

# Cody R. Hou

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## Education

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University of Minnesota, Twin Cities Medical School  
M.D.

Aug 2020 – Present  
Minneapolis, MN

University of Minnesota, Twin Cities  
B.S. in Biochemistry, *summa cum laude* (GPA: 3.991/4.0)  
Minor in German, Honors student

Sep 2016 – May 2020  
Minneapolis, MN

## Honors and Awards

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- 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

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Sarnoff Fellow

Jul 2022 – Present

Ellinor Lab, Broad Institute of MIT and Harvard

Cambridge, MA

- Utilizing deep learning on cardiac magnetic resonance imaging to investigate the association between lung volumes and cardiovascular disease

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

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- **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

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- **Hou CR**, Cortez D. Novel *ACTN2* missense variant is associated with idiopathic ventricular fibrillation. American College of Cardiology's 71<sup>st</sup> 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

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Vice President Sep 2022 – Present  
 Medicine and Machine Learning Group Minneapolis, MN

- Developing an introductory R 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

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

## Skills

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

## Hobbies

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