Michigan State University

CURRICULUM VITAE

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| **Name:** | Bin Chen, PhD |

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| **Position:** | Assistant Professor |
|  | Pediatrics/Pharmacology and Toxicology |
|  | College of Human Medicine |
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| **Address:** | |  | | --- | | Michigan State University | |
|  | Email: bin.chen@hc.msu.edu |

**EDUCATION**

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| --- | --- | --- | --- | --- |
| 2000 - 2004 | Chongqing University | B.A. | Chemistry |  |
| 2007 - 2009 | Indiana University, Bloomington | M.S. | Chemical Informatics |  |
| 2009 - 2012 | Indiana University, Bloomington | Ph.D. | Informatics |  |
| 2012 - 2015 | Stanford University | Postdoc | Bioinformatics |  |

**PRINCIPAL POSITIONS HELD**

|  |  |  |  |
| --- | --- | --- | --- |
| 2015 - 2017 | University of California, San Francisco | Instructor | Pediatrics |
| 2017 - 2018 | University of California, San Francisco | Assistant Professor | Pediatrics |
| 2018 - present | Michigan State University | Assistant Professor | Pediatrics/Pharmacology and Toxicology |

**OTHER POSITIONS HELD**

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| --- | --- | --- | --- |
| 2004 - 2017 | Shanghai Institute of Organic Chemistry, Chinese Academy of Science | Research Assistant |  |
| 2008 summer | Novartis | Intern |  |
| 2009 summer | Pfizer | Intern |  |
| 2010 summer | Pfizer | Intern |  |
| 2011 summer | Merck | Intern |  |
| 2012 | Novartis | Contractor |  |

**HONORS AND AWARDS**

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| --- | --- | --- |
| 2009 | Symyx Ph.D. Fellowship | Indiana University at Bloomington |
| 2010 | CINF Scholarship for Scientific Excellence | ACS Chemical Information Division |
| 2012 | Lucille Wert Scholarship | ACS Chemical Information Division |
| 2014 | Jason Morrow Trainee Award 2014 | ASCPT |
| 2014 | Presidential Trainee Award 2014 | ASCPT |
| 2015 | Presidential Poster of Distinction, 2015 | The Liver Meeting |
| 2015 | Intel Science Talent Search (Intel STS) 2015 Research Teacher |  |
| 2016 | LINCS meeting travel fellowship |  |
| 2017 | BD2K K01 Award | NIH |
| 2018 | BD2K single cell workshop travel award | NIH |

**KEYWORDS/AREAS OF INTEREST**

Big Data, Translational Bioinformatics, Cheminformatics, Drug Repositioning, Precision Medicine, Combinatorial Therapy, Cancer Therapy

**MEMBERSHIPS**

|  |  |
| --- | --- |
| 2008 - 2012 | American Chemical Society |
| 2012 - present | American Medical Informatics Association |
| 2017 - 2018 | Associate Member, UCSF cancer center |
| 2012 - present | International Society for Computational Biology |

**SERVICE TO SCHOOL**

|  |  |
| --- | --- |
| 2018- | Bioinformatics Faculty Search Committee (TSMM) |
| 2018- | GII Precision Medicine Faculty Search Committee |
| 2018- | CHM MMI interviewer |
| 2019-2022 | Student Competence Committee (appointed by the dean) | CHM MMI interviewer |
| 2020 | Chair, Research Faculty Search Committee | CHM MMI interviewer |

**SERVICE TO PROFESSIONAL ORGANIZATIONS**

|  |  |  |
| --- | --- | --- |
| 2016 - 2016 | The Fourteenth Asia Pacific Bioinformatics Conference | organizing committee |
| 2017 - 2017 | DahShu Data Science Symposium: Computational Precision Health 2017 | organizing committee co-chair and session chair |
| 2017 - 2017 | Fanconi Anemia Research Fund | grant reviewer |
| 2017 - 2017 | Ohio Cancer Research | grant reviewer |
| 2017 - 2017 | AMIA 2018 Informatics Summit | program committee |
| 2018 - 2018 | Alzheimer's Research UK | grant reviewer |
| 2018 - 2018 | Cancer Research UK | grant reviewer |
| 2019 - 2019 | Worldwide cancer research | grant reviewer |
| 2020 – 2020 | Spectrum Heath PRF Review | grant reviewer |
| 2020/9- | Journal of Cheminformatics | Editorial Board |
| 2020 - 2020 | CCNY-MSKCC Partnership | grant reviewer |

