# Stanford



# Bryant Lin Clinical Professor, Medicine - Primary Care and Population Health

# **CLINICAL OFFICE (PRIMARY)**

• Stanford Internal Medicine

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# Bio

#### BIO

Bryant Lin, MD, MEng is a primary care physician, educator and researcher. The cornerstone of Dr. Lin's work is keeping medicine focused on humans - patients, providers, families and trainees - and not lost in technology and algorithms. His research and educational interests span (1) Developing and testing novel medical technologies, (2) Improving the health of Asian populations with Precision and Population Health, and (3) Increasing expression and interconnections in the Health Community with the Humanities and Arts. After receiving his undergraduate and master's degrees in Electrical Engineering and Computer Science from MIT, he completed his MD and internal Medicine training at Tufts University School of Medicine and Tufts Medical Center. He came to Stanford to serve as a Research Fellow in Cardiac Electrophysiology and Biodesign Fellow where he learned to identify unmet human-centered needs. Since completing his post-graduate training, he stayed at Stanford as clinical faculty in Primary Care and Population Health in the Department of Medicine where he has invented and researched new medical technologies addressing unmet human-centered needs and started the Consultative Medicine Clinic evaluating patients with medical mysteries. He served as the Training Director for the Joe and Linda Chlapaty DECIDE Center which has created a novel shared decision making tool for atrial fibrillation anti-coagulation and is an investigator in several active clinical trials. Three years ago, he co-founded and currently co-directs, with Dr. Latha Palaniappan, the Center for Asian Health Research and Education (CARE) which aims to improve the health of Asians everywhere. Most recently, he has worked closely with the Medicine and the Muse leadership to help start the Stuck@Home concert series, the Stanford SoundWalk and the COVID Remembrance project. In 2021, Dr. Lin was appointed the Director of Medical Humanities and Arts at Stanford. Dr. Lin has an active interest in storytelling and film-making. He co-directs an undergradu

# CLINICAL FOCUS

- Internal Medicine
- Consultative Medicine
- Preventive Health
- Chronic Care Management
- Asian Health

Atrial Fibrillation

#### ACADEMIC APPOINTMENTS

- Clinical Professor, Medicine Primary Care and Population Health
- · Member, Cardiovascular Institute

#### ADMINISTRATIVE APPOINTMENTS

- Director of Medical Humanities and Arts, Stanford Center for Biomedical Ethics, (2021- present)
- Founding Co-Director, Center for Asian Health Research and Education (CARE) at Stanford, (2018- present)
- Training Director, Joe and Linda Chlapaty DECIDE Center at Stanford University, (2018-2022)
- Medical Director, Consultative Medicine Clinic, (2013-2019)

#### PROFESSIONAL EDUCATION

- Medical Education: Tufts University School of Medicine (2002) MA
- Fellowship: Stanford University Cardiovascular Medicine Fellowship (2008) CA
- Residency: Tufts Medical Center Internal Medicine Residency (2005) MA
- Fellowship, Stanford University, Biodesign (2006)
- Board Certification: Internal Medicine, American Board of Internal Medicine (2005)
- MEng, MIT, EECS (1997)
- SB, MIT, EECS (1996)

#### **PATENTS**

- Friedrich Prinz, Paul Wang, Bryant Lin, Ross Venook. "United States Patent 8,100,900 System for delivering therapy"
- Baharan Kamousi, Bryant Lin, Paul Wang. "United States Patent 8,204,581 Method to discriminate arrhythmias in cardiac rhythm management devices"
- Bryant Lin, Tatum Tarin, Ross Venook, Peter Hwang, Richard Goode. "United States Patent 8,290,582 Device and method to treat tissue with electric current"
- Paul Zei, Bryant Lin, Robert Allison, Kenneth Carr. "United States Patent 8,303,172 Devices and methods for exercise monitoring"
- Dorothea Koh, Bryant Lin, Paul Wang, Marie Guion-Johnson, Amin Al-Ahmad. "United States Patent 8,494,623 Method and apparatus for in-vivo physiological monitoring"

