CURRICULUM VITAE

Tobias de la Garza Eckle, M.D., Ph.D., FASA

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Senior Physician Scientist (MD, PhD, FASA) with over 25 years of experience. Once the youngest Professor of Anesthesiology in Germany, now a Professor of Anesthesiology at CU. Proven clinical and academic leader in faculty and provider development, supervising over 130 Anesthesia Advanced Practice Providers and mentoring more than 80 physicians. Instrumental in advancing research within the hypoxia and circadian rhythm fields, both of which have recently been honored with a Nobel Prize in Medicine. As a continuously funded Principal Investigator for 21 years, secured and budgeted over $8.8 million and published over 117 peer-reviewed articles (H-index 45) in leading journals such as *Journal of Clinical Investigation*, *Blood*, *Circulation*, *FASEB*, *PNAS*, *Nature Medicine*, *Cell Reports or Nature*.

Biographical Sketch

Current Positions

- Professor of Anesthesiology
- Associate Vice Chair of Faculty Development, Department of Anesthesiology
- Medical Director of CRNAs/AAs, Department of Anesthesiology
- Director of Grand Rounds, Department of Anesthesiology

Citizenship

- United States and Germany

Education

2008	Habilitation (Dr. habilitatus, highest university degree in Germany) Eberhard-Karls-University, Tübingen, Germany
2001	Doctor of Medicine (MD) Eberhard-Karls-University, Tübingen, Germany
2001	Doctor of Philosophy (PhD, summa cum laude) Eberhard-Karls-University, Tübingen, Germany
1993	Abitur Wildermuth Gymnasium, Tübingen, Germany (college, summa cum laude, salutatorian) Major: Mathematics/Latin; Minor: Chemistry/History

Postgraduate Medical Training

11/2025	Certificate of Specialization in Health Care Leadership Harvard Business School
11/2025	Innovations in Teamwork for Health Care Harvard Business School
07/2025	CORe (Business Analytics, Economics for Managers, Financial Accounting) Harvard Business School
05/2025	Health Care Economics Harvard Business School
04/2025	Health Care Strategy Harvard Business School
2022 - 2023	Foundations in Healthcare Leadership Program IHQSE (Institute for Healthcare Quality, Safety and Efficiency) University of Colorado Anschutz Medical Campus
2012 – 2016	Residency in Anesthesiology, Department of Anesthesiology, University of Colorado School of Medicine
2007 - 2008	Didactics training, certificate for qualification in teaching medicine University Hospital of Tübingen, Germany

2007 - 2008	Clinical fellowship in Critical Care Medicine University Hospital of Tübingen, Germany
2004 - 2006	Postdoctoral research fellow in the Department of Anesthesiology and Intensive Care Medicine, University of Tübingen
2003 - 2004	Postdoctoral research fellow in the Department of Virology, University of Tübingen
2001 - 2006	Residency: Department of Anesthesiology University Hospital of Tübingen, Germany
2000 - 2001	Internship: anesthesia, internal medicine, abdominal and cardiac surgery, University Hospital of Tübingen, Germany

Academic and Clinical Appointments

04/2023 - present	Associate Vice Chair of Faculty Development, Department of Anesthesiology
03/2021 - present	Medical Director of Advanced Practice Providers, Department of Anesthesiology
03/2021 - present	Medical Supervisor of 120 CRNAs/AAs
01/2018 - present	Director of Grand Rounds, Department of Anesthesiology
07/2016 - present	Professor, Department of Anesthesiology, University of Colorado School of Medicine
01/2010 - present	Training Faculty membership, Cell Biology, Stem Cells, and Development, CU
2012 - 2014	Assistant Clerkship Director for 3rd year Medical Students
2010 - 2016	Associate Professor of Anesthesiology, University of Colorado
2008 - 2016	Director for Resident Training in Basic Science Research, University of Colorado
2008 - 2010	Assistant Professor of Anesthesiology, University of Colorado
2001 - 2007	Assistant Professor, Department of Anesthesiology and Intensive Care Medicine, University Hospital of Tübingen

Employment

01/2008 - present	Anesthesiologist, Department of Anesthesiology University of Colorado, Denver, CO
2010, 2021, 2022	Anesthesia Expert Witness (2 x deposition)
07/2001-12/2007	Anesthesiologist, Department of Anesthesiology University Hospital of Tübingen, Germany
01/2004-01/2006	General practitioner for emergency medical assistance service (self-employed, medical practice of Dr. Ulrich Göhring and Dr. Petra Dörre), Germany
06/2000-04/2001	Professional Research Assistant (PRA), Institute of Virology and Epidemiology University Hospital of Tübingen, Germany
09/1996-06/1997	Hospital nurse, Internal Medicine, University Hospital of Tübingen, Germany
10/1993-06/1994	Instructor for medical service at the Military Duty (Group leader)

Clinical Work

01/2008 - present	University of Colorado Anschutz Medical Campus – University of Colorado Hospital General, Obstetric, Neurology, ENT, Transplant and Acute Trauma Anesthesia
07/2001 - 12/2007	University Hospital of Tübingen, Germany General, Obstetric, Neuro, ENT, Transplant, Pediatric, Cardiothoracic, Acute Trauma Anesthesia, Critical Care and Emergency Medicine

Leadership, Committee Appointments, Professional Development

National

2025	Medical Student Anesthesia Research Fellowship (MSARF) – FAER Mentor
2024	NIH SAT study section ad hoc reviewer
2024	Editorial Board Member *Scientific Reports*
2024	*Annals of Translational Medicine* Editor Special Edition ("Highlights in Anesthesia and Critical Care Medicine", 10 articles)
2023 - present	ASA Mentor
2023	FASA - Fellow of the American Society of Anesthesiology
2023 - 2024	ASA Committee on Academic Anesthesiology
2022 - present	Associated Editor *Frontiers in Cardiovascular Medicine*
2021 - present	Editor *Annals of Translational Medicine*

2020 - 2025	ASA Committee on Research (FAER Grant Reviews)
2020	NIH SAT study section ad hoc reviewer
2017 - 2020	AHA Study Section Member
2015 - present	Nominated Member - Association of University Anesthesiologists (AUA)
2015	Session moderator, Shock Conference 2015
2015	Editorial Board *International Journal of Anesthesiology & Research* (ISSN 2332-2780)
2014/2015	Invited Guest Editor, *Curr Pharm Des*, Special Edition ("Health Impact and Management of a Disrupted Circadian Rhythm and Sleep in Critical Illnesses", 10 articles)
2014	NHLBI Workshop: Circadian Clock at the Interface of Lung Health and Disease
2011 - present	Academic Editor, *PLOS One*
2011 - present	Editorial Board Member, *PLOS One*

Leadership, University of Colorado Anschutz Medical Campus/ University Hospital / Departmental
Local

2023 - present	Wellness committee
2023 - present	Team Positive Intelligence Program, University of Colorado Health
2023 - present	Individual Positive Intelligence Program, University of Colorado Health
2022	Co-Chair FCOTS (First Case on Time Start) Hospital Committee University of Colorado Health
2021 - present	Team OR Charge/Clinical Operations
2021 - 2022	Greenbelt Certification: safe Sugammadex Reduction, University of Colorado Health
2020 - present	CU Faculty Senate Member, School of Medicine
2019 - present	AUA membership nomination committee
2018 - present	Promotion Committee, Department of Anesthesiology, CU
2016 - present	Academic Time Committee, Department of Anesthesiology, CU
2016	Retreat Committee Chair, Cell Biology, Stem Cells and Development, CU
Since 2015	Industry Review Committee, CU, Anschutz Medical Campus
2015 - 2016	MD Finance Focus Group, Department of Anesthesiology, CU
2015 - 2016	CT Recruitment Committee, Department of Anesthesiology, CU
2014 - 2017	Compensation Committee, Department of Anesthesiology, CU
2014 - 2016	Grand Rounds Development Group, Department of Anesthesiology, CU
2011 - 2021	Comprehensive Examination Committee, Cell Biology, Stem Cells and Development, CU
2011 - 2015	Administrative Enterprise Committee, Department of Anesthesiology CU
2009 - 2015	Education Committee Meeting, Department of Anesthesiology
2009 - 2015	Research Committee, Department of Anesthesiology, CU
2008 - 2015	Seed Grant Committee, CU
2008 - present	Faculty Board, Department of Anesthesiology, CU