**SERVICE TO PROFESSIONAL PUBLICATIONS**

|  |  |
| --- | --- |
| 2010 - 2015 | Program Committee for STIIC 2010, BIOKDD 2011, STIIC 2011, ESWC 2012, WebS 2012, STIIC 2012, IBICA 2012, MDS 2012, WebS 2013, MDS 2013, CIKM2013, JIST 2013 |
| 2009 - 2015 | Ad hoc referee for Scientific Reports, Drug Discovery Today, Briefing in Bioinformatics, Bioinformatics Oxford, BMC Bioinformatics, BMC Medical Genomics, Journal of the American Medical Informatics Association, Journal of Chemical Information and Modeling, Journal of Cheminformatics, IEEE intelligent systems, Journal of Information Science, Knowledge and Information Systems, Social Network Analysis and Mining, Journal of Biomedical Semantics, Computers in Biology and Medicine, OMICS: A Journal of Integrative Biology, IEEE/ACM Transactions on Computational Biology and Bioinformatics, IEEE Computational Intelligence Magazine, Oxidative Medicine and Cellular Longevity, AMIA annual conference. (>50 manuscripts in 6 years) |
| 2015 - present | Ad hoc referee for Nature Communications |
| 2015 - present | Ad hoc referee for Nature Chemical Biology |
| 2015 - present | Ad hoc referee for Genome Medicine |
| 2015 - present | Ad hoc referee for Briefings in Bioinformatics |
| 2015 - present | Ad hoc referee for Journal of the American Medical Informatics Association |
| 2015 - present | Ad hoc referee for BMC Bioinformatics |
| 2015 - present | Ad hoc referee for Bioinformatics, Oxford |
| 2015 - present | Ad hoc referee for BMC Cancer |
| 2015 - present | Ad hoc referee for PLOS Comp Biol |
| 2015 - present | Ad hoc referee for Scientific Data |
| 2015 - present | Ad hoc referee for Advanced Science |
| 2015 - present | Ad hoc referee for Cell Chemical Biology |
| 2018 - present | Guest editor for PLOS Comp Biol |
| 2020 - present | Ad hoc referee for Molecular Systems Biology |
| 2020 - present | Ad hoc referee for Nature Review Chemistry |
| 2020 – present | Ad hoc referee for Nature Machine Intelligence |

**OTHER ACTIVITIES AND COMMUNITY OUTREACH**

July/Sep 2019 Participated the MSU/Pine Rest Core Data Group meetings (invited by Dean Dr. Norman Beauchamp)

July 2019 Participated the MSU/Siemens meeting (invited by Dean Dr. Norman Beauchamp)

August 2019 Participated the MSU & Mercy Health - Partnership Discussion Focused on Bioinformatics/AI (invited by Assistant Dean Dr. Jerry Kooiman)

Spring 2019 MSU Academic Communications Fellowship first cohort participant

Feb 2020 participated MSU/Mary Free Bed partnership discussion (invited by Associate Dean Dr. Walt Esselman)

May 2020 participated MSU/MiHIN Partnership Discussion (invited by Assistant Dean Dr. Jerry Kooiman)

**PRESENTATIONS - INTERNATIONAL**

|  |  |  |
| --- | --- | --- |
| 2014 | 8th International Conference on Systems Biology and 4th Translational Bioinformatics Conference, Qingdao, China (podium) |  |
| 2017 | Global Pharma R&D Informatics Congress 2017, Lisbon, Portugal (podium) |  |
| 2018 | Inaugural immunology and immunometabolism conference, Chongqing, China (podium) |  |
| 2018 | Chongqing University, Chongqing, China (podium) |  |
| 2018 | Army Medical University, Chongqing, China (podium) |  |
| 2018 | JSM 2018 annual meeting, Vancouver, Canada (podium) |  |
| 2019 | Fudan University, Shanghai, China (podium) |  |
| 2019 | Suzhou University, Jiangsu, China (podium) |  |
| 2020 | Department of Pharmacology Annual Symposium at the University of Toronto (keynote, canceled due to COVID-19) |  |

