

Christian O'Donnell

Clinical Scholar, Anesthesiology, Perioperative and Pain Medicine

Bio

ACADEMIC APPOINTMENTS

- Clinical Scholar, Anesthesiology, Perioperative and Pain Medicine

HONORS AND AWARDS

- Christopher O'Connor Award for Outstanding Scholarship by an Early Investigator, JACC Heart Failure (2024)
- Philip K. Caves Early Investigator Award Finalist, International Society of Heart and Lung Transplantation (2025)
- John Silvey Thompson III, MD Memorial: Critical Care Medicine Fellowship Award, Stanford University School of Medicine (2025)
- Early Career Investigator Award, Society of Cardiovascular Anesthesiologists (2024)
- Bronze Snapshot Award, Society of Critical Care Medicine Virtual Critical Care Congress
- Best Abstract, Society of Cardiovascular Anesthesiologists Annual Meeting (2024)

PROFESSIONAL EDUCATION

- Board Certification, American Board of Anesthesiology – Critical Care Medicine (2025)
- Board Certification, American Board of Anesthesiology (2025)
- Board Certification, American Board of Internal Medicine (2024)
- Fellowship, Stanford University School of Medicine , Anesthesia Critical Care Medicine (2025)
- Residency, Stanford University School of Medicine , Combined Internal Medicine and Anesthesiology (2024)
- MD, Stanford University School of Medicine , Doctorate of Medicine (2019)
- BS, University of California, Los Angeles (UCLA) , Physiological Science (2015)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Interested in echocardiography, right heart failure, and heart transplantation with a focus on phenotyping donor heart function and remodeling to improve recipient outcomes by developing better tools for donor-recipient size matching and selection. Developing novel machine learning algorithms to aid this process in real-time to improve heart transplantation outcomes.

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Cardiac Anesthesia (Fellowship Program)
- Critical Care Medicine (Fellowship Program)

