CURRICULUM VITAE

NAME Kipp William Johnson, Ph.D.

Address Home Office

333 Schermerhorn Street 770 Lexington Avenue

Apartment 31M 14^{th} Floor

Brooklyn, New York 11217 New York, NY 10065

Website...... https://kippjohnson.com

LinkedIn..... https://www.linkedin.com/in/kippwjohnson/

Google Scholar https://bit.ly/2IsoL5t

EXPERIENCE Tempus Labs

Head of Translational Cardiology (February 2020-present)

Staff Scientist (July 2019-February 2020).

New York, NY

Oova, Inc

Co-founder and Clinical Data Lead 2016-July 2019. New York, NY

National Resident Matching Program

Student Member, Board of Directors

2015-2018. Washington, D.C.

EDUCATION Icahn School of Medicine at Mount Sinai, New York, NY

2014-present

M.D./Ph.D., Genomics and Data Science

- Ph.D. Dissertation: "Data Science for Precision Cardiology"
- Advisor: Joel T. Dudley, Ph.D.

The University of Chicago, Chicago, IL

2010-2014

B.S. (with honors) in Biological Sciences, Statistics Minor

• Honors Dissertation: "Molecular dynamics simulations of amyloid protofibrils"

Publications

2020

- 42. Chaudhry F, Hunt RJ, Hariharan P, Anand SK, Sanjay S, Kjoller EE, Bartlett CM, **Johnson, KW**, Levy PD, Noushmehr H, Lee IY. Machine Learning Applications in the Neuro ICU: A Solution to Big Data Mayhem? Front Neurol. 2020;11:554633
- 41. Chaudhry F, Kawai H, **Johnson, KW**, Narula N, Shekhar A, Chaudhry F, Nakahara T, Tanimoto T, Kim D, Adapoe MKMY, Blankenberg FG, Mattis JA, Pak KY, Levy PD, Ozaki Y, Arbustini E, Strauss HW, Petrov A, Fuster V, Narula J. Molecular Imaging of Apoptosis in Atherosclerosis by Targeting Cell Membrane Phospholipid Asymmetry. J Am Coll Cardiol. 2020 Oct;76(16):1862–1874
- 40. Krittanawong C, Rogers AJ, **Johnson**, **KW**, Wang Z, Turakhia MP, Halperin JL, Narayan SM. Integration of novel monitoring devices with machine learning technology for scalable cardiovascular management. Nat Rev Cardiol. 2020 Oct;

