Cody R. Hou

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Education

University of Minnesota, Twin Cities Medical School — Aug 2020 – Present
M.D. — Minneapolis, MN

University of Minnesota, Twin Cities — Sep 2016 – May 2020
B.S. in Biochemistry, *summa cum laude* (GPA: 3.991/4.0) — Minneapolis, MN
Minor in German, Honors student

Honors and Awards

- Sarnoff Cardiovascular Research Fellowship (2022)
- B.A. and Robert Dyar Memorial Scholarship (2020)
    - Merit-based full tuition medical school scholarship
- Phi Beta Kappa (2019)
- Undergraduate Research Scholarship (2017)
- University of Minnesota Gold Scholar Award and Presidential Scholarship (2016)
    - National Merit Semifinalist full tuition undergraduate scholarship

Research Experience

Sarnoff Fellow — Jul 2022 – Present
Ellinor Lab, Broad Institute of MIT and Harvard — Cambridge, MA
- Analyze cardiac MRIs to develop machine learning algorithms for the lung

NIH T35 Mescher Scholar — Jul 2021 – Aug 2021
Boulware Lab, University of Minnesota — Minneapolis, MN
- Investigated how cerebral perfusion pressure and blood pressure influence cardiovascular and neurocognitive outcomes in cryptococcal meningitis

Wilson Scholar — May 2021 – Jul 2021
Benditt Lab, Lillehei Heart Institute, University of Minnesota — Minneapolis, MN
- Evaluated definitions of inappropriate sinus tachycardia in published literature

Summer Research Scholar/Research Assistant — May 2019 – May 2020
Dudley Lab, Lillehei Heart Institute, University of Minnesota — Minneapolis, MN
- Analyzed efficacy of novel drug analogs on mitochondrial oxidative stress in cardiac muscle cells to treat heart failure with preserved ejection fraction

Publications

- **Hou CR**, Cortez D. Novel *ACTN2* missense variant is associated with idiopathic ventricular fibrillation: a case report. *Eur Heart J Case Rep* 2022; accepted for publication.
- **Hou CR**, Olshansky B, Cortez D, Duval S, Benditt D. Inappropriate sinus tachycardia: an examination of existing definitions. *Europace* 2022; accepted for publication.
- Zhao M, Zhao M, **Hou CR**, Post F, Herold N, Walsleben J, Meng Z, Yu J. Left atrial appendage closure yields favorable cardio- and cerebrovascular outcomes in patients with non-valvular atrial fibrillation and prior stroke. *Front Neurol* 2022; 12:784557. DOI: 10.3389/fneur.2021.784557
- Zhao M, **Hou CR**, Xiong X, Post F, Herold N, Yu J. Safety and effectiveness of left atrial appendage closure in patients with non-valvular atrial fibrillation and prior major bleeding. *Expert Rev Med Devices* 2021; 18:1–9. DOI: 10.1080/17434440.2021.2011718
- Zhao M, Post F, Muenzel M, **Hou CR**, Keil T, Yu J. Impact of sex differences on outcomes in patients with non-valvular atrial fibrillation undergoing left atrial appendage closure: A single-center experience. *Int J Med Sci* 2021; 18:1990–1998. DOI: 10.7150/ijms.53221
- Liu M, Liu H, Feng F, Xie A, Kang GJ, Zhao Y, **Hou CR**, Zhao X, Dudley S. Magnesium deficiency causes a reversible, metabolic diastolic cardiomyopathy. *J Am Heart Assoc* 2021; 10:e020205. DOI: 10.1161/JAHA.120.020205
- Zhang X, Jin Q, Kong D, Jiang Y, Chen S, Chen D, **Hou CR**, Zhang L, Pan C, Zhou D, Ge J. Comparison of fluoroscopy and transesophageal echocardiogram for intra-procedure device surveillance assessment during implantation of Watchman. *Int J Cardiol* 2021; 324:72–77. DOI: 10.1016/j.ijcard.2020.08.070
- Fan J, Fang X, Liu C, Zhu G, **Hou CR**, Jiang J, Lin X, Wang L, He Y, Zhu Q, Ng S, Chen Z, Hu H, Liu X, Wang J, Leon M. Brain injury after transcatheter replacement of bicuspid versus tricuspid aortic valves. *J Am Coll Cardiol* 2020; 76:2579–2590. DOI: 10.1016/j.jacc.2020.09.605
- Yu J, Chen H, Post F, Münzel M, Keil T, **Hou CR,** Zhao M, Meng Z, Jiang L. Efficacy and safety of left atrial appendage closure in non-valvular atrial fibrillation in patients over 75 years. *Heart Vessels* 2019; 34:1858–1865. DOI: 10.1007/s00380-019-01428-8
- Urbach J*, **Hou CR***, Lesser J, Stanberry L, Garberich R, Caye D, Sorajja P, Gössl M. Computer tomographic angiography-derived risk factors for vascular complications in percutaneous transfemoral transcatheter aortic valve replacement. *Am J Cardiol* 2019; 124:98–104. DOI: 10.1016/j.amjcard.2019.03.043 (*Equal contribution)
- Yang L, Geng Z, Nickel T, Johnson C, Gao L, Dutton H, **Hou CR**, Zhang J. Differentiation of human induced-pluripotent stem cells into smooth-muscle cells: two novel protocols. *PLoS One* 2016; 11:e0147155. DOI: 10.1371/journal.pone.0147155

Abstracts

- **Hou CR**, Cortez D. Novel *ACTN2* missense variant is associated with idiopathic ventricular fibrillation. American College of Cardiology's 71st Annual Scientific Session, Washington, D.C., April 2022. *J Am Coll Cardiol* 2022; 79:2538. DOI: 10.1016/S0735-1097(22)03529-X
- **Hou CR**, Olson S, Lesser J, Stanberry L, Garberich R, Caye D, Sorajja P, Gössl M. Risk evaluation for vascular complication severity with transfemoral aortic valve replacement. American College of Cardiology's 67th Annual Scientific Session, Orlando, March 2018. *J Am Coll Cardiol* 2018; 71:A1187. DOI: 10.1016/S0735-1097(18)31728-5

Leadership

Vice President — Sep 2021 – Present
Medicine and Machine Learning Group — Minneapolis, MN
- Developing an introductory R and machine learning course for medical students

Co-President — Mar 2021 – Mar 2022
Asian Pacific American Medical Student Association — Minneapolis, MN
- Led initiatives to focus on medical issues important to Asian American, Native Hawaiian, and Pacific Islander medical students

Treasurer — Mar 2021 – Mar 2022
Cardiology Interest Group — Minneapolis, MN
- Managed group finances to promote cardiovascular medicine

Orientation Chair — Mar 2021 – Mar 2022
Anki Club — Minneapolis, MN
- Established materials to help incoming students master Anki, a learning tool for medical school

Student Technology Council Representative — Sep 2021 – Mar 2021
Medical Student Council — Minneapolis, MN
- Helped medical students obtain access to technology resources

Professional Organizations

- American College of Physicians (2022 – Present)
- American Medical Association (2021 – Present)
- American College of Cardiology (2017 – Present)

Skills

- Languages: Japanese (advanced); German (advanced); Chinese (intermediate)
- Computer skills: Python, R, Linux shell, Google BigQuery, machine learning with fastai, Adobe Lightroom/Photoshop

Hobbies

- Photography (portfolio: https://www.codyhou.com/photography/)
- Road cycling
- Cello
- Language learning