# LINKS

For My Kids: https://youtu.be/a3Z7zEc7AXQ

# Research & Scholarship

# CURRENT RESEARCH AND SCHOLARLY INTERESTS

- -Digital Health
- -Medical device design, prototyping, testing and clinical trials
- -Behavioral determinants of chronic disease
- -Novel diagnostic processes for medical mysteries
- -Asian Health
- -Medical Humanities and Arts
- -Medical Technology

#### **CLINICAL TRIALS**

• A Study to Establish a New Onset Hyperglycemia and Diabetes Cohort, Recruiting

- Evaluation of the Integrated Radio Frequency Denervation System to Improve Glycemic Control in Type 2 Diabetic Subjects, Recruiting
- · Engaging Patients to Help Achieve Increased Patient Choice and Engagement for AFib Stroke Prevention, Not Recruiting

# **Teaching**

# **COURSES**

#### 2023-24

- Exploring perspectives of complex, post-viral, chronic illness and disability through podcast media: SOMGEN 243 (Win)
- Generative AI and Medicine: MED 216 (Spr)
- Lasting Letters and the Art of Deep Listening: MED 256, WELLNESS 256 (Win)
- Literature and Writing for Military Affiliated Students: SOMGEN 203 (Aut)
- Medical Humanities and the Arts: INDE 212 (Spr)
- Physical Listening: SOMGEN 224 (Win)
- Science and History of Traditional Chinese Medicine: ASNAMST 272, CHINA 272, MED 272 (Win)
- Storytelling in Medicine: LIFE 53Q, MED 53Q (Win)
- Tackling Asian-American Health Challenges: ASNAMST 268, MED 268 (Spr)
- The Digital Future of Health Care: MED 213 (Win)

#### 2022-23

- Generative AI and Medicine: MED 216 (Spr)
- Lasting Letters and the Art of Deep Listening: MED 256 (Win)
- Literature and Writing for Military Affiliated Students: SOMGEN 203 (Aut)
- Medical Humanities and the Arts: INDE 212 (Spr)
- Science and History of Traditional Chinese Medicine: ASNAMST 272, MED 272 (Win)
- Storytelling in Medicine: LIFE 53Q, MED 53Q (Win)
- Tackling Asian-American Health Challenges: ASNAMST 268, MED 268 (Spr)
- The Digital Future of Health Care: MED 213 (Win)

#### 2021-22

- Diagnostic Medicine on Television: Truths vs. Theatrics: MED 291 (Win)
- Literature and Writing for Military Affiliated Students: SOMGEN 203 (Aut)
- Medical Humanities and the Arts: INDE 212 (Spr)
- Storytelling in Medicine: MED 53Q (Win)
- Tackling Cross-Cultural Health Challenges: Emphasis on the Asian Community: ASNAMST 268, MED 268 (Spr)
- The Digital Future of Health Care: MED 213 (Spr)

#### 2020-21

- Diagnostic Medicine on Television: Truths vs. Theatrics: MED 291 (Win)
- Storytelling in Medicine: MED 53Q (Win)
- Tackling Cross-Cultural Health Challenges: Emphasis on the Asian Community: MED 268 (Spr)

#### **Publications**

#### **PUBLICATIONS**

- Foundation metrics for evaluating effectiveness of healthcare conversations powered by generative AI. NPJ digital medicine