**PRESENTATIONS - NATIONAL**

|  |  |  |
| --- | --- | --- |
| 2010 | 239th ACS National Meeting, San Francisco, CA (podium and poster) |  |
| 2011 | Inaugural Conference of the International Chemical Biology Society, Kansas City, MO (poster) |  |
| 2012 | Conference on Semantics in Healthcare and Life Sciences, Cambridge, MA (podium and poster) |  |
| 2012 | Bio-IT World, Boston, MA (poster) |  |
| 2013 | LINCS Symposium, Boston, MA (poster) |  |
| 2013 | American Association of Pharmaceutical Scientists annual meeting, San Antonio, TX (podium) |  |
| 2014 | American Society for Clinical Pharmacology and Therapeutics annual meeting, Atlanta, GA (podium and poster) |  |
| 2014 | AMIA Translational Bioinformatics, San Francisco, CA (poster) |  |
| 2014 | 5th Annual Mechanistic Studies in Transplantation Workshop, Atlanta, GA (podium) |  |
| 2015 | The Liver Meeting, San Francisco, CA (poster) |  |
| 2016 | Digestive Disease Week, San Diego, CA (podium) |  |
| 2017 | Big Data For Breast Cancer\West Coast Conference, Susan G. Komen, Palo Alto, CA (invited meeting) |  |
| 2017 | I-SPY2+ Retreat, St Helena, CA (invited meeting) |  |
| 2017 | University of Arizona, Tulsa, USA (invited seminar) |  |
| 2017 | University of Pennsylvania, Philadelphia, Pennsylvania, USA (invited seminar) |  |
| 2017 | Michigan State University, East Lansing, Michigan (invited seminar) |  |
| 2018 | PSB, Big Island, Hawaii (poster) |  |
| 2018 | AACR annual meeting, Chicago, IL (poster) |  |
| 2018 | 2018 Data Science Innovation Lab: Mathematical Challenges of Single Cell Dynamics, Bend, Oregon, OR (one week workshop) |  |
| 2018 | ICSA 2018 Applied Statistics Symposium in New Brunswick, NJ (podium) |  |
| 2018 | ICIBM 2018 in Los Angeles, CA (podium) |  |
| 2019 | PSB, Big Island, Hawaii (poster) |  |
| 2019 | ICIBM, Columbus, Ohio (workshop) |  |
| 2019 | JSM 2019, Denver, CO(panel) |  |
| 2019 | Childhood Cancer Data Initiative, Washington DC (workshop) |  |
| 2019 | Moving Targets, USC, LA (podium) |  |
| 2020 | 4th Translational Genomics and Epigenomics Symposium, Buffalo NY (podium, canceled due to COVID-19) |  |
| 2020 | AMIA Annual Meeting Workshop (podium, canceled due to COVID-19) |  |
| 2020 | Invited Seminar in Cancer Biology, The University of Toledo (virtually) |  |
| 2020 | Mount Sinai MSCIC: Work in Progress (virtually) |  |

