 (12), 2775-2784.
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74. Maarten Naesens, **Purvesh Khatri**, Li Li, Tara Sigdel, Rong Chen, Atul Butte, Oscar Silvatierra, Minnie Sarwal. *Progressive histological damage in renal allografts is associated with expression of innate and adaptive immunity genes*. Kidney International **2011**, 80:1364-1376.
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79. **Purvesh Khatri** and Minnie Sarwal. *Using Gene Arrays in Diagnosis of Rejection*. *Current Opinions in Organ Transplant* **2009**, 14(1): 34-39.
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82. Sorin Draghici, **Purvesh Khatri**, Adi Laurentiu Tarca, Kashyap Amin, Arina Done, Calin Voichita, Constantin Georgescu and Roberto Romero. *A systems biology approach for pathway level analysis*. *Genome Research* **2007**, 17(10): 1537-1545.
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86. **Purvesh Khatri**, Valmik Desai, Adi L. Tarca, Sivakumar Sellamuthu, Derek E. Wildman, Roberto Romero, and Sorin Draghici. *New Onto-Tools: Promoter-Express, nsSNPCounter, and Onto-Translate*. *Nucleic Acids Research* **2006**, Jul; 34:W626-W631.
87. Sorin Draghici, **Purvesh Khatri**, Aron C. Eklund, and Zoltan Szallasi. *Reliability and reproducibility issues in DNA microarray measurements*. *Trends in Genetics* **2006**, Feb; 22(2): 101-109.
88. **Purvesh Khatri** and Sorin Draghici. *Ontological analysis of gene expression data: current tools, limitations, and open problems*. *Bioinformatics* **2005**, Sep: 21(18): 3587-3595. (Received "Fast Breaking Paper" award by ISI Thompson, <http://esi-topics.com/fbp/fbp-october2006.html>).
89. **Purvesh Khatri**, Bogdan Done, Archana Rao, Arina Done, and Sorin Draghici. *A semantic analysis of the annotations of the human genome*. *Bioinformatics* **2005**, Aug; 21(16): 3416-3421.
90. **Purvesh Khatri**, Sivakumar Sellamuthu, Pooja Malhotra, Kashyap Amin, Arina Done, and Sorin Draghici. *Recent additions and improvements to the Onto-Tools*. *Nucleic Acids Research* **2005**, Jul; 33:W762-W765.
91. Sorin Draghici*, **Purvesh Khatri***, Yanhong Liu, Kitty J. Chase, Elizabeth A. Bode, David A. Kulesh, Leonard P. Wasieloski, David A. Norwood, and Jaques Reifman. *Identification of Genomic Signatures for the Design of Assays for the Detection and Monitoring of Anthrax Threats*. *Pacific Symposium on Biocomputing* **2005**, 2480-259. *Joint first authors.
92. **Purvesh Khatri**, Pratik Bhavsar, Gagandeep Bawa, and Sorin Draghici. *Onto-Tools: An ensemble of web-accessible, ontology based tools for the functional design and interpretation of high throughput gene expression experiments*. *Nucleic Acids Research* **2004**, Jul; 32:W449-W456.

93. Sorin Draghici, **Purvesh Khatri**, Pratik Bhavsar, Abhik Shah, Stephen A. Krawetz, and Michael Tainsky. *Onto-Tools, the toolkit of the modern biologist: Onto-Express, Onto-Compare, Onto-Design and Onto-Translate*. Nucleic Acids Research **2003**, Jul;31 (13):3775-3781.
94. Sorin Draghici, **Purvesh Khatri**, Abhik Shah, and Michael Tainsky. *Assessing the functional bias of commercial microarrays using the Onto-Compare database*. Biotechniques **2003**, Mar; Suppl: 55-61.
95. Sorin Draghici, **Purvesh Khatri**, Rui P. Martins, G. Charles Ostermeier, and Stephen A. Krawetz. *Global functional profiling of gene expression*. Genomics **2003**, Feb; 81(2): 98-104.
96. G. Charles Ostermeier, David J. Dix, David Miller, **Purvesh Khatri**, and Stephen A. Krawetz. *Spermatozoal RNA profiles of normal fertile men*. Lancet **2002**, Sep; 360 (9335): 772-777.
97. **Purvesh Khatri**, Sorin Draghici, G. Charles Ostermeier, and Stephen A. Krawetz. *Profiling Gene Expression Utilizing Onto-Express*. Genomics **2002**, Feb; 79(2):266-270.