Leadership, University Hospital of Tübingen, Germany / Departmental
Local

2006 - 2008	Recruitment Committee for Anesthesia Residents and Fellows, Department of Anesthesiology and Intensive Care Medicine, University Hospital, Tübingen, Germany
2006 - 2008	Committee on Continued Medical Education, Department of Anesthesiology and Intensive Care Medicine, University Hospital, Tübingen, Germany
2006 - 2008	Education Committee, Department of Anesthesiology and Intensive Care Medicine, University Hospital, Tübingen, Germany
2006 - 2008	Faculty Board, Department of Anesthesiology and Intensive Care Medicine, University Hospital, Tübingen, Germany
2006 - 2007	Intensive Care Advisory Committee, Department of Anesthesiology and Intensive Care Medicine, University Hospital, Tübingen, Germany

Honors and Awards

2026	Identified as leading authority in the field and invited to present on "Circadian Control of Cardioprotection in Humans" by the Society for Research on Biological Rhythms (SRBR)
2025	Excellence in Didactic Instruction Award -The University of Colorado Master of Science in Anesthesiology Program

2025	Keynote speaker to the DGAI-Jahreskongress 2025, Annual German Anesthesia meeting
2025	Outstanding Author *Annals of Translational Medicine*
2024	Editorial Board Member *Scientific Reports*
2024	Featured Distinguished Editorial Board Member *Annals of Translational Medicine*
2024	CU nomination to the National Society of Leadership and Success (NSLS)
2024	Invited research review article on circadian rhythms as therapy in heart diseases for *Circulation Research*
2023	Fellow of the American Society of Anesthesiology (FASA)
2023	Invited Speaker to the 70th Annual Meeting of the Japanese Society of Anesthesiologist
2023	Distinguished Lecture Award from the Canadian Society for Chronobiology
2023	Invited Distinguished Professor, Canadian Society for Chronobiology (CSC) "Timing is Everything", University of Guelph, in Guelph, Ontario, Canada
2022	Invited Talk at the 9th North American Session of The International Academy of Cardiovascular Sciences "Advances in Cardiovascular Science and Medicine Through Diversity, Equity, and Inclusion supported Education, Research, and Technology Innovation."
2021	Invited Forum Article, *Trends in Molecular Medicine*
2020	Invited Speaker 2020 COMBAT Research Symposium
2020	Invited Speaker 2020 En Route Care Research Symposium
2016	Invited Speaker at the 38th SCA (Society of Cardiovascular Anesthesiologists) Annual Meeting
2015	Invited Review Article: Clinical Concepts in *Anesthesiology*; Featured Article
2015	Invited speaker and session moderator at Shock Conference 2015.
2015	Membership nomination for the Association of University Anesthesiologists (AUA)
2015	Selected oral presentation: Light therapy at the interface of circadian proteins and lung disease, ATS Meeting 2015.
2013	Nominated as one of the most amazing and inspiring mentor and instructor from the graduated 4th year medical students during their years
2012	*9NEWS live interview* on *Nature Medicine* Publication
2011	Invited *Nature Medicine* Review
2011	Invited Speaker IARS (International Anesthesia Research Society) Meeting Vancouver: Myocardial Metabolism as Target for the Treatment of Heart Ischemia'
2011	Selected oral presentation: Mucosal HIF in Acute Lung Injury'. ATS Meeting 2011.
2010	Selected for oral presentation: Adenosine dependent Period 2 stabilization leads to metabolic adaptation during myocardial ischemia. Keystone Meeting 2010, Hypoxia: Molecular Mechanisms of Oxygen Sensing and Response Pathways.
2009	Travel Award ILTS (International Liver Transplantation Society), New York 2009
2008	Journal of Clinical Investigation research article highlighted in Nature Reviews
2008	Science Award of the German Society of Anesthesiology and Intensive Care Medicine "*DGAI Dräger Preis*", highest possible science award of the German Society of Anesthesiology and Critical Care Medicine in the field of critical care medicine
2007	Nominated Participant of the 57th Meeting of Nobel Laureates in Lindau
2007	Science Award of the German Society of Anesthesiology and Critical Care Medicine "*DGAI Forschungsstipendium der Freseniusstiftung*", highest possible science award of the German Society of Anesthesiology and Critical Care Medicine; guest of honor for life at the Annual German Anesthesia Meeting.
2007	*Fortüne Science Award*, University of Tübingen, Germany
2006	*Fortüne Science Award*, University of Tübingen, Germany
2001	PhD thesis: summa cum laude

Licensure

State of Colorado Medical License – Active
ACLS / BLS Certified – current
Unrestricted license to practice medicine, Germany

Certification

Certificate for '4 Disciplines of Execution' Training 2020
Diplomate of the American Board of Anesthesiology 2018
American Board of Anesthesiology oral Exam *Applied* 2018
American Board of Anesthesiology written Exam *Part 1* 2017
Certificate for Crucial Conversations Training 2014
ECFMG certificate 2012
Medical Boards USA (USMLE 1-3) 2010-2014
Diplomate of the German Board of Anesthesiology 2007
Certificate for animal experiments 2004
Certificate for radiation protection 2002
Medical Boards Germany (1.-3. Staatsexamen) 1996-2000

Patents

2017	Modulation of Circadian Rhythm Protein PER2 to Prevent and Treat Mammalian Disorders (CU File No. CU4295H-PPA1)
2008	Therapeutical use of CD39 and C73 during ventilator induced lung injury: (WO 2008/034621) NUCLEOTIDE PHOSPHORYLASE FOR THE PROPHYLAXIS, TREATMENT OR DIAGNOSIS OF ACUTE LUNG INJURY (ALI) patents/WO2008034621A3
2008	Therapeutical use of CD39, C73 and A2BAR agonist during myocardial ischemia: (WO 2008/034623) MEDICAMENT FOR THE PROPHYLAXIS, TREATMENT OR DIAGNOSIS OF ISCHAEMIC DISEASES patents/WO2008034623A3

Review Service

2025 - present	Journal of Biological Rhythms
2025 - present	AJP-Lung
2025 – present	Journal of Cellular and Molecular Medicine.
2024 - present	Communications Biology
2021 - present	Cell Reports
2020 - present	Journal of Cardiac Failure
2020 - present	Circulation: Cardiovascular Interventions
2020 - present	Science Advances
2020 - present	Psychoendocrinology
2019 - present	FASEB
2019 - present	AJP-Renal Physiology
2018 - present	Scientific Reports
2017 - present	PLOS Medicine
2017 - present	Journal of Immunology Research
2017 - present	Annals of Surgery
2016 - present	JACC Basic Translational Research
2016 - present	Heart Rhythm
2015 - present	Journal of Cardiovascular Pharmacology and Therapeutics
2014 - present	American Journal of Respiratory Cell and Molecular Biology
2014 - present	British Journal of Pharmacology
2014 - present	Seminars in Cardiothoracic and Vascular Anesthesia
2014 - present	Journal of Translational Medicine
2013 - present	Cardiovascular Research
2013 - present	Critical Care Medicine
2013 - present	Journal of Molecular Medicine (Berlin)
2013 - present	BioMed Research International
2013 - present	Circulation
2012 - present	Anesthesiology Research and Practice
2012 - present	The Annals of Intensive Care
2010 - present	PLOS One
2010 - present	AJP – Heart

2010 - present	Journal of Biomedicine and Biotechnology
2009 - present	Journal of Immunology
2009 - present	Anesthesiology
2009 - present	Purinergic Signaling
2009 - present	Hepatology