  Abbasian, M., Khatibi, E., Azimi, I., Oniani, D., Shakeri Hossein Abad, Z., Thieme, A., Sriram, R., Yang, Z., Wang, Y., Lin, B., Gevaert, O., Li, L. J., Jain, et al 2024; 7 (1): 82
- Who Are We Missing? Reporting of Transgender and Gender-Expansive Populations in Clinical Trials. *Journal of the American Heart Association* Rice, E. N., Lan, R. H., Nunes, J. C., Shah, R., Clark, K., Periyakoil, V. S., Chen, J. H., Lin, B., Echols, M., Awad, C., Idris, M. Y., Cruz, E. R., Poullos, et al 2023; e030209
- Disabilities Reporting in Cardiac Clinical Trials: How Are We Doing? Journal of the American Heart Association
   Lan, R. H., Rice, E. N., Nunes, J. C., Shah, R., Igwe, J. K., Clark, K., Periyakoil, V. S., Chen, J. H., Lin, B., Awad, C., Idris, M., Cruz, E. R., Lewis, et al 2023: e029726
- Voices of Musicians: Virtual Live Bedside Music Concerts in Inpatient Care. Healthcare (Basel, Switzerland)
   Ambler, M., Janss, A., Stafford, R. S., Lin, B., Florom-Smith, A., Kang, A. W.
   2023; 11 (22)
- Acoustic resonance therapy is safe and effective for the treatment of nasal congestion in rhinitis: A randomized sham-controlled trial. International forum of allergy & rhinology

Luong, A. U., Yong, M., Hwang, P. H., Lin, B. Y., Gopi, P., Mohan, V., Ma, Y., Johnson, J., Yen, D. M., DeMera, R. S., Bleier, B. S. 2023

• Testing the Appropriateness of Diabetes Prevention and Care Information Given by the Online Conversational AI ChatGPT. Clinical diabetes: a publication of the American Diabetes Association

Hong, J., Kikuta, N. T., Simos, A., Tsai, S., Lin, B., Rodriguez, F., Palaniappan, L. 2023; 41 (4): 549-552

• THE EFFECT OF ACOUSTIC RESONANCE THERAPY ON CPAP ADHERENCE

Munafo, D., Gopi, P., Mohan, V., Hwang, P., Lin, B., Hekier, E., Lane, B., Guerrero, C., Dauphin, B., Kushida, C. OXFORD UNIV PRESS INC.2023: A216

- Design and development of a digital shared decision-making tool for stroke prevention in atrial fibrillation. *JAMIA open*Nunes, J. C., Baykaner, T., Pundi, K., DeSutter, K., True Hills, M., Mahaffey, K. W., Sears, S. F., Morin, D. P., Lin, B., Wang, P. J., Stafford, R. S. 2023; 6 (1): ooad003
- Clinical Trial to Evaluate an Atrial Fibrillation Stroke Prevention Shared DecisionMaking Pathway
  Wang, P. J., Lu, Y., Mahaffey, K. W., Lin, A., Morin, D. P., Sears, S. F., Chung, M. K., Russo, A. M., Lin, B., Piccini, J. P., Hills, M. T., Berube, C., Pundi, et al LIPPINCOTT WILLIAMS & WILKINS.2022: E582-E583
- A Randomized Clinical Trial to Evaluate an Atrial Fibrillation Stroke Prevention Shared Decision-Making Pathway. Journal of the American Heart Association

Wang, P. J., Lu, Y., Mahaffey, K. W., Lin, A., Morin, D. P., Sears, S. F., Chung, M. K., Russo, A. M., Lin, B., Piccini, J., Hills, M. T., Berube, C., Pundi, et al 2022: e8009

- Diagnostic journeys: characterization of patients and diagnostic outcomes from an academic second opinion clinic. Diagnosis (Berlin, Germany)
   Chao, S., Lotfi, J., Lin, B., Shaw, J., Jhandi, S., Mahoney, M., Singh, B., Nguyen, L., Halawi, H., Geng, L. N.
- Training Internal Medicine Residents in Difficult Diagnosis: A Novel Diagnostic Second Opinion Clinic Experience. Journal of medical education and curricular development

Testa, S., Joshi, M., Lotfi, J., Lin, B., Artandi, M., Chiang, K. F., Chang, K., Singh, B., Geng, L. N. 2022; 9: 23821205221091036

 The ENHANCE-AF Clinical Trial to Evaluate an Atrial Fibrillation Shared Decision-Making Pathway: Rationale and Study Design. American heart journal

Baykaner, T., Pundi, K., Lin, B., Lu, Y., DeSutter, K., Lhamo, K., Garay, G., Nunes, J. C., Morin, D. P., Sears, S. F., Chung, M. K., Paasche-Orlow, M. K., Sanders, et al

2022

Shifting our stance for current COVID-19 outbreaks: A global response to an international pandemic. Journal of global health

Obra, J. K., Lin, B., Palaniappan, L., Kim, G. S.