**PRESENTATIONS - REGIONAL AND OTHER INVITED PRESENTATIONS**

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| --- | --- | --- |
| 2010 | Pfizer Inc., Boston, MA (podium) |  |
| 2011 | Lecture for S604, Indiana University at Bloomington, IN (lecture) |  |
| 2011 | Merck Inc., Rahway, NJ (podium) |  |
| 2011 | Lecture for S636, Indiana University at Bloomington, IN (lecture) |  |
| 2011 | Mayo Clinic, Rochester, MN (podium) |  |
| 2012 | Novartis, Boston, MA (podium) |  |
| 2015 | UCSF Precision Medicine Conference, UCSF, San Francisco, CA (podium) |  |
| 2016 | Stanford VA hospital, Palo Alto, CA (podium) |  |
| 2017 | UCSF Chinese Association Seminar, UCSF, San Francisco, CA (podium) |  |
| 2017 | UCSF, PSPG 245B Course, UCSF, San Francisco, CA (lecture & workshop) |  |
| 2017 | UC Berkeley, Department of Statistics, Berkeley, CA (podium) |  |
| 2017 | UCSF, ISPY biomarker monthly workshop, San Francisco, CA (workshop) |  |
| 2017 | UCSF 2017 Cancer Showcase, San Francisco, CA (podium) |  |
| 2017 | UCSF Brain Cancer Seminar, San Francisco, CA (podium) |  |
| 2017 | DahShu Virtual Club and SFASA Monthly Seminar, San Francisco, CA (podium) |  |
| 2017 | UCSF Hepatobiliary Cancers Research Symposium, San Francisco, CA (podium) |  |
| 2018 | UCSF BP205B, San Francisco, CA (course lecture) |  |
| 2018 | Chinese American Biopharmaceutical Society Big Data workshop, Genentech, South San Francisco, CA (podium) |  |
| 2018 | UCSF Breast Cancer Retreat, San Francisco, CA (podium) |  |
| 2018 | MSU Pediatric Research rounds, East Lansing, MI (podium) |  |
| 2018 | Big Data Ignite, Grand Rapids, MI (podium) |  |
| 2018 | MSU Drug Discovery Seminar, East Lansing, MI (podium) |  |
| 2018 | Pediatric Grand Rounds at Helen DeVos Children’s Hospital, Grand Rapids, MI (podium) |  |
| 2019 | MSU translational science seminar, East Lansing, MI (podium) |  |
| 2019 | COCOH 2019, Grand Rapids, MI (podium) |  |
| 2019 | MSU IQ seminar, East Lansing, MI (podium) |  |
| 2019 | MSU EPI seminar, East Lansing, MI (podium) |  |
| 2019 | VARI cancer center seminar, Grand Rapids, MI (podium) |  |
| 2019 | MSU Pediatric Research Retreat, Grand Rapids, MI (podium) |  |
| 2019 | MSU machine learning seminar, East Lansing, MI (podium) |  |
| 2020 | MSU COM course lecture (lecture) |  |
| 2020 | MSU Translational Bioinformatics Workshop (lecture and organizer) |  |
| 2020 | MSU Department of Physiology Seminar (virtually) |  |

**SERVICE ACTIVITIES SUMMARY**

I co-founded DahShu (http://dahshu.org/) with a few faculty members from UC Berkeley and Stanford in 2015. DahShu is a non-profit organization to promote research and education in data science. We have successfully organized two data science conferences in the past two years, attracting hundreds of researchers from the world. As a core member, I am leading many activities including fundraising, marketing, conference organizing, etc. In 2017, we organized one seminar/workshop every month.

**COMMUNITY AND PUBLIC SERVICE**

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| --- | --- | --- |
| 2013 - 2014 | Board member, Postdoc Department, Association of Chinese Students and Scholars at Stanford |  |
| 2015 - present | General Secretary & co-founder, DahShu |  |