Grant Reviews/Study sections

2025	Research Excellence Council of Hungary, National Research, Development and Innovation Office (NRDI Office) Grant Review
2025	Swiss National Science Foundation Grant Review
2025	Foundation for Anesthesia Education and Research (FAER) - study section (Spring/Fall)
2025	DFG (Deutsche Forschunsgemeinschaft) Grant Review
2024	NIH - SAT study section ad hoc reviewer
2023	Grant Review for the United Arab Emirates University (UAEU)
2022	Swiss National Science Foundation Grant Review
2022	Foundation for Anesthesia Education and Research (FAER) - study section (Spring/Fall)
2021	DoD (Department of Defense) Grant Review
2021	DFG (Deutsche Forschunsgemeinschaft) Grant Review
2020	AHA International Stroke Conference 2021 abstract reviewer
2020	ASA Resident Research Essay Contest Reviewer
2020	NIH - SAT study section ad hoc reviewer
2020	Foundation for Anesthesia Education and Research (FAER) - study section (Spring/Fall)
2020	AUA/IARS abstract reviewer
2020	Nevada IdEA Network of Biomedical Research Excellence (NV-INBRE) Grant Review
2019	AUA/IARS abstract reviewer
2019	DFG (Deutsche Forschunsgemeinschaft) Grant Review
2018	AUA/IARS abstract reviewer
2018	California Northstate University College of Pharmacy Seed Grant External Reviewer Invitation
2017	AUA/IARS abstract reviewer
2017	Swiss National Science Foundation Grant Review
2017-2018	Reviewer for the Colorado Clinical and Translational Science Institute's (CCTSI) Pre-K Career Development Program
2017-2020	AHA study section member (Cardiac Bio BSc)
2016	AUA/IARS abstract reviewer
2015	The National Institute of Academic Anesthesia (NIAA)
2014	Medical Research Council (MRC)
2014	Biotechnology and Biological Sciences Research Council (BBSRC), UK
2013	NIH Mouse Metabolic Phenotyping Center, USA
2013	Intramural Grants, UC Denver
2011	FAER, USA
2009	Swiss National Science Foundation**,** Division Biology and Medicine

Presentations / Lectures

International

1. Eckle T. Intense light as novel treatment for myocardial injury in non-cardiac surgery, Grand Rounds, University Hospital Essen, Department of Anesthesiology, Germany, May 29, 2026.
2. Eckle T. Intense light to treat MINS. German Anesthesia Meeting (DGAI-Jahreskongresses), Kassel, September 2025.
3. Eckle T. From bench to bedside: circadian principles applied. Canadian Society for Chronobiology Conference "Timing is Everything", University of Guelph, Ontario, Canada. June 14-15, 2023, (Visiting Professorship)
4. Eckle T. Health implications of disrupted circadian rhythms and the potential for daylight as therapy. 70th Annual Meeting of JSA (Japanese Society of Anesthesiology), June 1 – 3 2023, Kobe, Japan, (Visiting Professorship)
5. Eckle T. The Circadian Hypoxia Link. 9th North American Session of The International Academy of Cardiovascular Sciences "Advances in Cardiovascular Science and Medicine Through Diversity, Equity, and Inclusion supported Education, Research, and Technology Innovation". September 6-9, 2022, in Winnipeg, Canada (Visiting Professorship)

6. Eckle T. Light elicited Cardioprotection, Department of Anesthesiology, University Hospital of Munich, Germany, August 3, 2016. (Visiting Professorship)
7. Eckle T. Per2 during hypoxia and myocardial ischemia in humans. Keynote speaker, Institute of Neurology (Edinger), University Hospital of Frankfurt, Germany, July 2, 2013. (Visiting Professorship)
8. Eckle T. Per2 in cardiac metabolism. Grand Rounds. Clinic of Anesthesiology, University Hospital of Tübingen, Germany 2013.
9. Eckle T. Impact of intense light therapy in the perioperative setting. Grand Rounds, Department of Anesthesiology, University Hospital of Munich, Germany, Jun 25, 2013. (Visiting Professorship)
10. Eckle T. Myocardial Metabolism as Target for the Treatment of Heart Ischemia. IARS Meeting May 2011, Vancouver, Canada.
11. Eckle T. HIF during Ventilator Induced Lung Injury. German Anesthesia Meeting (DAC 2010), Nürnberg June 22, 2010.
12. Eckle T. Circadian Rhythms in Cardioprotection. Grand Rounds. Clinic of Anesthesiology, University Hospital of Tübingen, Germany 2010. (Visiting Professorship)
13. Eckle T. Light dependent Per2 mediates a metabolic switch critical for myocardial ischemia. German Anesthesia Meeting (DAC 2010), Nurnberg June 22, 2010. (Visiting Professorship).
14. Eckle T. Circadian Rhythm Proteins Outside The Brain. Institute of Neurology (Edinger), University Hospital of Frankfurt, Germany, Jun 29th, 2010. (Visiting Professorship)
15. Eckle T. Adenosine in Tissue Adaptation to Hypoxia, Clinic of Anesthesiology, University Hospital of Tübingen, Germany 2008. (Visiting Professorship)
16. Eckle T. Aprotinin – History of a dangerous drug. Clinic of Anesthesiology, University Hospital of Tübingen, Germany 2008. (Visiting Professorship)
17. Eckle T. Transcriptional and Metabolic Control of Cardiac Adenosine Signaling: Implications for Cardioprotection. University of Colorado Health Science Centre, Denver, USA 2007. (Visiting Professorship)
18. Eckle T. Molekularer Nachweis der initialen in vitro Selektion von HCMV-UL97-Wildtyp oder Mutante bei einer Patientin nach peripherer Blutstammzelltransplantation. Jahrestagung der Gesellschaft für Virologie. Wien, Österreich, 2000.

National

1. Eckle T. Circadian Control of Cardioprotection in Humans. SRBR2026, FL, USA, May 9, 2026 (Visiting Professorship)
2. Eckle T. Circadian Rhythms – from bench to bedside. Grand Rounds Invitation Emory University, August 2025 (Visiting Professorship).
3. Eckle. T. Grand Rounds. Targeting Circadian Rhythms as Organ Protective Strategy, Oak Hill Hospital Anesthesia Didactics Presentation, FL, USA, December 10, 2021 (Visiting Professorship).
4. Eckle T. Intense light to treat hemorrhagic shock lung. 2020 COMBAT Research Symposium. October 29-30, 2020.
5. Eckle T. Intense light pretreatment improves hemodynamics, barrier function and inflammation in a murine model of hemorrhagic shock lung 2020 En Route Care Research Symposium. 24-26 August 2020
6. Eckle. T. Grand Rounds. Targeting Circadian Rhythms as Organ Protective Strategy, Cornell University, NY, USA, January 2020 (Visiting Professorship).
7. Eckle T. Adenosine Illuminated – Circadian Rhythms in Organ Protection, Columbia University, NY, USA, December 2016 (Visiting Professorship).
8. Eckle T. Cellular effects of hypoxemia - Research Update. TAS San Diego 2016 Annual Meeting - Society of Cardiovascular Anesthesiologists. April 1-2, 2016, San Diego, USA.
9. Eckle T. Per2 in acute lung injury. Faculty Retreat, Department of Cell Biology, Breckenridge, October 9th, 2015, USA.
10. Eckle. T. Intense Light Therapy for Cardiac Protection. June 7th, 2015, 38th Annual Conference on Shock, Denver, CO, USA.
11. Eckle. T. Light and Period 2 – effects of light on metabolism. Colorado Sleep and Circadian Research Symposia, June 1, 2015, University of Boulder. (Visiting Professorship).
12. Eckle T. Light elicited Per2 in cell metabolism. Faculty Retreat, Department of Cell Biology, Breckenridge, October 2014, USA.
13. Eckle. T. Clock Genes & Myocardial and Adaptation to Ischemia. Colorado Sleep and Circadian Research Symposia, June 10, 2014, University of Boulder. (Visiting Professorship).