Book Chapters

1. **Purvesh Khatri**. *Knowledge Base-Driven Pathway Analysis*. A Bioinformatics Guide for Molecular Biologists Cold Spring Harbor Laboratory Press **2014**.
2. **Purvesh Khatri** and Minnie M Sarwal. *Functional Pathway Analysis for Understanding Immunologic Signature of Rejection: Current Approaches and Outstanding Challenges*. Immunologic Signatures of Rejection (Springer New York), 239-256, **2011**
3. **Purvesh Khatri**, Sorin Draghici, Adi L. Tarca, Sonia S. Hassan, Roberto Romero. *A system biology approach for the steady-state analysis of gene signalling networks*. Progress in Pattern Recognition, Image Analysis and Applications, Lecture Notes in Computer Science. 4756:32-41, November **2007**
4. **Purvesh Khatri** and Sorin Draghici. *A comparison of existing tools for ontological analysis of gene expression data*. Encyclopedia of Genetics, Genomics, Proteomics and Bioinformatics. John Wiley & Sons. October **2005**

Peer-reviewed Conference Publications

1. Calin Voichita, **Purvesh Khatri**, Sorin Draghici. *Identifying Uncertainty Regions in Support Vector Machines Using Geometric Margin and Convex Hulls*. IEEE World Congress on Computational Intelligence, WCCI 2008, Hong Kong, China. June 1-6, **2008**
2. **Purvesh Khatri**, Sorin Draghici, Adi L. Tarca, Sonia S. Hassan, Roberto Romero. *A system biology approach for the steady-state analysis of gene signalling networks*. 12th Iberoamerican Congress on Pattern Recognition, CIARP 2007, Valparaiso, Chile. November 13-16, **2007**
3. Bogdan Done, **Purvesh Khatri**, Arina Done, Sorin Draghici. *Semantic analysis of genome annotations using weighting schemes*. 2007 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology (IEEE CIBCB 2007). Honolulu, Hawaii, April 1-5, **2007**
4. Valmik Desai, **Purvesh Khatri**, Arina Done, Aviva Friedman, Michael Tainsky, and Sorin Draghici. *A Novel Bioinformatics Technique for Predicting Condition-Specific Transcription Factor Binding Sites*. 2006 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology (IEEE CIBCB 2005). San Diego, CA. November 14-15, **2005**

Conference Podium Presentations

1. Francesco Vallania, Andrew Tam, Shane Lofgren, Steven Schaffert, Erika Bongen, Michael Alonso, Mark Davis, Ed Engleman and **Purvesh Khatri**. *Leveraging heterogeneity in public data to reduce bias and increase accuracy of cell-mixture deconvolution*. ISMB July 2017, Prague.
2. Winston Haynes, Rohit Vashisht, Francesco Vallania, Greg Caskins, Charles Liu, Erika Bongen, Shane Lofgren, Paul J Utz, Timothy E Sweeney, Nigam Shah, and **Purvesh Khatri**. *Understanding human disease relationships through integrated molecular and clinical analysis*. ISMB July 2017, Prague.