Publications

PUBLICATIONS

- **Impact of Donor Left Ventricular Geometric Remodeling and Hypertrophy on Heart Acceptance and Recipient Survival.** *JACC. Heart failure*
O'Donnell, C., Kim, J. S., Tarun, A., Celestin, B. E., Karius, A. K., Bagherzadeh, S. P., Intrieri, T. A., Tapaskar, N., Zhang, S., Weng, Y., Zaroff, J., Sun, L. Y., Wayda, et al
2026: 103150
- **Defining Perioperative Right Heart Failure in Cardiac Surgery: A Multiparametric Approach to Diagnosis and Management.** *Anesthesiology*
Jabagi, H., O'Donnell, C., Haddad, F., Denault, A., Sun, L. Y.
2026
- **Time-varying comparative effectiveness of surgical or percutaneous revascularization on patient-centred outcomes.** *CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne*
Fielding-Singh, V., O'Donnell, C., Boyd, J. H., Tuna, M., Mamas, M. A., Ruel, M., Sun, L. Y.
2025; 197 (42): E1436-E1448
- **The Association of Echocardiographically Measured Donor Left Ventricular Mass and 1-Year Outcomes After Heart Transplantation.** *JACC. Heart failure*
O'Donnell, C., Tapaskar, N., Sanchez, P. A., Wayda, B., Santana, E. J., Pulgrossi, R. C., Steffner, K., Zhang, S., Weng, Y., Sun, L. Y., Malinoski, D., Zaroff, J., Haddad, et al
2024
- **Impact of C-reactive Protein on Anticoagulation Monitoring in Extracorporeal Membrane Oxygenation.** *Journal of cardiothoracic and vascular anesthesia*
Madhok, J., O'Donnell, C., Jin, J., Owyang, C. G., Weimer, J. M., Pashun, R. A., Shudo, Y., McNulty, J., Chadwick, B., Ruoss, S. J., Rao, V. K., Zehnder, J. L., Hsu, et al
2024
- **The Echocardiographic Evaluation of the Right Heart: Current and Future Advances.** *Current cardiology reports*
O'Donnell, C., Sanchez, P. A., Celestin, B., McConnell, M. V., Haddad, F.
2023
- **Right Ventricular Dysfunction Patterns Among Patients with COVID-19 in the Intensive Care Unit - a Retrospective Cohort Analysis.** *Annals of the American Thoracic Society*
Sanchez, P. A., O'Donnell, C. T., Francisco, N., Santana, E. J., Moore, A. R., Pacheco-Navarro, A., Roque, J., Lebold, K. M., Parmer, C. M., Pienkos, S. M., Celestin, B. E., Levitt, J. E., Collins, et al
2023
- **N-Terminal Pro-B-Type Natriuretic Peptide as a Biomarker for the Severity and Outcomes With COVID-19 in a Nationwide Hospitalized Cohort.** *Journal of the American Heart Association*
O'Donnell, C., Ashland, M. D., Vasti, E. C., Lu, Y., Chang, A. Y., Wang, P., Daniels, L. B., de Lemos, J. A., Morrow, D. A., Rodriguez, F., O'Brien, C. G.
2021: e022913
- **The Use of Factor Eight Inhibitor Bypass Activity (FEIBA) for the Treatment of Perioperative Hemorrhage in Left Ventricular Assist Device Implantation.** *Journal of cardiothoracic and vascular anesthesia*
O'Donnell, C., Rodriguez, A. J., Madhok, J., Sharifi, H., Wang, H., O'Brien, C. G., Boyd, J., Hiesinger, W., Hsu, J., Hill, C. C.
2021
- **Platelet-Rich Plasma (PRP) from Older Males with Knee Osteoarthritis Depresses Chondrocyte Metabolism and Upregulates Inflammation.** *Journal of orthopaedic research : official publication of the Orthopaedic Research Society*
O'Donnell, C., Migliore, E., Grandi, F. C., Koltsov, J., Lingampalli, N., Cisar, C., Indelli, P. F., Sebastiano, V., Robinson, W. H., Bhutani, N., Chu, C. R.
2019
- **Utilization of Del Nido Cardioplegia in Adult Coronary Artery Bypass Grafting - A Retrospective Analysis.** *Circulation journal : official journal of the Japanese Circulation Society*
O'Donnell, C., Wang, H., Tran, P., Miller, S., Shuttleworth, P., Boyd, J. H.
2018
- **Drivers of prognosis and clinical trajectories differ between COVID and non-COVID acute hypoxic respiratory failure.** *PloS one*