14. Eckle. T. Circadian mechanisms of hypoxia response and cellular adaptation in ischemia/reperfusion. NHLBI Workshop: "Circadian Clock at the Interface of Lung Health and Disease", April 28-29, 2014, Rockledge II, Bethesda, MD. (Visiting Professorship).
15. Eckle. T. Circadian Control of Cardiac Metabolism. CT Conference. Department of Anesthesiology, Duke University, USA, February 3-5, 2014 (Visiting Professorship).
16. Eckle T. Circadian Rhythms in Anesthesia and Critical Care Medicine: A new Period evolves, Grand Rounds, Department of Anesthesiology, Duke University, USA, February 3-5, 2014 (Visiting Professorship).
17. Eckle T. Normoxic HIF1A stabilization attenuates acute lung injury by optimizing alveolar epithelial carbohydrate metabolism. Research Seminar, Department of Pulmonology, University of Colorado Denver, USA, May 6th, 2013.
18. Eckle T. Circadian Rhythms in Metabolic Adaptation to heart ischemia. Faculty Retreat, Department of Cell Biology, Estes Park, October 2012.
19. Eckle T. Adora2b-elicited Per2 stabilization promotes a HIF-dependent metabolic switch crucial for myocardial adaptation to ischemia. Research Symposium NIH, Bethesda, NIH-NHLBI, USA, July 2012. (Visiting Professorship)
20. Eckle T. Period 2 as key regulator of glycolysis during myocardial ischemia. Fort Collins Colorado State University, Research Seminar, Department of Microbiology, April 2011. (Visiting Professorship)
21. Eckle T. Metabolic Adaptation to heart ischemia. Faculty Retreat, Department of Cell Biology, Estes Park, October 2010.
22. Eckle T. From Adenosine to Circadian Networks. Columbia University, NY, USA, May 2010 (Visiting Professorship).
23. Eckle T. Adenosine-Dependent Stabilization of Period 2 Promotes Metabolic Adaptation of the Myocardium to Limited Oxygen Availability. Keystone, Hypoxia Meeting, January 22, 2010.
24. Eckle T. Risk factors for the emergence of drug resistant CMV infection in the pediatric and adult bone marrow transplant setting: pitfalls in phenotypic diagnosis. Jahrestagung der Gesellschaft für Virologie. Erlangen, 4. - 11. April 2002.

Local

1. Eckle T. Intense light to treat MINS. Grand Rounds Anesthesiology, Denver, USA, June 30, 2025
2. Eckle T. Intense light in organ protection. Grand Rounds Anesthesiology, Denver, USA, October 14th, 2024
3. Eckle T. Circadian Rhythms in Medicine. Grand Rounds Anesthesiology, Denver, USA, October 17th, 2022
4. Eckle T. M&M. Grand Rounds Anesthesiology, Denver, USA, October 14th, 2019.
5. Eckle T. Targeting Circadian Rhythms as Organ Protective Strategy. Grand Rounds Anesthesiology, Denver, USA, June 10th, 2019.
6. Eckle T. Circadian light-mediated organ protection, Anesthesiology Research Seminar. Department of Anesthesiology, University of Colorado Denver, February 2019.
7. Eckle T. Circadian endothelial metabolic reprogramming, Mucosal Inflammation Program Research talk, University of Colorado Denver, February 2019.
8. Eckle T. Light elicited ATII-PER2 in ALI, Mucosal Inflammation Program Research talk, University of Colorado Denver, January 2018
9. Eckle T. Circadian Rhythms in Disease Development. Translational Cardiovascular Biology Conference, University of Colorado Denver, Invited Speaker, October 10, 2017.
10. Eckle T. Circadian Rhythms and Disease Development. T32 Training Grant Seminar Series, Otolaryngology, Invited Speaker, February 2017.
11. Eckle T. Circadian proteins and acute lung injury, Mucosal Inflammation Program Research talk, University of Colorado Denver, January 2017.
12. Eckle T. Adenosine Illuminated, Anesthesiology Research Seminar. Department of Anesthesiology, University of Colorado Denver, November 2016.
13. Eckle T. Light at the interface of circadian proteins and acute lung injury, Medicine Research Seminar National Jewish Health, October 2016.
14. Eckle T. Light elicited Per2 in acute lung injury. OLAR meeting March 8th, 2016, Denver, USA.
15. Eckle T. Light Elicited Cardioprotection. Cardiology Grand Rounds Lecture, Friday, January 22, 2016, Denver, USA
16. Eckle T. Light elicited mechanisms in acute lung injury. OPP Research Talk, Denver, USA, December 9th, 2015.
17. Eckle T. ARDS following thyroid surgery. M&M Grand Rounds Anesthesiology, Denver, USA, December 7th, 2015.

18. Eckle, T. Light at the interface of circadian proteins and acute lung injury. October 6th, 2015, Translational Cardiovascular Biology Conference, Denver, CO, USA.
19. Eckle T. Light therapy at the interface of circadian proteins and lung disease. May 18, 2015, ATS, Denver, CO, USA.
20. Eckle T. Circadian Rhythms in Critical Illness, Grand Rounds Anesthesiology, Denver, USA, February 23, 2015
21. Eckle. T. Intense Light Therapy for Perioperative Cardio-Protection. DOM Research & Innovation Conference Presentation, Denver, USA, October 30, 2014.
22. Eckle. T. HIF in Acute Lung Injury. Anesthesiology Research Seminar. Department of Anesthesiology, University of Colorado Denver, USA, April 16, 2013.
23. Eckle T. Period 2 in Cardiovascular Disease. Department of Pediatrics, University of Colorado Denver, USA, April 2012.
24. Eckle T. Circadian Control of Heart Metabolism. Anesthesiology Research Seminar. Department of Anesthesiology, University of Colorado Denver, USA, April 2012.
25. Eckle T. Hypoxia Inducible Factor 1 in Acute Lung Injury. ATS Meeting May 2011, Denver, USA.
26. Eckle T. Mechanisms of myocardial adaptation to cardiac ischemia. Division of Cardiology, Grand Rounds, January 2011.
27. Eckle T., Neuroaxial Opioids, Volume Administration, Pain Management & Resuscitation. M&M/Clinical Case Conference, Anesthesia Department, June 1, 2010, UC Denver.
28. Eckle T. Circadian Rhythm Proteins in the heart. Research Seminar, Cell Biology, June 9, 2010, UC Denver.
29. Eckle T. Periods – Regulators of HIF. Anesthesiology Research Seminar. Department of Anesthesiology, University of Colorado Denver, USA, June 7, 2010.
30. Eckle T. Per2 stabilization by Cul1 deneddylation. Anesthesiology Research Seminar. Department of Anesthesiology, University of Colorado Denver, USA, 30 2009.
31. Eckle T. Cardioprotection by Adenosine A2B receptors. Anesthesiology Research Seminar. Department of Anesthesiology, University of Colorado Denver, USA, 2009.
32. Eckle T. Periods in Cardioprotection. Grand Rounds. Division of Cardiology, University of Colorado Denver, USA 2009
33. Eckle T. The role of HIF in Acute Lung Injury. Anesthesiology Research Seminar. Department of Anesthesiology, University of Colorado Denver, USA 2009
34. Eckle T. HIF – A paradigm in cardioprotection. Anesthesiology Research Seminar. Department of Anesthesiology, University of Colorado Denver, USA 2008
35. Eckle T. A murine model of acute lung injury: Ventilator Induced Lung Injury. Anesthesiology Research Seminar. Department of Anesthesiology, University of Colorado Denver, USA 2008
36. Eckle T. The Role of Adenosine in Acute Lung Injury. Anesthesiology Research Seminar. Department of Anesthesiology, University of Colorado Denver, USA 2008.
37. Eckle T. The Role of Nucleotide Metabolism and Nucleoside Signaling in Ischemic Preconditioning of the Heart. Clinic of Anaesthesiology, University Hospital of Tübingen, Germany 2006.
38. Eckle T. Systematic evaluation of a novel model for cardiac ischemic preconditioning in mice. Clinic of Anesthesiology, University Hospital of Tübingen, Germany 2005.
39. Eckle T. Pitfalls of Genotypic HCMV Drug Resistance Screening in Stem Cell Transplant Recipients. Annual Meeting of the "Gesellschaft für Virologie" and Joint Meeting with "Societa Italiana di Virologia", Tübingen, Germany 17-20 March 2004
40. Eckle T. Multidrug Resistance in children after PBSCT. Institute of Infectious Diseases. University of Tübingen, Germany 2002.
41. Eckle T. Generation of Recombinant HCMV using overlapping Cosmids. Institute of Virology, University of Tübingen, Germany 2001.
42. Eckle T. Longitudinal Cytomegalovirus Resistance Screening in an Adult after PBSCT. Institute of Virology, University of Tübingen, Germany 1997.