3. Michele Donato, Tej Deepak Azad, Line Heylen, Shai Shen-Orr, Timothy Sweeney, Maarten Naesens, **Purvesh Khatri**. *Dysregulated innate immune response is a robust marker of allograft injury and survival across all transplanted organs*. AMIA-TBI March 27, **2017**.
4. Shane Lofgren, Monique Hinchcliff, Mary Carns, Tammara Wood, Kathleen Aren, Esperanza Arroyo, Peggie Cheung, Alex Kuo, Antonia Valenzuela, Anna Haemel, Paul Wolters, Jessica Gordon, Robert Spiera, Shervin Assassi, Francesco Boin, Lorinda Chung, David Fiorentino, PJ Utz, Michael Whitfield, **Purvesh Khatri**. *Multi-cohort Analysis of Systemic Sclerosis Identifies Robust Transcriptional Signature of Disease Severity*. AMIA-TBI March 27, **2017**.
5. Erika Bongen, Francesco Vallania, PJ Utz, Timothy Sweeney, **Purvesh Khatri**. *Sex differences in immune system gene expression*. AMIA-TBI March 27, **2017**.
6. Winston Haynes, Rohit Vashisht, Francesco Vallania, Charles Liu, Greg Gaskin, Erika Bongen, Shane Lofgren, Timothy Sweeney, PJ Utz, Nigam Shah, **Purvesh Khatri**. *Understanding human disease relationships through integrated molecular and clinical analysis*. AMIA-TBI March 27, **2017**.
7. Aurelie Tomczak, Jonathan Mortensen, Rainer Winnenbourg, Winston Haynes, Charles Liu, Dominique Alessi, Francesco Vallania, Shane Lofgren, Varsha Swamy, Nigam Shah, Mark Musen, **Purvesh Khatri**. *Effect of evolution of the Gene Ontology on interpretation of experiments: implications for reproducibility*. AMIA-TBI March 27, **2017**.
8. Francesco Vallania, Andrew Tam, Shane Lofgren, Michael Alonso, Edgar Engleman, **Purvesh Khatri**. *immunoStates: a new strategy to remove platform and disease bias in cell- mixture deconvolution*. AMIA-TBI March 27, **2017**.
9. Timothy E Sweeney, Aaditya Shidham, Hector R Wong, **Purvesh Khatri**. *A Comprehensive Time-Course-Based Meta-Analysis of Sepsis and Sterile Inflammation Reveals a Robust Diagnostic Gene Set*. AMIA-TBI Mar 25, **2015**.
10. Timothy E Sweeney, Aaditya Shidham, Hector R Wong, **Purvesh Khatri**. "1002: A Comprehensive Time-Course-Based Meta-Analysis of Sepsis and Sterile Inflammation Reveals a Robust Discriminatory Gene Set". *Critical Care Medicine* 42 (12), A1601, **2014**.
11. Timothy E Sweeney, **Purvesh Khatri**. *Gene Expression Can Robustly Separate Infectious and Non-Infectious Inflammation*. *Journal of the American College of Surgeons* 219 (3), S43. American College of Surgeons Clinical Congress, **2014**.
12. Michael Januszzyk, Michael Sorkin, Robert C. Rennert, Geoffrey C. Gurtner, **Purvesh Khatri**, Atul J. Butte. *Identification of Transcriptionally-Defined Cancer Subpopulations Through Integration of Public Microarray Data with Single Cell Gene Expression Profiling*. AMIA 2014 Joint Summits on Translational Science, **2014**.
13. **Purvesh Khatri**. *Novel Method for Meta-analysis of Acute Rejection across Multiple Organ Data Sets Identifies a Core Immune Response Module for Repositioning Novel Therapeutics in Transplantation*. 2012 Summit on Translational Bioinformatics (TBI). San Francisco, CA, March 19-23, **2012**.
14. **Purvesh Khatri**. *A common immune response module for acute rejection across multiple organs can reposition novel therapeutics for organ transplantation*. 3rd International Conference on Transplantomics and Biomarkers in Organ Transplantation. La Jolla, CA, March 8-10, **2012**.
15. **Purvesh Khatri**, Shai Shen-Orr, Robert Tibshirani, Atul Butte, Minnie Sarwal. *Novel Cell-type Specific Deconvolution of Whole-Blood Gene Expression Profiles in Renal Acute Rejection*. American Transplant Congress, San Diego, USA, May 1-5, **2010**.
16. **Purvesh Khatri**, Richard Hayden Jones, Atul J Butte, Minnie M Sarwal. *Meta-analysis of Solid Organ Transplant Data Sets Identifies Differentially Expressed microRNAs common in Heart, Kidney and Liver Allografts*. American Transplant Congress, San Diego, USA, May 1-5, **2010**. (Selected for "Young Investigator Award")
17. **Purvesh Khatri**, Adi Laurentiu Tarca, Kashyap Amin, Arina Done, Calin Voichita, Constantin Georgescu, Roberto Romero, and Sorin Draghici. *A systems biology approach for steady-state analysis of signaling pathways*. 16th Annual International Conference on Intelligent Systems for Molecular Biology, Toronto, Canada, July 19-23, **2008**.