- 39. Vaid A, Somani S, Russak AJ, De Freitas JK, Chaudhry FF, Paranjpe I, **Johnson, KW**, Lee SJ, Miotto R, Richter F, Zhao S, Beckmann ND, Naik N, Kia A, Timsina P, Lala A, Paranjpe M, Golden E, Danieletto M, Singh M, Meyer D, O'Reilly PF, Huckins L, Kovatch P, Finkelstein J, Freeman RM, Argulian E, Kasarskis A, Percha B, Aberg JA, Bagiella E, Horowitz CR, Murphy B, Nestler EJ, Schadt EE, Cho JH, Cordon-Cardo C, Fuster V, Charney DS, Reich DL, Bottinger EP, Levin MA, Narula J, Fayad ZA, Just AC, Charney AW, Nadkarni GN, Glicksberg BS. Machine Learning to Predict Mortality and Critical Events in a Cohort of Patients With COVID-19 in New York City: Model Development and Validation. J Med Internet Res. 2020 11;22(11):e24018
- 38. Krittanawong C, Virk HUH, Bangalore S, Wang Z, **Johnson, KW**, Pinotti R, Zhang H, Kaplin S, Narasimhan B, Kitai T, Baber U, Halperin JL, Tang WHW. Machine learning prediction in cardiovascular diseases: a meta-analysis. Sci Rep. 2020 09;10(1):16057
- 37. Lala A, Johnson, KW*, Januzzi JL, Russak AJ, Paranjpe I, Richter F, Zhao S, Somani S, Van Vleck T, Vaid A, Chaudhry F, De Freitas JK, Fayad ZA, Pinney SP, Levin M, Charney A, Bagiella E, Narula J, Glicksberg BS, Nadkarni G, Mancini DM, Fuster V. Prevalence and Impact of Myocardial Injury in Patients Hospitalized With COVID-19 Infection. J Am Coll Cardiol. 2020 08;76(5):533–546
- 36. Russak AJ, Chaudhry F, De Freitas JK, Baron G, Chaudhry FF, Bienstock S, Paranjpe I, Vaid A, Ali M, Zhao S, Somani S, Richter F, Bawa T, Levy PD, Miotto R, Nadkarni GN, **Johnson, KW**, Glicksberg BS. Machine Learning in Cardiology-Ensuring Clinical Impact Lives Up to the Hype. J Cardiovasc Pharmacol Ther. 2020 09;25(5):379–390
- 35. Raghunath S, Ulloa Cerna AE, Jing L, vanMaanen DP, Stough J, Hartzel DN, Leader JB, Kirchner HL, Stumpe MC, Hafez A, Nemani A, Carbonati T, Johnson, KW, Young K, Good CW, Pfeifer JM, Patel AA, Delisle BP, Alsaid A, Beer D, Haggerty CM, Fornwalt BK. Prediction of mortality from 12-lead electrocardiogram voltage data using a deep neural network. Nat Med. 2020 06;26(6):886–891
- 34. Krittanawong C, Kumar A, Wang Z, **Johnson, KW**, Baber U, Palazzo A, Mehran R, Bhatt DL. Clinical features and prognosis of patients with spontaneous coronary artery dissection. Int J Cardiol. 2020 08:312:33–36
- 33. Chaudhry F, Adapoe MKMY, Johnson, KW, Narula N, Shekhar A, Kawai H, Horwitz JK, Liu J, Li Y, Pak KY, Mattis J, Moreira AL, Levy PD, Strauss HW, Petrov A, Heeger PS, Narula J. Molecular Imaging of Cardiac Allograft Rejection: Targeting Apoptosis With Radiolabeled Duramycin. JACC Cardiovasc Imaging. 2020 Jun;13(6):1438–1441
- 32. Russak AJ*, **Johnson KW***, Halperin J, Percha B, Dudley, JT. Racial and sex differences in stroke risk in patients with atrial fibrillation. J Am Coll Cardiol. 2019 Dec;74(24):3069–3070. DOI: 10.1016/j.jacc.2019.10.018
- 31. Krittanawong C, Kumar A, Wang Z, **Johnson, KW**, Rastogi U, Narasimhan B, Kaplin S, Virk HUH, Baber U, Tang W, Lansky AJ, Stone GW. Predictors of In-Hospital Mortality after Transcatheter Aortic Valve Implantation. Am J Cardiol. 2020 Jan;125(2):251–257. PMID: 31759517
- 30. Krittanawong C, Rogers AJ, Aydar M, Choi E, **Johnson, KW**, Wang Z, Narayan SM. Integrating blockchain technology with artificial intelligence for cardiovascular medicine. Nat Rev Cardiol. 2020 Jan;17(1):1–3. DOI: 10.1038/s41569-019-0294-y, PMID: 31605093
- 29. Glicksberg BS, Oskotsky B, Thangaraj PM, Giangreco N, Badgeley MA, **Johnson KW**, Datta D, Rudrapatna V, Rappoport N, Shervey MM, Miotto R, Goldstein TC, Rutenberg E, Frazier R, Lee N, Israni S, Larsen R, Percha B, Li L, Dudley JT, Tatonetti NP, Butte AJ. PatientExploreR: an extensible application for dynamic visualization of patient clinical history from Electronic Health Records in the OMOP Common Data Model Title. Bioinformatics. 2019 Jun; [Epub ahead of print]. DOI: 10.1093/bioinformatics/btz409, PMID: 31214700