<u>Competitive talks</u>

1. Eckle T. Extracellular adenosine production by ecto-5'-nucleotidase protects during murine hepatic ischemic preconditioning. NY, ILTS, USA, 2009. → Travel Award
2. Eckle T. Adenosine and Cardioprotection DAC 2007, Hamburg, Germany 2007
3. Eckle T. Cardioprotection by ecto-5'-nucleotidase (CD73) and A2B adenosine receptors. TSIS 2007 München,

Germany 2007. → Draeger Award

4. Eckle T. Cardioprotection of E-NTPDase1 (CD39) in Acute Myocardial Infarction. 22. Wissenschaftliche Arbeitstage der DGAI in Würzburg, Germany 2007.
5. → Fresenius Award
6. Eckle T. The Role of Ecto-5'-Nucleotidase (CD73) in Ischemic Preconditioning of the Heart. 21. Wissenschaftliche Arbeitstage der DGAI in Würzburg, Germany 2006.

Research

Areas of Research Interest

- Chronotherapy (time dependent administration of drugs)
- Intense light as a novel strategy to treat myocardial injury in non-cardiac surgery (https://clinicaltrials.gov/study/NCT03822949).
- Light elicited circadian rhythm protein Period 2 (Per2) in ischemia and reperfusion injury.
- Adenosine A2B receptor (Adora2b) signaling during ischemia and reperfusion injury.
- Hypoxia-inducible transcription factors during ischemia and reperfusion injury.
- Purinergic signaling during acute lung injury.
- Hypoxia-inducible transcription factor during acute lung injury.

Funding

Pending grant support

2026-2031 NHBLI-R01HL17952, Study mechanisms of intense light elicited Cardioprotection, Status: PI

2026-2029 NHLBI-R34HL180902, Intense light therapy as a novel treatment for Myocardial Injury after non-cardiac surgery (MINS): a pilot study, Status: PI

Current grant support

2022-2026 Department of Anesthesiology Seed grant, Bright light therapy in patients.' 20 000 US $, Status PI

Completed grant support

2022-2025 NHLBI-R56HL156955*, "Targeting the endothelial clock to treat perioperative myocardial ischemia." 382 000 US $, Status: PI, *The NIH R56 award is a short-term, high-priority research grant.

2022-2024 NIH-NIA 1R03AG078956 GEMSSTAR, "Circadian Diurnal Motor Synchrony and Delirium Amongst Older Cardiac Surgery ICU Patients", 225 000 US $, Status: Mentor, PI: Meghan Prin, MD

2022-2024 SCA Starter Grant, "Circadian Movements and Delirium in Older Cardiac Surgery ICU Patients", 50 000 US $, Status: Mentor, PI: Meghan Prin, MD

2020-2022 AHA-Postdoctoral Fellowship, 20POST35210002, Clocks, Oxygen, and Neonatal Airway Disease', 128,836 US $, Status: Mentor, PI: Colleen Bartman, PhD

2020-2021 Department of Anesthesiology Bridge funds 2020-21, US $ 50K, Status PI

2020-2021 Deans CU-SCOM Bridge Funds 2020-21, US $ 50K, Status PI

2019-2020 AHA-Postdoctoral Fellowship, 19POST34380105 (2019-2020), 'Angiopoietin-like 4 as a cardioprotective target in light-elicited circadian PER2 amplitude enhancement', 114,368 US $, Status: Mentor, PI: Yoshimasa Oyama MD, PhD

2016-2018 AHA-Predoctoral Fellowship, 16PRE27250077, The role of intense light in hypoxic cardiac metabolism 52 000 US $, Status: Mentor, PI: Colleen Bartman (PhD Graduate)

2016 DREAM Grant (CU Denver): Impact of daylight on circadian rhythms and plasma protein expression Status: Mentor, PI: Jennifer Gile (Medical Student)

2015-2021 NIH-NHLBI, R01-HL122472 (Score 19, Percentile 2), 'Intense Light Therapy for Perioperative Cardio-Protection', 1.9 Mio US $, Status PI

2015-2016 CCTSI Grant: Intense Light as a Novel Treatment in Myocardial Ischemia, 25K US $ Status: Mentor, PI: Colleen Bartman (PhD Graduate)

2015-2016 UC Denver 'Deans Office' Research Award, 25 000 US $, Status PI

2010-2015 NIH-NHLBI, K08-HL102267-01 (Score 20, funded at first submission) "Period in Cardio-Protection", 650 000 US $ Status PI

2011-2015 NIH-NHLBI, R01 HL098294 (PI: Eltzschig), Hypoxia Inducible Factor in Acute Lung Injury' 2.0 Mio US $ Status: Co-Investigator

2014 FAER Grant 'Medical Student Anesthesia Research Fellowship Program' (PI: Daniel Sehrt), Mentor: Tobias Eckle, 3 200 US $

2009-2013 NIH-NHLB, R01 HL092188-01 NHLB (PI: Eltzschig), Extracellular Adenosine during Ventilator Induced

Lung Injury, 1.8 Mio US $, Status: Co-Investigator

2009-2010 AHA SDG (National Scientist Development Grant): Equilibrative Nucleoside Transporters (ENTs) in Cardiac Ischemic Preconditioning 308 000 US $, Status PI

2009-2010 MRTG FAER Grant (Foundation for Anesthesia Education and Research Grant): Myocardial Ischemic Preconditioning through Hypoxia Inducible Factor (HIF)-1, 215 000 US $, Status PI

2006-2008 IZKF Cluster of Excellence Grant (Universitäts-Klinikum Tübingen): Role of Nucleotide Phosphohydrolysis and Adenosine Signaling in Ischemic Preconditioning of the Heart, 530 000 US $, Status PI

2007-2008 IZKF Promotionskolleg (Universitäts-Klinikum Tübingen), 10 000 US $, Status PI

2003-2004 Fortüne Grant (Universitäts-Klinikum Tübingen): Generation of HCMV UL54/UL97 Mutants for the analysis of drug resistance, 60 000 US $, Status PI

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H-index 45. i10 index 68. Total citations 12597 as of 05/2025.