2021; 11: 03123

• Achieving Equity in Asian American Healthcare: Critical Issues and Solutions. Journal of Asian health

Obra, J. K., Lin, B., #oàn, L. N., Palaniappan, L., Srinivasan, M. 2021; 1 (1)

• MACHINE LEARNING CLUSTERING FOR BLOOD PRESSURE VARIABILITY: VALIDATION FROM THE SPRINT TO THE HONG KONG COMMUNITY COHORT

Tsoi, K., Chan, N., Yiu, K., Poon, S., Ho, K., Lin, B. LIPPINCOTT WILLIAMS & WILKINS.2021: E69

 Precision Public Health Matters: An International Assessment of Communication, Preparedness, and Coordination for Successful COVID-19 Responses. American journal of public health

Sales, C., Kim, Y., Kim, G., Lin, B., Palaniappan, L. 2021; 111 (3): 392–94

Disaggregated Mortality from Gastrointestinal Cancers in Asian Americans: Analysis of United States Death Records. International journal of cancer
Huang, R. J., Sharp, N., Talamoa, R., Kapphahn, K., Sathye, V., Lin, B., Srinivasan, M., Palaniappan, L. P.

Increased Self-Reported Racial/Ethnic Discrimination and Concern for Physical Assault Due to the COVID-19 Pandemic in Chinese, Vietnamese, Korean,
 Japanese, and Filipino Americans Journal of Asian Health

Ha, S. K., Nguyen, A. T., Sales, C., Chang, R. S., Ta, H., Srinivasan, M., Chung, S., Palaniappan, L., Lin, B. 2021; 1 (1)

• Resonant vibration of the sinonasal cavities for the treatment of nasal congestion. International forum of allergy & rhinology

Khanwalkar, A., Johnson, J., Zhu, W., Johnson, E., Lin, B., Hwang, P. H. 2021

• Blood Thinners for Atrial Fibrillation Stroke Prevention. Circulation. Arrhythmia and electrophysiology

Pundi, K., Baykaner, T., True Hills, M., Lin, B., Morin, D. P., Sears, S. F., Wang, P. J., Stafford, R. S.

2021: CIRCEP120009389

Shifting our stance for current COVID-19 outbreaks: A global response to an international pandemic JOURNAL OF GLOBAL HEALTH

Obra, J., Lin, B., Palaniappan, L., Kim, G. S. 2021; 11

2021; 11

A Speech Test to Assess Mask Efficacy 43rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)
 Parameswaran, K., Lin, B.

2021

• Achieving Equity in Asian American Healthcare: Critical Issues and Solutions Journal of Asian Health

Obra, J., Lin, B., Doan, L., Palaniappan, L., Srinivasan, M. 2021; 1 (1)

A Summary of the 2020 Gastric Cancer Summit at Stanford University. Gastroenterology

Huang, R. J., Koh, H., Hwang, J. H., Summit Leaders, Abnet, C. C., Alarid-Escudero, F., Amieva, M. R., Bruce, M. G., Camargo, M. C., Chan, A. T., Choi, I. J., Corvalan, A., Davis, J. L., et al

 Machine Learning Clustering for Blood Pressure Variability Applied to Systolic Blood Pressure Intervention Trial (SPRINT) and the Hong Kong Community Cohort. Hypertension (Dallas, Tex.: 1979)

Tsoi, K. K., Chan, N. B., Yiu, K. K., Poon, S. K., Lin, B., Ho, K. 2020: HYPERTENSIONAHA11914213

• Pharmacogenomics in Asian subpopulations and impacts on commonly prescribed medications. Clinical and translational science

Lo, C. n., Nguyen, S. n., Yang, C. n., Witt, L. n., Wen, A. n., Liao, T. V., Nguyen, J. n., Lin, B. n., Altman, R. B., Palaniappan, L. n.