**PREDOCTORAL STUDENTS SUPERVISED OR MENTORED**

| Dates | Name | Program or School | Mentor Type | Current Position |
| --- | --- | --- | --- | --- |
| 2014 - 2014 | Charles Pei | SMIR Stanford | Project Mentor | Undergraduate at Harvard |
| 2014 - 2014 | Rachel Wu | SMIR Stanford | Project Mentor | Undergraduate at MIT |
| 2015 - 2015 | Jane Wei | UCSF Intern | Project Mentor | Undergraduate at Cornell University |
| 2016 - 2016 | Tanisha Joshi | UCSF Intern | Project Mentor | Evergreen Valley High School |
| 2016 - 2016 | Michael Sharpnack | UCSF volunteer | Project Mentor | Graduate student at Ohio State University |
| 2016 - 2016 | Jordan Spatz | UCSF medical student | Project Mentor | Graduate student at UCSF |
| 2017 - 2017 | Reuben Sarwal | UCSF Intern | Project Mentor | UC Berkeley  undergraduate |
| 2017 - 2019 | Billy Zeng | UCSF medical student | Project Mentor | Graduate student at UCSF |
| 2017 - 2018 | Yuying Chen | UCSF Volunteer | Project Mentor | UCSF ISPY program intern |
| 2017 - 2017 | Alex Jin | UCSF volunteer | Project Mentor | Portledge ​High School |
| 2018- | Ke Liu | PhD | Mentor | Postdoctoral scholar |
| 2018 summer | Tom Hu | Intern | Project Mentor | UC Berkeley  undergraduate |
| 2018- | Rama Shankar | PhD | Mentor | Postdoc scholar |
| 2018-2019 | Patrick Newbury | MD | Mentor | Postdoc Scholar |
| 2018-2018 | Anthony Sciarini | Intern | Mentor | GVSU undergraduate |
| 2018-2018 | Keith Schmitt | Intern | Mentor | GVSU undergraduate |
| 2018- | Shreya Paithankar |  | Mentor | Lab assistant |
| 2018 summer | Anita Wen | Intern | Mentor | UC Davis graduate |
| 2018- | Jing Xing | PhD | Mentor | Postdoctoral scholar |
| 2018-2018 | Omar Kana | Rotation student | Mentor | MSU BMS program |
| 2018-2018 | Kasim Fassia | MSU medical student | Project mentor | MSU/CHM medical student |
| 2018-2018 | Albert Jiao | MSU medical student | Project mentor | MSU/CHM medical student |
| 2019-2020 | Rae Felismino | MSU medical student | Project mentor | MSU/COM medical student |
| 2019-2020 | Krista Young | MSU medical student | Project mentor | MSU/COM medical student |
| 2019-2020 | Cathy Lee | MSU medical student | Project mentor | MSU/COM medical student |
| 2019- | Christopher Chang | MSU medical student | Project mentor | MSU/COM medical student |
| 2019- | Mengying Sun | PhD student | Mentor | Computer science PhD student (co-supervise with Jiayu Zhou) |
| 2019 summer | Suchir Gupta | Central High school | Mentor | Summer intern |
| 2019- | Yingying Wu | PhD | mentor | Postdoc scholar |
| 2019- | Shan-Ju Yeh | PhD student | mentor | Visiting PhD student |
| 2019- | Eugene Chekalin | PhD | mentor | Postdoc scholar |
| 2020- | Austin Vanvelsen | Medical student | Mentor | CHM student |
| 2020- | Tyler Vanvelsen | Medical student | Mentor | CHM student |
| 2020 summer | Xiangyu Chen | High school | Mentor | East Grand Rapids High School |
| 2020 | Jeremy Haskins |  | Mentor | Lab assistant |

**RESEARCH AWARDS - CURRENT**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. | BD2K K01 RFA-ES-16-002 | | | PI | | | 50 % effort | | Chen (PI) |
|  | NIH/NIEHS | | | | | | 05/01/2017 | | 04/30/2021 |
|  | Integrating transcriptomic, proteomic and pharmacogenomic data to inform individualized therapy in cancers | | | | | | $ 171,216 direct/yr 1 | | $ 684,864 total |
|  | Develop biomarkers from cell lines to guide cancer therapy | | | | | | | | |
| 2. | Henlius | | PI | | |  | | Chen (PI) | |
|  | Industry sponsored | | | | | 5/01/2019 | | 4/30/2021 | |
|  | Big data approach to identify next generation immuno-oncology targets | | | | | $124,000 direct/yr 1 | |  | |
|  | This collaborative proposal is aimed to propose novel targets to increase immunotherapy response. | | | | | | | | |
| 3. | Global Impact Initiative | | PI | | |  | | Chen (PI) | |
|  | MSU | | | | | 4/01/2018 | | 3/31/2021 | |
|  | MSU startup funds |  | | |
| 4. | R01 | | | PI | | | 20% effort | | Chen (PI) |
|  | NIH/NIGMS | | | | | | 09/01/2019 | | 07/30/2024 |
|  | Repurpose open data to discover new therapeutics for understudied diseases | | | | | | $300,000 direct/year | |  |
| 5. | Spectrum Health-MSU Alliance | | | PI | | |  | | Chen (PI) |
|  | Spectrum Health-MSU Alliance Cooperation | | | | | | 07/01/2019 | | 06/30/2022 |
|  | Spectrum Health-MSU Big Data Collaborative Program | | | | | | $867,744 total | |  |
| 6. | 1OT2TR003426-01 | | | PI | | |  | | Chen (PI) |
|  | NIH/NCATS | | | | | | 01/24/2020 | | 05/31/2020 |
|  | Drug biomarker resources for precise translational research | | | | | | $ 87,195  direct | |  |
|  | Create drug biomarker resources from public databases | | | | | | | | |
| 7. | FAIN2028717 | | | Co-PI | | |  | | Ding (PI) |
|  | NSF | | | | | | 07/01/2020 | | 06/31/2021 |
|  | RAPID: Dashboard for COVID-19 Scientific Development | | | | | | $ 50,000 (chen lab)  direct | |  |
|  | Develop a dashboard for COVID-19 research. | | | | | | | | |
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**RESEARCH AWARDS – PENDING**