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Peer Reviewed Publications

1. Oyama Y, de la Garza Eckle. Light therapy in Medicine: Where do we stand? Ann Transl Med. 2025, submitted.
2. Villasenor M, de la Garza Eckle T, Lyman M, Vogel S. Pitfalls of electromyography (EMG) in parathyroidectomy: a case report of unrecognized pseudocholinesterase deficiency. Ann Transl Med. 2025 Oct 28;13(5):62.
3. Bertazzo J, Oyama Y, Gordon F, Walker L, and de la Garza Eckle T. Intense light as therapy for myocardial injury in patients after non-cardiac surgery. Ann Transl Med. 2025, in press.
4. Repine K, de la Garza Eckle T, Montejano J, Vogel S. Multimodal anesthesia for hemicorporectomy suggests creating a standardized anesthesia guideline: a case report. Ann Transl Med. 2025 Feb 28;13(1):7.
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6. Eckle T, Bertazzo J, Khatua TN, Tabatabaei SRF, Bakhtiari NM, Walker LA, Martino TA. Circadian Influences on Myocardial Ischemia- Reperfusion Injury and Heart Failure. Circ Res 2024 Mar 14
7. Eckle T, Scott B. Preface on highlights in anesthesia and critical care medicine. Ann Transl Med. 2024 Feb 1. (https://atm.amegroups.org/post/view/highlights-in-anesthesia-and-critical-care-medicine)
8. Pei B, Jin C, Cao S, Eckle T, Park HJ, Ji N, Jiang H, Xia M. The development of prediction model for cuffed tracheal tube size from the middle finger in pediatrics: a concise and feasible approach. Transl Pediatr. 2023 Dec 26
9. Villasenor M, Bengson J, Cloyd BH, Eckle T. Cardiac arrest due to an unexpected inability to ventilate in a tracheostomy patient suggesting the need for a routine anesthesia checklist and an anesthesia relevant emergency pathway for tracheostomy management: a case report. Ann Transl Med. 2023 Dec 20.
10. Prin M, Bertazzo J, Walker LA, Scott B, Eckle T. Enhancing circadian rhythms-the circadian MEGA bundle as novel approach to treat critical illness. Ann Transl Med. 2023 Jun 30.
11. Douin DJ, Pattee J, Scott B, Fernandez-Bustamante A, Prin M, Eckle T, Ginde AA, Clendenen N. Hyperoxemia During Cardiac Surgery Is Associated With Postoperative Pulmonary Complications. Crit Care Explor. 2023 Mar 2.
12. Simmons CG, Eckle T, Rogers D, Williams JD, Brainard JC. Disposable laryngoscope intubation to reduce equipment failure in an emergency out of OR setting - a quality control case study. BMC Anesthesiol. 2023 Jan 10;23(1):16.
13. Prin M, Pattee J, Douin DJ, Scott BK, Ginde AA, Eckle T. Time-of-day dependent effects of midazolam administration on myocardial injury in non-cardiac surgery. Front Cardiovasc Med. 2022 Oct 28.
14. Oyama Y, Shuff S, Burns N, Vohwinkel CU, Eckle T. Intense light elicited alveolar type 2 specific circadian PER2 protects from bacterial lung injury via BPIFB1. Am J Physiol Lung Cell Mol Physiol. 2022 Mar 10.
15. Shuff S, Oyama Y, Walker L, Eckle T. Circadian Angiopoietin-like-4 as novel therapy in cardiovascular disease. Trends Mol Med. 2021. Jul;27(7):627-629.
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Book Chapters

1. Yoshimasa Oyama, Lori A. Walker and Tobias Eckle. The Circadian-Hypoxia Link. Chronobiology and Chronomedicine - From molecular and cellular mechanisms to whole body: interdigitating networks. February 2024. Royal Society of Chemistry.

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6. M Koeppen, KS Brodsky, M Moss, T Eckle, DA Schwartz, H Eltzschig. Detrimental role for gel-forming protein MUC5AC during acute lung injury. Am J Respir Crit Care Med 183.
7. KS Brodsky, M Moss, T Eckle, DA Schwartz, H Eltzschig, M Koeppen. Detrimental Role For Gel-Forming Protein Muc5ac During Acute Lung Injury. Am J Respir Crit Care Med 183;2011:A1663
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11. Mandell S., Hart M., Eckle T., Eltzschig HK. Use of a hanging weight system for liver ischemic preconditioning in mice. ILTS 2009 NY July 8-11, Liver Transplantation July 2009, S124.
12. Eckle T., Hart M., Mandell S., Eltzschig HK. Extracellular adenosine production by ecto-5'nucleotidase protects during murine hepatic ischemic preconditioning. ILTS 2009 NY July 8-11, Liver Transplantation July 2009, S71.

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17. Eltzschig HK, Eckle T., Mager A., Küper N., Karcher C., Weissmuller T., Boengler C., Schulz R., Robson S., and Colgan S. ATP release from activated neutrophils occurs via connexin 43 and modulates adenosine-dependent endothelial cell function. DIVI-Kongress Hamburg, November 2006, Intensivmedizin und Notfallmedizin, 43, Supp. 1, Oktober 2006, page I/44.
18. Eckle T, Grenz A, Köhler D, Faigle M, Wehrmann W, Schneermann J, Thompson LT, Osswald H and Eltzschig HK. Critical role of the 5'-ectonucleotidase (CD73) and the adenosine A2B receptor in cardiac ischemic preconditioning. DIVI-Kongress Hamburg, November 2006, Intensivmedizin und Notfallmedizin, 43, Supp. 1, Oktober 2006, page I/11.
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21. Eckle T., Grenz A., Faigle M., Weissmüller T., Thompson L., Colgan SP., Oßwald H., Eltzschig HK. Critical Role of 5´- Ectonucleotidase (CD73) in Cardiac Ischemic Preconditioning. 8th International Symposium on Adenosine and Adenine Nucleotides, Ferrara, Italy, May 2006. Purinergic Signaling, 2, No.2 2006, page 164.
22. Prix L., Eckle T., Hamprecht K., Klingebiel T., Selle B., Jahn G. Drug resistant cytomegalovirus infection in children after stem cell transplantation. 7th international Cytomegalovirus Workshop. Brighton, UK, 28. April - 1. Mai, 1999. J Clin Virol, 12, No. 2 1 April 1999, page 182.

<u>Abstracts published in meeting booklets</u>

1. Tobias dela Garza Eckle. Novel therapies for Myocardial injury. DGAI, Germany 2025
2. Tobias de la Garza Eckle, Julia Bertazzo, Yoshimasa Oyama, Finneas Gordon and Lori Walker. Intense light as novel treatment for myocardial injury in non-cardiac surgery (MINS). AUA 2025 Annual Meeting.
3. Julia Bertazzo, Yanmei Du, Lori Walker and Tobias Eckle. Light therapy and circadian regulation to prevent endothelial dysfunction. ISHR 2024. Annual Meeting August 19-23, 2024
4. Tobias Eckle, Yoshimasa Oyama and Lori Walker. Intense light elicited therapies in murine myocardial ischemia and reperfusion injury. AUA 2023 Annual Meeting, April 13-14.
5. Bengson, J, Eckle T. Near Miss Event Due to An Unexpected Airway Complication in A Patient with Brain Injury. Medically Challenging Cases III. Sunday Oct 10, 2021, 10:00 AM - 12:00 PM. ASA Anesthesiology annual meeting October 2021, San Diego, USA.
6. Eckle T, Shuff S, Maddry JK, Schauer SG, Bebarta VS, Intense Light Pretreatment Improves Hemodynamics, Barrier Function, and Inflammation in a Murine Model of Hemorrhagic Shock Lung. COMBAT Research Symposium (29 OCT 2020)
7. Eckle T, Shuff S, Maddry JK, Schauer SG, Bebarta VS. Intense light in HSL. Military Health System Research Symposium. 2020.
8. Yoshimasa Oyama and Tobias Eckle. Light elicited alveolar type 2 specific PER2 in bacterial induced murine lung injury. ASA Anesthesiology annual meeting October 2019, Orlando, USA.
9. Yoshimasa Oyama and Tobias Eckle. Light elicited and endothelial specific PER2 maintains vascular integrity during murine myocardial ischemia via metabolic reprogramming. AUA 2019 Annual Meeting, May 16-17.
10. Jennifer Gile, Benjamin Scott and Tobias Eckle. Per2 as a novel therapeutic target in midazolam induced delirium. December 2018. Best Student Research Forum Poster at the 33rd Annual Student Research Forum.