18. Sorin Draghici and **Purvesh Khatri**. *A systems biology approach for pathway level analysis*. Pacific Symposium on Biocomputing (PSB 2007). Wailea, Maui, January 3-7, **2007**.
19. Sorin Draghici, **Purvesh Khatri**, Constantin Georgescu, Adi Laurentiu Tarca. *A systems biology approach for pathway level analysis*. Pacific Symposium on Biocomputing (PSB 2007). Wailea, Maui, January 3-7, **2007**.
20. Sorin Draghici, Kashyap Amin, Arina Done, and **Purvesh Khatri**. *Beyond classical statistics - A systems biology approach for pathway level analysis*. 14th Annual International Conference on Intelligent Systems for Molecular Biology (ISMB), 2006. Fortaleza, Brazil, August 6-10, **2006**.
21. Sivakumar Sellamuthu, **Purvesh Khatri**, and Sorin Draghici. *Onto-Translate: Resolving name space issues in the existing biological annotation databases*. 10th Annual International Conference on Research in Computational Molecular Biology (RECOMB), Venice Lido, Italy. April 2-5, **2006**.
22. *Recent additions and improvements to the Onto-Tools*. Gene Ontology Consortium User Meeting. University of Bergen, Bergen, Norway, September 14-15, **2005**.
23. *Onto-Tools, A toolset for modern biologists: Onto-Express, Onto-Compare, Onto-Design, Onto-Translate and Onto-Miner*. Great Lakes Bioinformatics. Michigan State University, East Lansing, Michigan, Aug 19-20, **2003**.

Invited Talks

1. Invited talk, 3rd international workshop on clinical tolerance, Stanford, CA. *Identification and validation of robust gene signatures for graft injury using heterogeneous public data*. September 8-9, **2017**.
2. Invited talk, 10th integrative biology symposium, Hanover, NH. *Adventures of a data parasite: accelerating translational medicine using public data*. May 23, **2017**
3. Invited talk, SystemX alliance workshop on Big Data, Diagnostic Devices and Bioelectric Interfaces in Medicine, Stanford, CA. *Leveraging heterogeneity in public data for precision medicine*. April 18, **2017**
4. Invited talk, Statistics and Genomics Seminar, University of California, Berkeley, CA. *Data Re-Use is Not Parasitism: Translational Medicine Using Public Data*. April 13, **2017**
5. Keynote, Grand Challenges India, New Delhi, India. *Igniting Young Minds: translational medicine using public data*. March 24, **2017**
6. Invited talk, CHI Molecular Tri-Conference, San Francisco, CA. *Accelerating diagnosis and therapy of infectious diseases using public heterogeneous data*. February 20-22, **2017**
7. Invited talk, Madagascar: a crucible for science, health and the environment. Stanford, CA. *Leveraging heterogeneity in public data for translational medicine*. February 8, **2017**
8. Invited talk, Pacific Symposium on Biocomputing, Big Island Hawaii, HI. *Adventures of a "data parasite": translational medicine using heterogeneous data*. January 3, **2017**
9. Invited talk, Collaborative Centers for Human Immunology, Bethesda, MD. *Translational medicine using heterogeneous public data*. November 30-December 2, **2016**
10. Invited talk, American Medical Informatics Association, Chicago, IL. *Re-use is not parasitism*. November 13, **2016**
11. Invited talk, SCOT trial meeting, American College of Rheumatology, Washington, DC. *Integrated multi-cohort analysis of SSC skin*. November 12, **2016**
12. Invited talk, Cornell University, Ithaca, NY. *Adventures of a "data parasite": accelerating translational medicine using heterogeneous data*. November 11, **2016**
13. Invited talk, Grand Challenges, London, UK. *Adventures of a "data parasite": accelerating translational medicine using heterogeneous data*. October 26, **2016**
14. Invited talk, Cepheid, Sunnyvale, CA. *Host-response diagnostics for infectious diseases using public data*. September 9, **2016**
15. Invited talk, Grand rounds, Stanford University, Stanford, CA. *Adventures of a "data parasite": accelerating translational medicine using heterogeneous data*. August 10, **2016**