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|  |  | | | | | |
| 1. | R01 | | PI | | 20% effort | Chen (PI) |
|  | Discovering new therapeutics for COVID-19 through targeting host responses | | | | 12/01/2020 | 11/30/2025  $500K direct/year |
| 2. | R01 | | PI | | 20% effort | Chen (PI) |
|  | Informatics approaches for translational cancer metastasis research | | | | 12/01/2020 | 11/30/2024  $250K direct/year |
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**RESEARCH AWARDS - PAST**

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| 1. | Stanford SPARK program | | co-investigator | | | | | | 0 % effort | | | | | So (PI) | | |
|  | Stanford SPARK | | | | | | | | 01/01/2016 | | | | | 12/31/2016 | | |
|  | Translating niclosamide ethanolamine for the treatment of hepatocellular carcinoma | | | | | | | | $ 30,000 direct/yr 1 | | | | | $ 30,000 total | | |
|  | Conduct PK/PD/Toxicity study on niclosamide ethanolamine in animal models | | | | | | | | | | | | | | | |
|  | I coordinated this project and did not draw the salary from this grant. This grant was primarily used for experimental validation. | | | | | | | | | | | | | | | |
| 2. | P01 PAR-13-321 | | | | | co-investigator | | | | | 5 % effort | | | | | Esserman & Hylton (PI) |
|  | NIH/NCI | | | | | | | | | | 07/01/2017 | | | | | 3/31/2018 |
|  | I-SPY2 +: Evolving the I-SPY 2 TRIAL to include MRI-directed, adaptive sequential treatment to optimize breast cancer outcomes | | | | | | | | | | $ 1,849,707 direct/yr 1 | | | | | $ 8,531,879 total |
|  | Develop, implement, and validate a strategy to address insufficient response to neoadjuvant therapy in high-risk breast cancer  Lead the effort to develop a portfolio of agents for switching that match biology of residual tumor burden (Project 4)  Project terminated due to career move | | | | | | | | | | | | | | | |
| 3. | L’Oreal & UCSF collaboration | | | | co- investigator | | | | | 5 % effort | | | | | Butte (PI) | |
|  | L’Oreal & UCSF collaboration | | | | | | | | | 07/01/2017 | | | | | 3/31/2018 | |
|  | Leveraging big data to predict new targets and actives for hyper pigmentation | | | | | | | | |  | | | | | $ 499,374 total | |
|  | Develop a computational method to identify new drugs for hyper pigmentation | | | | | | | | | | | | | | | |
|  | Lead the effort on drug predictions  Project terminated due to career move | | | | | | | | | | | | | | | |
| 4. | U24DK116215 | | | co-investigator | | | | 5 % effort | | | | | McManus & Jan (PI) | | | |
|  | NIH/NIDDK | | | | | | | 11/01/2017 | | | | | 3/31/2018 | | | |
|  | Illuminating the Dark Kinome | | | | | | | $ 1,600,000 direct/yr 1 | | | | |  | | | |
|  | Facilitate the unveiling of functions of poorly characterized members of the human kinome using experimental and informatics approaches.  Informatics core lead  Project terminated due to career move | | | | | | | | | | | | | | | |
| 5. | R21TR001743 | PI | | | | | 10 % effort | | | | | Chen (PI) | | | | |
|  | NIH/ NCATS | | | | | | 8/01/2017 | | | | | 7/31/2019 | | | | |
|  | Targeting Glucose Metabolism for the Treatment of Hepatocellular Carcinoma | | | | | | $216,349 direct/yr 1 | | | | |  | | | | |
|  | The goal of this project is to validate the efficacy of a few drug candidates that target glucose metabolism for the treatment of hepatocellular carcinoma in preclinical models. | | | | | | | | | | | | | | | |
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**PEER REVIEWED PUBLICATIONS**