2019

- 28. Liu AC, Patel K, Vunikili RD, Johnson KW, Abdu F, Belman SK, Glicksberg BS, Tandale P, Fontanez R, Mathew OK, Kasarskis A, Mukherjee P, Subramanian L, Dudley JT, Shameer K. Sepsis in the era of data-driven medicine: personalizing risks, diagnoses, treatments and prognoses. Brief Bioinformatics. 2019 Jun; [Epub ahead of print]. DOI: 10.1093/bib/bbz059, PMID: 31190075 [Review]
- 27. **Johnson KW**, Glicksberg BS, Shameer K, Vengrenyuk Y, Krittanawong C, Russak AJ, Sharma SK, Narula JN, Dudley JT, Kini AS. A transcriptomic model to predict increase in fibrous cap thickness in response to high-dose statin treatment: Validation by serial intracoronary OCT imaging. EBioMedicine. 2019 May; [Epub ahead of print]. DOI: 10.1016/j.ebiom.2019.05.007, PMID: 31126891
- 26. Krittanawong C, **Johnson KW**, Tang WW. How artificial intelligence could redefine clinical trials in cardiovascular medicine: lessons learned from oncology. Per Med. 2019 Mar;16(2):83–88. DOI: 10.1016/j.amjcard.2018.12.045, PMID: 30838909 [Perspective]
- 25. Krittanawong C, **Johnson KW**, Rosenson RS, Wang Z, Aydar M, Baber U, Min JK, Tang WHW, Halperin JL, Narayan SM. Deep learning for cardiovascular medicine: a practical primer. Eur Heart J. 2019 Feb; [Epub ahead of print]. DOI: 10.1093/eurheartj/ehz056, PMID: 30815669 [Review]
- 24. Chandrashekhar YS, **Johnson KW**. Precision Medicine for Aortic Stenosis: The Future of Cardiology Today. JACC Cardiovasc Imaging. 2019 Feb;12(2):249–251. DOI: 10.1016/j.jcmg.2018.12.005, PMID: 30732720 [Editorial]
- Krittanawong C, Kumar A, Johnson KW, Kaplin S, Virk HUH, Wang Z, Bhatt DL. Prevalence, Presentation, and Associated Conditions of Patients With Fibromuscular Dysplasia. Am J Cardiol. 2019 Apr;123(7):1169–1172. DOI: 10.1016/j.amjcard.2018.12.045, PMID: 30678834
- 22. Krittanawong C, Kumar A, **Johnson KW**, Luo Y, Yue B, Wang Z, Bhatt DL. Conditions and Factors Associated With Spontaneous Coronary Artery Dissection (from a National Population-Based Cohort Study). Am J Cardiol. 2019 Jan;123(2):249–253. DOI: 10.1186/s12911-018-0653-3, PMID: 30477805
- Johnson KW*, De Freitas JK*, Glicksberg BS, Bobe JR, Dudley JT. Evaluation of patient reidentification using laboratory test orders and mitigation via latent space variables. Biocomputing 2019. 2019 Jan;p. 415–426. DOI: 10.1142/9789813279827_0038, PMID: 30864342
- 20. Vashisht R, Jung K, Schuler A, Banda JM, Park RW, Jin S, Li L, Dudley JT, Johnson KW, Shervey MM, Xu H, Wu Y, Natrajan K, Hripcsak G, Jin P, Van Zandt M, Reckard A, Reich CG, Weaver J, Schuemie MJ, Ryan PB, Callahan A, Shah NH. Association of Hemoglobin A1c Levels With Use of Sulfonylureas, Dipeptidyl Peptidase 4 Inhibitors, and Thiazolidinediones in Patients With Type 2 Diabetes Treated With Metformin: Analysis From the Observational Health Data Sciences and Informatics Initiative. JAMA Netw Open. 2018 Aug;1(4):e181755. DOI: 10.1001/jamanetworkopen.2018.1755, PMID: 30646124
- 19. Shameer K, Perez-Rodriguez MM, Bachar R, Li L, Johnson A, Johnson KW, Glicksberg BS, Smith MR, Readhead B, Scarpa J, Jebakaran J, Kovatch P, Lim S, Goodman W, Reich DL, Kasarskis A, Tatonetti NP, Dudley JT. Pharmacological risk factors associated with hospital readmission rates in a psychiatric cohort identified using prescriptome data mining. BMC Med Inform Decis Mak. 2018 Sep;18(Suppl 3):79. DOI: 10.1186/s12911-018-0653-3, PMID: 30255805
- Narula N, Dannenberg AJ, Olin JW, Bhatt DL, Johnson KW, Nadkarni G, Min J, Torii S, Poojary P, Anand SS, Bax JJ, Yusuf S, Virmani R, Narula J. Pathology of Peripheral Artery Disease in Patients With Critical Limb Ischemia. J Am Coll Cardiol. 2018 Oct;72(18):2152–2163. DOI: 10.1016/j.jacc.2018.08.002, PMID: 30166084