16. Invited talk, EternaCon, Stanford University, Stanford, CA. *Robust 3-gene signature for diagnosis of tuberculosis using public data*. July 16, **2016**
17. Invited talk, University of Alabama, Birmingham, AL. *Integrated multi-scale analysis of public data for translational medicine*. July 14-15, **2016**
18. Invited talk, Yale Symposium on Influenza, Yale University, New Haven, CT. *Accelerating translational medicine using public data*. June 24, **2016**
19. Invited talk, Summer school for computational immunology, Yale University, New Haven, CT. *Multi-cohort analysis of gene expression data*. June 22, **2016**
20. Invited talk, Summer school for computational immunology, Yale University, New Haven, CT. *Pathway analysis: current approaches and limitations*. June 21, **2016**
21. Invited talk, Grand rounds, University of Texas, Houston, TX. *Accelerating translational medicine using public data*. June 16-17, **2016**
22. Invited talk, 17th Annual UC Systemwide Bioengineering Symposium at University of California, San Francisco, CA. *Translational medicine using publicly available heterogeneous data*. June 14, **2016**
23. Invited talk, Big data bioinformatics, GLCbio, Boston, MA. *Accelerating biomarker discovery using public data*. May 25-27, **2016**
24. Invited talk, MedImmune, Mountain View, CA. *Leveraging heterogeneity in public data for translational medicine*. May 23, **2016**
25. Invited talk, One Health Symposium, Stanford, CA. *Accelerating translational medicine using heterogeneous public data*. April 30, **2016**
26. Invited talk, Grand rounds, Division of Infectious Diseases, Stanford University, Stanford, CA. *Adventures of a "data parasite": novel diagnostics and therapies using public data*. March 31, **2016**
27. Invited talk, Biomarkers in infectious diseases, GLCbio, San Diego, CA. *Accelerating biomarker discovery using public data*. March 21-23, **2016**
28. Invited talk, Scleroderma Research Foundation, San Francisco, CA. *Integrated multi-cohort analysis of systemic sclerosis*. March **2016**
29. Invited talk, CHI Molecular Tri-Conference (session chair and talk for infectious diseases diagnosis), San Francisco, CA. *Novel diagnostic approaches in infectious diseases*. March 7-9, **2016**
30. Invited talk, Arthritis Foundation, Atlanta, GA. *Systems approach for computational immunology*. February 23-24, **2016**
31. Invited talk, Grand rounds, Northwestern University, Chicago, IL. *Accelerating translational medicine using heterogeneous public data*. February 10-12, **2016**
32. Invited talk, Grand rounds, Pulmonary and Critical Care Medicine, Stanford, CA. *Translational medicine using public data*. September 18, **2015**
33. Invited talk, Big Data in Biomedicine, Stanford, CA. *Understanding immunology using public data*. May 20-22, **2015**
34. Invited talk, Arthritis Foundation, Atlanta, GA. *Framework for integrated multi-cohort analysis of molecular data*. May 13-14, **2015**
35. Invited talk, NIH Perinatology Research Branch, Detroit, MI. *Onto-Tools: toolkit for higher level analysis of gene expression data*. May **2013**
36. Keynote, Childhood Leukemia International Consortium, University of California, Berkeley, CA. *Translational medicine using multi-scale analysis of public data: studies in cancer and drug repositioning*. October 3, **2012**
37. Invited talk, Functional Genomics Data Society (FGED), Cambridge, MA. *Meta-analysis of public domain data sets for translational medicine*. January 25-26, **2012**
38. Invited talk, Institute for Digital Biology, Mississippi State University, Starkville, MS. *Onto-Tools: a toolkit for modern biologists*. May 20-22, **2008**
39. Invited talk, US Army Medical Research and Materiel Command, Fort Detrick, MD. *Onto-Expression: tool for identifying significant processes in high throughput gene expression data*. July 18, **2003**