1. Shi L-W, **Chen B**, Zhou J-H, Zhang T, Kang Q, Chen M-B. Structure and Relative Stability of Drum-like C4 n N2 n (n= 3− 8) Cages and Their Hydrogenated Products C4 n H4 n N2 n (n= 3− 8) Cages. The Journal of Physical Chemistry., 2008;112(46):11724-30.
2. Scheiber J, **Chen B**, Milik M, Sukuru SC, Bender A, Mikhailov D, Whitebread S, Hamon J, Azzaoui K, Urban L, Glick M, Davies JW, Jenkins JL. A Comprehensive Systems Chemical Biology Analysis Gains Insight into Off-Target Mediated Effects of Drug Candidates, J Chem Inf Model., 2009, 49 (2), 308-317 (citations > 130)
3. **Chen B**, Wild D, Guha R. PubChem Bioassays as a Source of Polypharmacology, J Chem Inf Model., 2009, 49(9), 2044-55 (citations > 100)
4. **Chen B**, Wild D. PubChem as a data source for predictive models, J Mol Graph Model., 2010, 28(5):420-6
5. **Chen, B**., Dong. X., Jiao, D., Wang, H., Zhu, Q., Ding, Y., Wild, D.J. Chem2Bio2RDF: a semantic framework for linking and data mining chemogenomic and systems chemical biology data. BMC Bioinformatics, 2010, 11:255 (citations > 140)
6. Dong, X., Ding, Y., Wang, H., **Chen, B.**, Wild, D.J. Chem2Bio2RDF Dashboard: Ranking Semantic Associations in Systems Chemical Biology Space. Future of the Web in Collaborative Science (FWCS), WWW2010, Apr 26-30, 2010, Raleigh NC
7. **Chen, B.**, Ding, Y., Wang, H., Wild, D., Dong, X., Sun, Y., Zhu, Q., & Sankaranarayanan, M. (2010). Chem2Bio2RDF: A Linked Open Data Portal for Chemical Biology. IEEE/WIC/ACM International Conferences on Web Intelligence, Aug 31-Sep 3, 2010, Toronto, Canada (acceptance rate 16.6%, best paper shortlist)
8. Ding, Y., Sun, Y., **Chen, B.**, Borner, K., Ding, L., Wild, D., Wu, M., DiFranzo, D., Fuenzalida, A. G., Li, D., Milojevic, S., Chen, S., Sankaranarayanan, M. & Toma, I. Semantic Web Portal: A Platform for Better Browsing and Visualizing Semantic Data. Proceedings of the 2010 International Conference On Active Media Technology (AMT2010), Lecture Notes in Artificial Intelligence (LNAI), Springer, Aug 28-30, 2010, Toronto, Canada
9. Choi, J.Y., Bae, S.H., Qui, J., **Chen, B.**, Wild, D.J. Browsing large scale cheminformatics data with dimension reduction. Currency and Computation: Practice and Experience, 2011, 23: 2315-2325.
10. **Chen B**, McConnell KJ, Wale N, Wild DJ, Gifford EM. Comparing Bioassay Response and Similarity Ensemble Approaches to Probing Protein Pharmacology, Bioinformatics, 2011, 27(21):3044-9
11. He, B., Tang, J., Ding, Y., Wang, H., Sun, Y., Shin, J.H., **Chen, B.**, Moorthy, G., Qiu, J., Desai, P., Wild, D.J., Mining relational paths in biomedical data, PLOS ONE, 2011, e27506
12. **Chen B**, Ding Y, Wild DJ. Improving integrative searching of systems chemical biology data using semantic annotation. Journal of Cheminformatics. 2012;4:6
13. **Chen B**, Sheridan RP, Hornak V, Voigt JH. Comparison of random forest and Pipeline Pilot Naive Bayes in prospective QSAR predictions. Journal of Chemical Information and Modeling. 2012 Mar 26;52(3):792-803.
14. **Chen B**, Ding Y, Wild DJ. Assessing Drug Target Association using Semantic Linked Data. PLoS Computational Biology. 2012;8(7):e1002574. (citations > 50)
15. Willighagen EL, Waagmeester A, Spjuth O, Ansell P, Williams AJ, Tkachenko V, Hastings J, **Chen B**, Wild DJ. The ChEMBL database as linked open data. Journal of Cheminformatics. 2013;5(1):1-12.3
16. **Chen B**\*, Wild DJ\*. Practice and Challenges of Building a Semantic Framework for Chemogenomics Research. Molecular Informatics. 2013;32(11‐12):1000-8. (\*co-corresponding authors).
17. Auerbach RK, **Chen B**, Butte AJ. Relating genes to function: identifying enriched transcription factors using the ENCODE ChIP-Seq significance tool. Bioinformatics. 2013;29(15):1922-4.
18. **Chen B**, Butte A. Network medicine in disease analysis and therapeutics. Clinical Pharmacology & Therapeutics. 2013;94(6):627-9.
19. Wu M, Sirota M, Butte AJ, **Chen B.**\*, Characteristics Of Drug Combination Therapy In Oncology By Analyzing Clinical Trial Data On Clinicaltrials.gov, Pacific Symposium on Biocomputing (PSB) 2015, Hawaii (\*corresponding author)
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2. Jing Xing#, Rama Shankar#, Aleksandra Drelich#, Shreya Paithankar, Eugene Chekalin, Thomas Dexheimer, Surender Rajasekaran, Chien-Te Kent Tseng\*, **Bin Chen**\*, Reversal of Infected Host Gene Expression Identifies Repurposed Drug Candidates for COVID-19, PMID:32511305, PMC7217282
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4. Ke Liu\*, Benjamin S. Glicksberg, Shreya Paithankar, **Bin Chen**, In-depth transcriptomic comparison provides novel insights into breast cancer metastasis, under submission