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#### • Cryosurgical posterior nasal tissue ablation for the treatment of rhinitis

Hwang, P. H., Lin, B., Weiss, R., Atkins, J., Johnson, J.

WILEY.2017: 952-56

#### Visualizing ablation gaps in vitro using a deflectable fiber optic endocardial visualization catheter JOURNAL OF INTERVENTIONAL CARDIAC ELECTROPHYSIOLOGY

Irani, A. R., Lin, B., Eversull, C., Hsia, H. H., Zei, P. C., Wang, P. J., Al-Ahmad, A.

2009; 25 (2): 107-110

#### Direct Visualization of Cardiac Radiofrequency Ablation Lesions JOURNAL OF CARDIOVASCULAR TRANSLATIONAL RESEARCH

Eversull, C. S., Lin, B., Irani, A. R., Quigley, M. L., Mourlas, N. J., Hsia, H. H., Zei, P. C., Al-Ahmad, A., Wang, P. J. 2009; 2 (2): 198-201

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#### A New Approach for ICD Rhythm Classification based on Support Vector Machines Annual International Conference of the IEEE-Engineering-in-Medicineand-Biology-Society

Kamousi, B., Tewfik, A., Lin, B., Al-Ahmad, A., Hsia, H., Zei, P., Wang, P.

IEEE.2009: 2478-2481

#### • Dynamic Time Warping: A novel algorithm for rhythm discrimination in ICDs

Kamousi, B., Lin, B., Lee, G., Ai-Ahmad, A., Hsia, H. H., Zei, P. C., Wang, P. J.

ELSEVIER SCIENCE INC.2008: A14

#### Visualizing ablation gaps in vitro using a deflectable fiber optic endocardial visualization catheter

Irani, A. R., Lin, B., Eversull, C., Wang, P. J., Al-Ahmad, A.

ELSEVIER SCIENCE INC.2008: A8

#### A Covariance-Based Algorithm: A Novel Technique for Rhythm Discrimination in ICDs 30th Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society

Kamousi, B., Lin, B., Al-Ahmad, A., Hsia, H., Zei, P., Natale, A., Moss, A., Daubert, J., Zareba, W., Wang, P.

IEEE.2008: 5478-5481

#### • Feasibility Testing of Novel Ablation Catheter-based Temperature Measurement Device Cardiostim 2008

Bryant Lin MD, Ronald Lo MD, Z Cheng MD, Manuela Kuehnel, Peter van der Sluis, Henry H. Hsia MD, Paul C. Zei MD PhD Paul J Wang MD, Amin Al-Ahmad MD

2008

#### Novel Method to Assess Gap Distance Between Ablation Lesions Featured Poster Heart Rhythm Society

Lin BY, Eversull C, Chen H, Hsia H, Al-Ahmad A

2006

# Extraction of buried P waves from printed electrocardiograms ANNALS OF NONINVASIVE ELECTROCARDIOLOGY

Lin, B., Wang, P. J., Mahapatra, S., Homoud, M., Link, M., Estes, N. A., Al-Ahmad, A.

2005; 10 (2): 142-145

#### • Contractile actin expression in torn human menisci WOUND REPAIR AND REGENERATION

Lin, B. Y., Richmond, J. C., Spector, M.

2002; 10 (4): 259-266

#### Changes in Physical and Biochemical Properties of Cartilage in the Guinea Pig Spontaneous OA Model are Consistent with Hypertrophic Remodeling Transactions of the Orthopaedic Research Society

Lin BY, Sebern EL, Frank EH, Dube N, Grodzinsky AJ

1998; 23: 130

# Association Between Financial Literacy and Diabetes and Hypertension Control among US Adults SGIM Annual

Yank, V., Lin, B., Loftus, P., Agarwal, S., Rehkopf, D.

2018: S124

### • Design and Testing of a Wearable Device to Detect Leg Position in Patients with Edema IEEE Eng Med Biol Soc

Sharma, K., Sathye, V., Gole, S., Lin, B.

2018