40. Invited talk, The Frederick Forum on Bioinformatics and Chemoinformatics, National Cancer Institute and US Army Medical Research and Materiel Command, Fort Detrick, MD. *Data analysis for microarrays*. June 24-25, 2003

Patent Applications and Disclosures

1. Biomarkers for use in prognosis of mortality in critically ill patients. US patent 10,344,332 (Licensed to Inflammatrix, Inc.)
2. Methods for diagnosis of bacterial and viral infections. US provisional application no. 62/346,962 (Licensed to Inflammatrix, Inc.)
3. Methods for diagnosis of tuberculosis. US provisional application no. 62/241,506. (Licensed to Cepheid and Fasttrack Diagnostics)
4. Methods for diagnosis of sepsis. WO2016/145426A1 (Licensed to ChromaCode, Inc. and Inflammatrix, Inc.)
5. Biomarkers of ovarian cancer. US provisional patent application no. 14/914, 245. (Licensed to mProbe, Inc.)
6. Identification of new therapeutic uses for known therapeutic agents US provisional patent no. 14/361,668
7. Protein and Gene Biomarkers for Rejection of Organ Transplants. US provisional patent no. 9,535,075. WO/2011/119980. (Licensed to Organ-i)
8. Onto-Express: A Tool for Functional Profiling of Bioinformatics Data. January 2, 2002. US Patent Application No. 60/347,383.

Funding

Note: Amounts represent total cost per year for Dr. Khatri's group in each proposal.

ACTIVE

1U19AI109662 (Glenn) NIH/NIAID	04/01/2014 – 03/31/2020 Role: Co-I	2.4 calendar \$334,490/year
Project 5: Accelerating novel countermeasures against RNA viruses through repurposing. Advancing Broad Spectrum Host Targeting Antiviral Strategies to the Clinic		
R01 HL128734 (Spiekerkoetter, PI) NIH/NHLBI	05/01/2016 – 04/30/2021 Role: Co-I	0.6 calendar \$54,490/year
Targeting Novel BMPR2 modifiers in Pulmonary Hypertension with Repurposed Drugs		
R01AI125197 (Utz, PI) NIH/NIAID	07/01/2016 – 06/30/2021 Role: Co-I	1.2 calendar \$148,406/year
Influenza Vaccine Response Prediction using GMR sensors		
U19 AI057229 (Davis) NIH/NIAID	05/01/2014 – 04/30/2024 Role: Co-I	1.2 calendar \$129,727/year
Adaptive and innate immunity, memory and Repertoire in Vaccination and infection		
Bill & Melinda Gates Foundation	10/01/2016 – 09/30/2021 Role: PI	1.2 calendar \$485,813/year
Global Health-Vaccine Accelerator Program Infrastructure		
Bill & Melinda Gates Foundation	10/01/2018 – 09/30/2021 Role: Co-PI	1.2 calendar \$182,041/year
Understanding role of NK cells in Tuberculosis		

Bill & Melinda Gates Foundation 05/01/2018 – 04/30/2020 1.2 calendar
Role: PI \$55,018/year
RNA-seq analysis of BCG vaccine in non-human primates.