- 17. Ali M, Chang BA, **Johnson KW**, Morris SK. Incidence and aetiology of bacterial meningitis among children aged 1-59 months in South Asia: systematic review and meta-analysis. Vaccine. 2018 Sep;36(39):5846–5857. DOI: 10.1016/j.vaccine.2018.07.037, PMID: 30145101
- 16. Shameer K, **Johnson KW**, Glicksberg BS, Dudley JT, Sengupta PP. The whole is greater than the sum of its parts: combining classical statistical and machine intelligence methods in medicine. Heart. 2018 Jul;104(14):1228. DOI: 10.1136/heartjnl-2018-313377, PMID: 29945951 [Review]
- Johnson KW, Dudley JT, Bobe JR. A 72-Year-Old Patient with Longstanding, Untreated Familial Hypercholesterolemia but no Coronary Artery Calcification: A Case Report. Cureus. 2018 Apr;10(4):e2452. DOI: 10.7759/cureus.2452, PMID: 29888156 [Case Report]
- Shameer K, Dow G, Glicksberg BS, Johnson KW, Ze Y, Tomlinson MS, Readhead B, Dudley JT, Kullo IJ. A Network-Biology Informed Computational Drug Repositioning Strategy to Target Disease Risk Trajectories and Comorbidities of Peripheral Artery Disease. AMIA Jt Summits Transl Sci Proc. 2018;2017:108–117. PMID: 29888052
- 13. **Johnson KW**, Torres Soto J, Glicksberg BS, Shameer K, Miotto R, Ali M, Ashley E, Dudley JT. Artificial Intelligence in Cardiology. J Am Coll Cardiol. 2018 Jun;71(23):2668–2679. DOI: 10.1016/j.jacc.2018.03.521, PMID: 29880128 [Review]
- 12. Glicksberg BS*, **Johnson KW***, Dudley JT. The next generation of precision medicine: observational studies, electronic health records, biobanks and continuous monitoring. Hum Mol Genet. 2018 Mar;27(R1):R56–R62. DOI: 10.1093/hmg/ddy114, PMID: 29659828 [Review]
- 11. Shameer K, **Johnson KW**, Glicksberg BS, Dudley JT, Sengupta PP. Machine learning in cardio-vascular medicine: are we there yet? Heart. 2018 Jul;104(14):1156–1164. DOI: 10.1136/heartjnl-2017-311198, PMID: 29352006 [Review]
- 10. **Johnson KW**, Glicksberg BS, Hodos RA, Shameer K, Dudley JT. Causal inference on electronic health records to assess blood pressure treatment targets: an application of the parametric g formula. Pac Symp Biocomput. 2018;23:180–191. PMID: 29218880
- 9. Glicksberg BS, Miotto R, **Johnson KW**, Shameer K, Li L, Chen R, Dudley JT. Automated disease cohort selection using word embeddings from Electronic Health Records. Pac Symp Biocomput. 2018;23:145–156. PMID: 29218877
- 8. Chamaria S, **Johnson KW**, Vengrenyuk Y, Baber U, Shameer K, Divaraniya AA, Glicksberg BS, Li L, Bhatheja S, Moreno P, Maehara A, Mehran R, Dudley JT, Narula J, Sharma SK, Kini AS. Intracoronary Imaging, Cholesterol Efflux, and Transcriptomics after Intensive Statin Treatment in Diabetes. Sci Rep. 2017 Aug;7(1):7001. DOI: 10.1038/s41598-017-07029-7, PMID: 28765529
- Johnson KW, Shameer K, Glicksberg BS, Readhead B, Sengupta PP, Bjorkegren JLM, Kovacic JC, Dudley JT. Enabling Precision Cardiology Through Multiscale Biology and Systems Medicine. JACC Basic Transl Sci. 2017 Jun;2(3):311–327. DOI: 10.1016/j.jacbts.2016.11.010, PMID: 30062151 [Review]
- 6. Shameer K, Glicksberg BS, Hodos R, Johnson KW, Badgeley MA, Readhead B, Tomlinson MS, O'Connor T, Miotto R, Kidd BA, Chen R, Ma'ayan A, Dudley JT. Systematic analyses of drugs and disease indications in RepurposeDB reveal pharmacological, biological and epidemiological factors influencing drug repositioning. Brief Bioinformatics. 2018 Jul;19(4):656–678. DOI: 10.1093/bib/bbw136, PMID: 28200013