Denver, UC Denver, USA

11. Andrea Hess, Yoshimasa Oyama and Tobias Eckle. Intense Light as Cardioprotective Strategy. ASA Anesthesiology annual meeting October 2018, San Francisco, USA. FAER's Medical Student Anesthesia Research Fellowships (MSARF) program
12. Oyama Yoshimasa, Colleen Bartman, Sean Colgan and Tobias Eckle. Light elicited and endothelial specific PER2 maintains vascular integrity during myocardial ischemia via metabolic reprogramming. October 2018. 3rd Anesthesiology Research Conference. Denver, UC Denver, USA.
13. Colleen Bartman, Yoshimasa Oyama, and Tobias Eckle. Light elicited cardio-protection reveals circadian entrainment as a mechanism that requires PER2 to mimic HIF1α mediated metabolic adaptation to ischemia at the AUA 2018 Annual Meeting, April 27 – 28, 2018 (Invited talk)
14. Yoshimasa Oyama, Benjamin K. Scott, Tobias Eckle. Pneumomediastinum and bilateral pneumothoraces causing severe respiratory failure after thyroid surgery. Medically Challenging Case Presentations. ASA Anesthesiology annual meeting October 2017, Boston, USA.
15. Jennifer Gile1, Benjamin Scott and Tobias Eckle. Per2 as novel therapeutic target in midazolam induced delirium. October 2017. 2nd Anesthesiology Research Conference. Denver, UC Denver, USA.
16. Colleen Bartman, Yoshimasa Oyama, and Tobias Eckle. The Role of PER2 in Hypoxic Metabolic Adaptation. October 2017. 2nd Anesthesiology Research Conference. Denver, UC Denver, USA.
17. Yoshimasa Oyama, Colleen Bartman and Tobias Eckle. Entrainment as mechanism for light elicited PER2 in cardioprotection. October 2017. 2nd Anesthesiology Research Conference. Denver, UC Denver, USA.
18. Colleen M Bartman, Lida Khailova, and Tobias Eckle. Light elicited circadian mechanisms on cardio-protective metabolism. May 8—12, 2017, Keystone Symposia, Mitochondria, Metabolism and Heart, Santa Fe, New Mexico USA.
19. Jennifer Gile, Daniel Sehrt and Tobias Eckle. The role of the circadian rhythm protein Per2 in delirium. 2017. 31st Annual Student Research Forum, Denver, UC Denver, USA. Award for Best in Area-Neuroscience-Brain, Behavior, and Vision.
20. Colleen M Bartman, Lida Khailova, and Tobias Eckle. Illuminating a Circadian Link to Cardio-Protective Metabolism. 2017. 31st Annual Student Research Forum, Denver, UC Denver, USA. Award for Best in Area-Surgery or Cardiovascular
21. Jennifer Gile, Daniel Sehrt and Tobias Eckle. The role of the circadian rhythm protein Per2 in delirium. 2016 November. Anesthesiology Research Conference. Denver, UC Denver, USA.
22. Ludmila Khailova, Jennifer Gile, Colleen Bartman, Tobias Eckle. Intense light elicits Period 2 in acute lung injury. 2016 November. Anesthesiology Research Conference. Denver, UC Denver, USA.
23. Colleen M Bartman, Lida Khailova, and Tobias Eckle. Illuminating a circadian link to cardio-protective metabolism. 2016 November. Anesthesiology Research Conference. Denver, UC Denver, USA.
24. Colleen M Bartman, Kelley Brodsky, Ludmila Khailova, Michael Koeppen, and Tobias Eckle. Intense light-elicited up-regulation of miR-21 facilitates PER2-dependent glycolytic metabolism. 2016 November. Anesthesiology Research Conference. Denver, UC Denver, USA. 2nd poster price.
25. Jennifer Gile, Daniel Sehrt and Tobias Eckle. THE IMPACT OF MIDAZOLAM ON THE EXPRESSION OF CARDIAC PER2 AND MYOCARDIAL ISCHEMIA AND REPERFUSION INJURY. 2016 Anesthesiology Research Conference. Denver, UC Denver, USA.
26. Gile J, Sehrt D, Scott B and Eckle T. The impact of midazolam on the expression of the circadian rhythm protein Per2. Neuroscience Conference 2016 November 12-16, 2016, San Diego, USA
27. Eckle T. Light Elicited Mechanisms in Organ Protection. AUA 63rd Annual Meeting, May 19-20, 2016, in San Francisco, USA.
28. Colleen B, Khailova L, Goodman M, Bonney S, Eckle T. Intense Light as a Novel Treatment for Myocardial Ischemia. ACTS meeting 2016, April 13 -15 2016, Washington DC, USA.
29. Colleen B, Khailova L, Goodman M, Bonney S, Eckle T. Light Elicited Metabolic Adaptation to Hypoxia. Top Poster at the 30th Annual Student Research Forum. February 4th, 2016, Denver, UC Denver, USA.
30. Colleen B, Khailova L, Goodman M, Bonney S, Eckle T. Light Elicited Circadian Rhythm in Cardiac Metabolism. October 9-10, 2015, Annual CSD Retreat, Breckenridge, CO, USA.
31. Gobel M, Bonney S, Eckle T. Light therapy at the interface of circadian proteins and lung disease. May 18, 2015, ATS, Denver, CO, USA.
32. Gonzales J, Eckle T, Romano O. A Regional Fellowship Impacts HCAHPS Survey Scores Regarding Satisfaction with Pain Management at Academic Institutions. Poster presented at: 40th Annual Regional Anesthesiology

and Acute Pain Medicine Meeting; 2015 May 14-16; Las Vegas, NV.

33. Gobel M, Sehrt D, Bonney S and Eckle T. Per2 control of glycolysis, fatty acid oxidation and mitochondrial biogenesis. January 27, 2015, Convention Center, Santa Fe, Keystone Meeting Mitochondria, Metabolism and Heart Failure.
34. Sehrt D, Gobel M, Eckle T. Light elicited Per2 in cardio-protection. FAER Medical Student Anesthesia Research Fellowship Symposium — ASA Annual Meeting October 12, 2014, Morial Convention Center, New Orleans, LA, United States
35. Bonney S, Hughes K, Buttrick P, Eltzschig HK, Walker L and Eckle T. The Role of human Period 2 in carbohydrate metabolism and myocardial ischemia. Molecular Clockworks and the Regulation of Cardio-Metabolic Function Snowbird, Utah USA, April 3 - April 7, 2013.
36. Eckle T, Hartmann K, Bonney S, Reithel S, Mittelbronn M, Walker L, Lowes B, Han J, Borchers C, Buttrick P, Kominsky D, Colgan S and Eltzschig HK. Adora2b-elicited Per2 stabilization promotes a HIF-dependent metabolic switch critical for myocardial adaptation to ischemia. Meeting of NHLBI K Award Investigators, July 16-17, 2012.
37. Poth P, Bonney S, Bonney M, Eltzschig HK and Eckle T. Nucleoside Transporters in Acute Lung Injury. Keystone Meeting 2012 Hypoxia and Metabolism, Banff, Canada.
38. Eckle T, Bonney S, Bonney B, Eltzschig HK. The Role of Circadian Hif1a in Period2 mediated Cardioprotection. Keystone Meeting 2012 Hypoxia and Metabolism, Banff, Canada.
39. Eckle T., Hartmann K., Mittelbronn M, Walker L, Kominsky D, Eltzschig HK. Light Therapy in myocardial ischemia. IARS 2011 Annual Meeting May 21 -24, Vancouver, Canada.
40. Eckle T and Eltzschig HK. ENT2 in myocardial ischemia. IARS 2011 Annual Meeting May 21 -24, Vancouver, Canada.
41. Eckle T, Brodsky KS, Koeppen M, Kewley E, Mariani TJ, Moss M, and Eltzschig HK. (HIF)-1 stabilization as pharmacological strategy in acute lung injury. IARS 2011 Annual Meeting May 21 -24, Vancouver, Canada.
42. Koeppen M, Bonney S, Reitel S, Mittelbronn M, Eckle T. AB2AR agonist treatment as therapeutic option in myocardial ischemia-reperfusion injury. IARS 2011 Annual Meeting, May 21 -24, Vancouver, Canada.
43. Koeppen M, Eltzschig HK, Eckle T. AB2AR signaling on bone marrow derived cells dampens myocardial ischemia-reperfusion injury. Keystone Symposia: Molecular Cardiology: Disease Mechanisms and Experimental Therapeutics. 22 Feb 2011 - 27 Feb 2011. Keystone, USA.
44. Eckle T., Hartmann K., Mittelbronn M, Walker L, Kominsky D, Eltzschig HK. Period 2 promotes metabolic adaptation of the myocardium to ischemia via regulation of HIF1a. Keystone Symposia: Molecular Cardiology: Disease Mechanisms and Experimental Therapeutics. 22 Feb 2011 - 27 Feb 2011. Keystone, USA.
45. Koeppen, K., Eckle T., Eltzschig HK. Neuronal guidance molecule netrin-1 attenuates myocardial ischemia reperfusion injury by enhancing extracellular adenosine signaling events. DAC 2010 June 19-22, Nurnberg, Germany.
46. Koeppen M., Eckle T., Eltzschig HK. A1-Adenosine-Rezpetor (A1AR) mediates adenosine-induced bradycardia. DAC 2010 June 19-22, Nurnberg, Germany.
47. Eckle T., Hartmann K, Komminsky D., Mittelbronn M, Walker L., Lowes B. and Eltzschig HK. Light dependent Per2 mediates a metabolic switch critical for myocardial ischemia. DAC 2010 June 19-22, Nurnberg, Germany.
48. Eckle T., Brodsky K., Hartmann K., Eltzschig HK. Hypoxia Inducible Factor in VILI. DAC 2010 June 19-22, Nurnberg, Germany.
49. Eltzschig HK, Brodsky K., Hartmann K., Eckle T. Protective role of hypoxia-inducible factor (HIF)-1a in acute lung injury. AUA, 57th Annual Meeting, April 8 -10 2010, Denver, USA.
50. Eckle, T, Hartmann K, Komminsky D, Walker L., Mittelbronn M., Lowes B., and Eltzschig H.K. Adenosine-dependent stabilization of the clock gene Per2 mediates a metabolic switch critical for myocardial adaptation to ischemia. AUA, 57th Annual Meeting, April 8 -10 2010, Denver, USA.
51. Eckle T., Hartmann K. Walker L., Mittelbronn M., Kominsky D., and Eltzschig HK. Per2 critical in myocardial ischemia. Hypoxia: Molecular Mechanisms of Oxygen Sensing and Response Pathways. January 19 - 24, 2010, Keystone Meeting, Keystone, USA
52. Eckle T, Hartmann K, Mittelbronn M, Kominsky D, Eltzschig HK. Period in Cardioprotection. Immunology Retreat September 2009, Estes Parc, USA.
53. Eckle T, Grenz A, Laucher S, Eltzschig HK. A2B adenosine receptor attenuates ventilator induced lung injury by enhancing alveolar fluid clearance. Immunology Retreat October 2008, UC Denver.