1. **NON-PEER REVIEWED PUBLICATIONS**

1. **Chen B**., Wang H., Ding Y., Wild D., Semantic Breakthrough in Drug Discovery, Morgan & Claypool Publishers, 2014 (Book)
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**SIGNIFICANT PUBLICATIONS**

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| 1. | **Chen B**\*, Wei W\*, Ma L, Yang B, Gill RM, Chua MS, Butte AJ, and So S, Computational discovery of niclosamide ethanolamine as a repurposed drug for hepatocellular carcinoma that acts through inhibition of CDC37-mediated signaling, Gastroenterology, In press (\*co-first authors), IF: 18  conceived the study, performed bioinformatics analysis, analyzed and interpreted the data, coordinated the work and wrote the manuscript  Press  \*Deworming Pill May Be Effective in Treating Liver Cancer (UCSF press release)  \*Bioinformatic Search Identifies Tapeworm Drug for Treatment of Hepatocellular Carcinoma (Featured in Gastro journal)  \*New Approach to Drug Discovery Finds Veterinary Pill Helps Mice Fight Liver Cancer (LIVER DISEASE NEWS)  \*Featured in the UCSF Magazine Winter 2018 and the UCSF Cancer Year in Review: 2017 |
| 2. | **Chen B**\*#, Ma L\*, Paik H, Sirota M, So S, Chua MS#, Butte AJ#. Reversal of cancer gene expression correlates with drug efficacy and suggests therapeutic targets, *Nature Communications*, 2017 (\*co-first authors, #co-corresponding authors)  conceived the study, performed bioinformatics analysis, analyzed and interpreted the data, coordinated the work and wrote the manuscript  Press  \*Big-Data Analysis Points Toward New Drug Discovery Method (UCSF press release, Science Daily, EurekAlert )  \*Database sleuths turn up a surprising new drug to test against cancer (STAT)  \*Systems Study Taps Cancer Gene Expression Reversal to Predict Drug Response (genomeweb)  \*How Big Data Is Transforming Medicine (HuffPost)  \*New Computational Method to Aid Cancer Drug Discovery (Genetic Engineering & Biotechnology News)  \*UCSF-led research produces method for probing new drug use (XINHUA)  \*Featured in KCBS |
| 3. | Liu K, Newbury PA, Glicksberg BS, Zeng WZD, Paithankar S, Andrechek ER, **Chen B**., Nat Commun. 2019 May 15;10(1):2138. doi: 10.1038/s41467-019-10148-6. PMID: 31092827conceived and supervised the study  Press  \*Big data helps identify better way to research breast cancer’s spread (MSU press release, Science Daily, EurekAlert )  \*Breast Cancer Cell Lines Get Big Data Assistance (GEN News)  \*Are Cell Lines the Best Model to Analyze Breast Cancer Biology? (I3Health News)  \*Big data helps determine better research models to fight the spread of breast cancer (The Medical News)  8Using Big Data to Improve Metastatic Breast Cancer Research (Specialty Pharmacy Times)  Tweeted by NCI Genomices, NatRevClinOncol and many others  Select as an NIEHS Extramural Paper of the Month |
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