- Kini AS, Vengrenyuk Y, Shameer K, Maehara A, Purushothaman M, Yoshimura T, Matsumura M, Aquino M, Haider N, Johnson KW, Readhead B, Kidd BA, Feig JE, Krishnan P, Sweeny J, Milind M, Moreno P, Mehran R, Kovacic JC, Baber U, Dudley JT, Narula J, Sharma S. Intracoronary Imaging, Cholesterol Efflux, and Transcriptomes After Intensive Statin Treatment: The YELLOW II Study. J Am Coll Cardiol. 2017 Feb;69(6):628–640. DOI: 10.1016/j.jacc.2016.10.029, PMID: 27989886
- 4. Shameer K, **Johnson KW**, Yahi A, Miotto R, Li LI, Ricks D, Jebakaran J, Kovatch P, Sengupta PP, Gelijns S, Moskovitz A, Darrow B, David DL, Kasarskis A, Tatonetti NP, Pinney S, Dudley JT. Predictive Modeling of Hospital Readmission Rates Using Electronic Medical Record-Wide Machine Learning: A Case-Study Using a Mount Sinai Heart Failure Cohort. Pac Symp Biocomput. 2017;22:276–287. PMID: 27896982
- 3. Eden C, **Johnson KW**, Gottesman O, Bottinger EP, Abul-Husn NS. Medical student preparedness for an era of personalized medicine: findings from one US medical school. Per Med. 2017 Mar;13(2):129–141. DOI: 10.2217/pme.15.58, PMID: 27528879
- 20. Jiang ZF, Xia F, **Johnson KW**, Brown CD, Bartom E, Tuteja JH, Stevens R, Grossman RL, Brumin M, White KP, Ghanim M. Comparison of the genome sequences of "Candidatus Portiera aleyrodidarum" primary endosymbionts of the whitefly Bemisia tabaci B and Q biotypes. Appl Environ Microbiol. 2013 Mar;79(5):1757–1759. DOI: 10.1128/AEM.02976-12, PMID: 23315735
- 2012 1. Jiang ZF, Xia F, **Johnson KW**, Bartom E, Tuteja JH, Stevens R, Grossman RL, Brumin M, White KP, Ghanim M. Genome sequences of the primary endosymbiont "Candidatus Portiera aleyrodidarum" in the whitefly Bemisia tabaci B and Q biotypes. J Bacteriol. 2012 Dec;194(23):6678–6679. DOI: 10.1128/JB.01841-12, PMID: 23144417

Preprints

2020

- 6. Vaid A, Jaladanki SK, Xu J, Teng S, Kumar A, Lee S, Somani S, Paranjpe I, De Freitas JK, Wanyan T, **Johnson, KW**, Bicak M, Klang E, Kwon YJ, Costa A, Zhao S, Miotto R, Charney AW, B?ttinger E, Fayad ZA, Nadkarni GN, Wang F, Glicksberg BS. Federated Learning of Electronic Health Records Improves Mortality Prediction in Patients Hospitalized with COVID-19. medRxiv. 2020 Aug;
- 5. Paranjpe I, Russak A, De Freitas JK, Lala A, Miotto R, Vaid A, **Johnson, KW**, Danieletto M, Golden E, Meyer D, Singh M, Somani S, Manna S, Nangia U, Kapoor A, O'Hagan R, O'Reilly PF, Huckins LM, Glowe P, Kia A, Timsina P, Freeman RM, Levin MA, Jhang J, Firpo A, Kovatch P, Finkelstein J, Aberg JA, Bagiella E, Horowitz CR, Murphy B, Fayad ZA, Narula J, Nestler EJ, Fuster V, Cordon-Cardo C, Charney DS, Reich DL, Just AC, Bottinger EP, Charney AW, Glicksberg BS, Nadkarni G. Clinical Characteristics of Hospitalized Covid-19 Patients in New York City. medRxiv. 2020 Apr;
- 2019
- 4. **Johnson KW**, Rappaport E, Khader S, Glicksberg BS, Dudley JT. fragilityindex: An R Package for Statistical Fragility Estimates in Biomedicine. bioRxiv. 2019;DOI: 10.1101/562264
- 2018
- 3. Vunikili R, Glicksberg BS, **Johnson KW**, Dudley J, Subramanian L, Shameer K. Predictive modeling of susceptibility to substance abuse, mortality and drug-drug interactions in opioid patients. bioRxiv. 2018;DOI: 10.1101/506451
- Shameer K, Johnson KW, Glicksberg BS, Hodos R, Readhead B, Tomlinson MS, Dudley JT. Prioritizing Small Molecule as Candidates for Drug Repositioning using Machine Learning. bioRxiv. 2018;DOI: 10.1101/331975