EMD Serono, Inc 03/15/2018 – 03/14/2020 0.3 calendar
Role: Co-PI \$70,739/year
Adaptive and innate immunity, memory and Repertoire in Vaccination and infection

W81XWH-18-1-0253 (Cantanzaro) 09/30/2018 – 09/29/2021 0.6 calendar
Department of Defense Role: Co-PI \$256,494/year
A Rapid Blood Test to Differentiate Latent Tuberculosis from Active Disease

Dr. Ralph & Marian Falk Medical Research Trust (Einav) 12/31/2018 – 12/30/2020 1.2 calendar
Role: Co-PI \$179,835/year
Towards predicting and preventing the development of severe dengue

Department of Defense (Einav) 09/30/2019 – 09/29/2022 1.2 calendar
Role: Co-I \$199,804/year
Immune mechanisms of pathogenesis and viral clearance in dengue patients

PENDING

Note: Amounts represent total cost for the proposal.

Immunometabolic phenotypes in adult severe asthma and disease progression (Levy) 04/01/2020 – 03/31/2025 1.2 calendar
Role: Site PI \$195,341/year
NIH/NHLBI

COMPLETED

(Khatri) 06/14/2017 – 06/13/2018 2.4 calendar
Vir Biotechnology, Inc. Role: PI \$2,041,000/year
Strategic efforts in computational immunology using public data

U54I117925 (Musen) 09/01/2014 – 08/31/2018 1.8 calendar
NIH Role: Co-I \$217,766/year
Center for Expanded Data Annotation and Retrieval

Bill & Melinda Gates Foundation (Davis) 09/01/2016 – 08/31/2019 0.6 calendar
Role: Co-I \$342,299/year
Analysis of the immune state of latent Mtb infection and its progression to active diseases

Gates Foundation (Khatri) 07/01/2015 – 06/30/2017 0.0 calendar
Gates Foundation Role: PI \$150,000/year
Optimization and validation of a whole-blood transcriptional signature to distinguish bacterial infections from viral infections in resource-limited settings

Integrative Omics of Macrophage-Vascular Interaction in Pulmonary Hypertension (Rabinovitch) 04/01/2015 – 03/31/2019 1.2 calendar
NIH Role: Co-I \$152,491/year
Integrative Omics of Macrophage-Vascular Interaction in Pulmonary Hypertension

U01AI089859 Infrastructure Opportunity Fund (Khatri) NIH Development of HIPC data standards to support cross-center projects	01/01/2014 -06/30/2015	1.2 calendar
Proposal to enhance Cell Ontology (Khatri) NIAID/NIH	07/01/2015 – 06/30/2016	0 calendar
AMP RA/SLE leadership center (Utz) NIAMS/NIH	06/15/2015 – 05/31/2017 Role: Co-I	0.6 calendar
Vaccination and Infection: Indicators of immunological health and responsiveness (Davis) NIAID/NIH Role: Co-I	07/15/2015 – 06/30/2016	0.5 calendar
Northrop Grumman (Khatri) Northrup Grumman	04/01/2015 – 09/29/2015	0.01 calendar
Protein Methyltransferases in pancreatic cancer (Sage) Lustgarten Foundation	01/01/2015 – 12/31/2015	0.2 calendar
Prospective Validation of a Three-Gene Set for Diagnosis of Tuberculosis and Prognosis of Treatment Response (Khatri/Andrews) SPADA	01/01/2016 – 12/31/2016 Role: PI	0% effort
Strategic effort in precision immunology – I-GPS (Altman) Pfizer	11/17/2015 – 11/16/2016	0% effort