- Pienkos, S., Moore, A. R., Roque, J., Jensen, A., Pacheco-Navarro, A., Lebold, K. M., Parmer-Chow, C., Sanchez, P. A., Morin, H., O'Donnell, C., Ramaswamy, T., Collins, W., Wilson, et al
2025; 20 (12): e0339604
- **Pirfenidone for the treatment of bronchiolitis obliterans syndrome related to chronic graft-versus-host disease.** *Blood advances*
Sharifi, H., Moss, C. T., Musa, Z., Bell, A., O'Donnell, C., Borges, C., Matthaïou, E. I., Johnston, L., Galban, C., Sheshadri, A., Yanik, G. A., Cheng, G. S., Hsu, et al
2025
 - **Association between emergency department disposition and mortality in patients with COVID-19 acute respiratory distress syndrome.** *Journal of the American College of Emergency Physicians open*
Lebold, K. M., Moore, A. R., Sanchez, P. A., Pacheco-Navarro, A. E., O'Donnell, C., Roque, J., Parmer, C., Pienkos, S., Levitt, J., Collins, W. J., Rogers, A. J., Wilson, J. G.
2024; 5 (3): e13192
 - **The Art of the Null Hypothesis-Considerations for Study Design and Scientific Reporting.** *Journal of cardiothoracic and vascular anesthesia*
O'Donnell, C. T., Fielding-Singh, V., Vanneman, M. W.
2023
 - **Use of methylene blue to treat vasoplegia syndrome in cystic fibrosis patients undergoing lung transplantation: A case series.** *Annals of cardiac anaesthesia*
Washington, G. C., O'Donnell, C. T., Madhok, J., Williams, K. M., Hill, C. C.
2023; 26 (1): 36-41
 - **IMPACT OF C-REACTIVE PROTEIN ON ANTICOAGULATION MONITORING IN EXTRACORPOREAL MEMBRANE OXYGENATION**
Madhok, J., O'Donnell, C., Jin, J., Owyang, C., Weimer, J., Pashun, R., Shudo, Y., McNulty, J., Chadwick, B., Ruoss, S., Rao, V., Zehnder, J., Hsu, et al
LIPPINCOTT WILLIAMS & WILKINS.2023: 54
 - **Impact of PhD Degree Versus Non-PhD Research Fellowship on Future Research Productivity Among Academic Cardiothoracic Surgeons.** *World journal of surgery*
Bajaj, S. S., Wang, H., Williams, K. M., Heiler, J. C., Pickering, J. M., Manjunatha, K., O'Donnell, C. T., Sanchez, M., Boyd, J. H.
2022
 - **An automated line-clearing chest tube system after cardiac surgery.** *JTCVS open*
Obafemi, O. O., Wang, H., Bajaj, S. S., O'Donnell, C. T., Elde, S., Boyd, J. H.
2022; 10: 246-253
 - **The safety and tolerability of pirfenidone for bronchiolitis obliterans syndrome after hematopoietic cell transplant (STOP-BOS) trial.** *Bone marrow transplantation*
Matthaïou, E. I., Sharifi, H., O'Donnell, C., Chiu, W., Owyang, C., Chatterjee, P., Turk, I., Johnston, L., Brondstetter, T., Morris, K., Cheng, G., Hsu, J. L.
2022
 - **Career Progression and Research Productivity of Women in Academic Cardiothoracic Surgery.** *The Annals of thoracic surgery*
Williams, K. M., Wang, H., Bajaj, S. S., Hironaka, C. E., Kasinpila, P., O'Donnell, C. T., Sanchez, M., Watkins, A. C., Lui, N. S., Backhus, L. M., Boyd, J.
2022
 - **Analyzing the Scholarly Impact of Cardiothoracic Surgery Research Using the Relative Citation Ratio.** *The Journal of surgical research*
Wang, H., Bajaj, S. S., Williams, K. M., O'Donnell, C. T., Heiler, J. C., Krishnan, A., Pickering, J. M., Sanchez, M., Manjunatha, K., Kumar, S. S., Yu, M. M., Boyd, J. H.
2022; 275: 265-272
 - **The Academic Impact of Advanced Clinical Fellowship Training among General Thoracic Surgeons.** *Journal of surgical education*
Patel, D. C., Wang, H., Bajaj, S. S., Williams, K. M., Pickering, J. M., Heiler, J. C., Manjunatha, K., O'Donnell, C. T., Sanchez, M., Boyd, J. H., Backhus, L. M.
2021
 - **Characterization of academic cardiothoracic surgeons who started as attendings in private or community practice.** *Surgery*
Bajaj, S. S., Wang, H., Williams, K. M., Krishnan, A., Heiler, J. C., Pickering, J. M., Manjunatha, K., O'Donnell, C. T., Sanchez, M., Boyd, J. H.