 Shameer K, Johnson KW, Readhead B, Glicksberg BS, McCallum C, Revikumar A, Hirsch JS, Bock K, Chelico J, Hajizadeh N, Oppenheim M, Dudley JT. Rapid Therapeutic Recommendations in the Context of a Global Public Health Crisis using Translational Bioinformatics Approaches: A proof-of-concept study using Nipah Virus Infection. bioRxiv. 2018;DOI: 10.1101/333021

Major The association of monogenic hypertension variants with hypertension, clinical diagnosis, and ad-

Unpublished verse outcomes: A retrospective cohort study

Manuscripts First author

Status: Second round of revisions

Repurposing the antidepressant trazodone for atherosclerotic cardiovascular disease

First author Status: Submitted

Honors, Awards, Scholarships JACC Journals Best of 2018 (One of Top-Five Most Read Articles)

Journal of the American College of Cardiology

For manuscript: Artificial Intelligence in Cardiology

Announced May 2019.

Young Investigator Award Finalist

American Heart Association, Council on Genomic and Precision Medicine

One of five finalists; only finalist who was not a cardiology fellow

For manuscript: Repurposing the antidepressant trazodone for atherosclerotic cardiovascular disease

November 2018. Chicago, IL

Poster of Distinction

2018 Mount Sinai Department of Medicine Research Day

For poster: Investigation of repurposing novel agents for cardiovascular disease

May 2018. New York, NY

Pacific Symposium on Biocomputing

Student Travel Award (\$1000) January 2018. Big Island, Hawaii

Swiss Institute of Bioinformatics Resource Innovation Award

BC2 Basel Computational Biology Conference

For web resource: RepurposeDB September 2017. Basel, Switzerland

Henry I. Russek Student Fellowship

Declined due to scheduling American Heart Association November 2016. New York, NY

Medical Scientist Training Program

Full-tuition scholarship with stipend National Institute of General Medical Sciences, to Mount Sinai

June 2014-present. New York, NY

Student Marshal

"The highest award given to students in the college" – Received by approximately 3% of graduating undergraduate class

The University of Chicago

June 2014. Chicago, IL

Honors in Research

Biological Sciences Division The University of Chicago June 2014. Chicago, IL

Teaching

2017 Teaching Assistant for Renal Physiology

Medical School

Icahn School of Medicine at Mount Sinai

New York, NY

2016 Teaching Assistant for Public Health Law

Masters Program in Public Health

Icahn School of Medicine at Mount Sinai

New York, NY

2012-2014

Teaching Assistant for:

- An Introduction to Bioinformatics
- An Introduction to Quantitative/Computational Biology
- Mathematical Modeling for Pre-Med Students I
- Mathematical Modeling for Pre-Med Students II
- Multiscale Modeling of Biological Systems II

The University of Chicago

Chicago, IL

SERVICE

2020

Moderator, ACC Scientific Sessions, "Artificial Intelligence in Electrocardiography"

Ad hoc reviewer for:

- Journal of the American College of Cardiology
- Journal of the American College of Cardiology: Cardiovascular Imaging
- World Congress of Cardiology (Abstract Reviewer)
- American College of Cardiology (Abstract Reviewer)

2019

Committee Member, Guidelines Co-Author

JACC: Cardiovascular Imaging Machine Learning Guidelines
Guidelines publication forthcoming

Ad hoc reviewer for:

- Proceedings of Machine Learning for Healthcare (MLHC)
- Expert Review of Precision Medicine and Drug Development
- American Medical Informatics Association
- Entropy
- Journal of Cardiovascular Pharmacology and Therapeutics
- JACC: Cardiovascular Interventions
- Computer Methods and Programs in Biomedicine

2018

Ad hoc reviewer for:

- Journal of the American College of Cardiology
- Scientific Reports

- ullet Journal of Biomedical Informatics
- $\bullet \ \ American \ \ Medical \ Informatics \ \ Association$
- Pacific Symposium on Biocomputing (PSB)

2017 Ad hoc reviewer for:

• Pacific Symposium on Biocomputing (PSB)