2021

- **Career Research Productivity Correlates With Medical School Ranking Among Cardiothoracic Surgeons.** *The Journal of surgical research*
Bajaj, S. S., Wang, H., Williams, K. M., Pickering, J. M., Heiler, J. C., Manjunatha, K., Sanchez, M., O'Donnell, C. T., Boyd, J. H.
2021; 264: 99–106
- **THE SAFETY AND EFFICACY OF PERIOPERATIVE FEIBA AFTER LEFT VENTRICULAR ASSIST DEVICE IMPLANTATION**
O'Donnell, C., Rodriguez, A., Madhok, J., Wang, H., Shad, R., Sharifi, H., Boyd, J., William, H., Hsu, J., Hill, C.
LIPPINCOTT WILLIAMS & WILKINS.2021: 168
- **Characterization of Cardiothoracic Surgeons Actively Leading Basic Science Research.** *The Journal of surgical research*
Wang, H., Bajaj, S. S., Krishnan, A., Heiler, J. C., Williams, K. M., Pickering, J. M., Manjunatha, K., Sanchez, M., O'Donnell, C. T., Boyd, J. H.
2021; 268: 371-380
- **National Institutes of Health R01 Grant Funding Is Associated with Enhanced Research Productivity and Career Advancement Among Academic Cardiothoracic Surgeons.** *Seminars in thoracic and cardiovascular surgery*
Bajaj, S. S., Wang, H., Williams, K. M., Pickering, J. M., Heiler, J. C., Manjunatha, K., O'Donnell, C. T., Sanchez, M., Boyd, J. H.
2020
- **Early Engagement in Cardiothoracic Surgery Research Enhances Future Academic Productivity.** *The Annals of thoracic surgery*
Wang, H., Bajaj, S. S., Williams, K. M., Heiler, J. C., Pickering, J. M., Manjunatha, K., O'Donnell, C. T., Sanchez, M., Boyd, J. H.
2020
- **New Attending Surgeons Hired by Their Training Institution Exhibit Greater Research Productivity.** *The Annals of thoracic surgery*
Bajaj, S. S., Wang, H., Williams, K. M., Pickering, J. M., Heiler, J. C., Manjunatha, K., O'Donnell, C. T., Sanchez, M., Boyd, J. H.
2020
- **Impact of advanced clinical fellowship training on future research productivity and career advancement in adult cardiac surgery.** *Surgery*
Wang, H., Bajaj, S. S., Williams, K. M., Pickering, J. M., Heiler, J. C., Manjunatha, K., O'Donnell, C. T., Sanchez, M., Boyd, J. H.
2020
- **Endoscopic Radial Artery Harvesting During Anesthesia Line Placement Reduces the Time and Cost of Multivessel Coronary Artery Bypass Grafting.** *Innovations (Philadelphia, Pa.)*
Wang, H., Bilbao, M. S., Miller, S. L., O'Donnell, C. T., Boyd, J. H.
2020: 1556984519882014
- **Women in Thoracic Surgery Scholarship: Impact on Career Path and Interest in Cardiothoracic Surgery.** *The Annals of thoracic surgery*
Williams, K. M., Hironaka, C. E., Wang, H. n., Bajaj, S. S., O'Donnell, C. T., Sanchez, M. n., Boyd, J. n., Kane, L. n., Backhus, L. n.
2020
- **Off-Pump Mini Thoracotomy Versus Sternotomy for Left Anterior Descending Myocardial Bridge Unroofing.** *The Annals of thoracic surgery*
Wang, H. n., Pargaonkar, V. S., Hironaka, C. E., Bajaj, S. S., Abbot, C. J., O'Donnell, C. T., Miller, S. L., Honda, Y. n., Rogers, I. S., Tremmel, J. A., Fischbein, M. P., Mitchell, R. S., Schnittger, et al
2020
- **Platelet-Rich Plasma (PRP) From Older Males With Knee Osteoarthritis Depresses Chondrocyte Metabolism and Upregulates Inflammation** *JOURNAL OF ORTHOPAEDIC RESEARCH*
O'Donnell, C., Migliore, E., Grandi, F., Koltsov, J., Lingampalli, N., Cisar, C., Indelli, P. F., Sebastiano, V., Robinson, W. H., Bhutani, N., Chu, C. R.
2019; 37 (8): 1760–70
- **Utilization of Del Nido Cardioplegia in Adult Coronary Artery Bypass Grafting - A Retrospective Analysis -** *CIRCULATION JOURNAL*
O'Donnell, C., Wang, H., Phat Tran, Miller, S., Shuttleworth, P., Boyd, J. H.
2019; 83 (2): 342–46