54. Eckle T, Eltzschig HK. Netrin dampens inflammation. Translational Immunology Symposium Princeton Conference Center at Children's Hospital, Anschutz Medical Campus, Denver, USA, May 29, 2008.
55. Eltzschig, HK, Eckle T. Role of HIF-1alpha in A2B Adenosine Receptor-dependent Cardioprotection During Ischemic Preconditioning. Molecular, Cellular, Physiological, and Pathogenic Responses to Hypoxia, Keystone Meeting, Vancouver, British Columbia, Canada, January 15 - 20, 2008.
56. Eltzschig HK, Eckle T., Mager A., Küper N., Karcher C., Weissmuller T., Boengler C., Schulz R., Robson S., and Colgan S. ATP release from activated neutrophils occurs via connexin 43 and modulates adenosine-dependent endothelial cell function. DIVI-Kongress Hamburg, Germany, Oktober 2006.
57. Grenz A., Zhang H., Eckle T., Zug S., Köhle C., Falk M.,Thompson L.,Wehrmann M., Osswald H., Eltzschig H.K. Bedeutung der Ekto-5'-Nukleotidase (CD73) für die ischämische Präkonditionierung an der Niere. 37. Kongress der Gesellschaft für Nephrologie Essen, Germany, September 2006.
58. Eckle T., Grenz G., Faigle M., Weissmüller T., Oßwald H., Thompson L., Colgan SP., Eltzschig HK. Critical Role of 5´- Ectonucleotidase (CD73) in Cardiac Ischemic Preconditioning. DAC 17. - 20. Mai 2006. Congress Centrum Leipzig, Germany.
59. Weissmüller T., Eckle T., Faigle M., Robinson A, Kepmf VA, Colgan SP., Eltzschig HK. Modulation of endothelial ATP Signaling by Hypoxia: Functional Consequences of HIF-1 dependant P2y2 induction. Keystone Meeting, Hypoxia and Development, Physiology and Diseases, January 16-21, 2006, Breckenridge, USA.
60. Eckle T., Jahn G., Hamprecht K. Pitfalls of Genotypic HCMV Drug Resistance Screening in Stem Cell Transplant Recipients. Annual Meeting of the "Gesellschaft für Virologie" and Joint Meeting with "Societa Italiana di Virologia", Tübingen, 17-20 March 2004, Germany.
61. Hamprecht K., Eckle T., Lang P., Einsele H., Niethammer D., Jahn G. Risk factors for the emergence of drug resistant CMV infection in the pediatric and adult bone marrow transplant setting: pitfalls in phenotypic diagnosis. Jahrestagung der Gesellschaft für Virologie. Erlangen, Germany 4. - 11. April 2002.
62. Eckle T., Prix L., Hebart H., Einsele H., Jahn G., Hamprecht K. Molekularer Nachweis der initialen in vitro Selektion von HCMV-UL97-Wildtyp oder Mutante bei einer Patientin nach peripherer Blutstammzelltransplantation. Jahrestagung der Gesellschaft für Virologie. Wien, Austria, 2000.

Education

Teaching / Grand Rounds – University of Colorado Denver

06/2025	Grand Rounds, 200 participants, attendings, fellows, residents, and students
09/2024	Grand Rounds, 200 participants, attendings, fellows, residents, and students
11/2022	Grand Rounds, 200 participants, attendings, fellows, residents, and students
09/2019	Grand Rounds, 200 participants, attendings, fellows, residents, and students
03/2019	Grand Rounds, 200 participants, attendings, fellows, residents, and students
07/2016 – present	Anesthesia Assistant (AA) class (Anes & Co-Existing Diseases I 001), 6 x 2h lecture (12 h), Course Director, 14 AA students
07/2016 – present	Resident lecture core curricula (2.h lecture), up to 21 residents
03/2015	Grand Rounds, 200 participants, attendings, fellows, residents, and students
08/2015	Grand Rounds, 200 participants, attendings, fellows, residents, and students
10/2014	Grand Rounds, 200 participants, attendings, fellows, residents, and students
01/2014- 01/2019	Translational Cardiovascular Biology, Conference, 0.5 hours lecture per week
01/2014- 01/2016	DOM Research & Innovation Conference 0.5 hours lecture per week
11/2014	Grand Rounds, 200 participants, attendings, fellows, residents, and students
01/2013-01/2016	Research in Progress' - OPP (Organ Protection Program), CU 0.5-hour lecture per week
03/2013	Grand Rounds, 200 participants, attendings, fellows, residents, and students
01/2012 - 01/2014	Assistant Clerkship Director Medical Students, 0.5-hour lecture per week
06/2012	Grand Rounds, 200 participants, attendings, fellows, residents, and students
01/2010 - 01/2015	3rd year medical students on Preoperative Care, Airway Management and Resuscitation, IDPT 7050, 0.5-hour lecture per week
01/2010 – 01/2012	2012 Integrated Clinicians Course (ICC) 7001 for medical student (IV/Intubation) 0.5-hour lecture per week
10/2009	Grand Rounds, 200 participants, attendings, fellows, residents, and students
01/2008-present	Research Seminar Anesthesiology, UC Denver, 0.5 hours lecture per week

01/2008-present	Research in Progress -MIP (Mucosal Inflammation Program) UC Denver 0.5-hour lecture per week
01/2008-present	supervision and bedside teaching of residents, Resident Program Anesthesiology, UC Denver, 8 hours per week
01/2008-present	training in basic science and clinical research, UC Denver, 16 hours per week
10/2009	Grand Rounds, 200 participants, attendings, fellows, residents, and students

Teaching / Grand Rounds – Eberhard-Karls-University Tübingen

01/2004 – 01/2007	Basic Science in Anesthesiology, Eberhard-Karls-University Tübingen, 40 students, 2 hours lecture per week, 12 weeks (total 24 hours lecture)
01/2004 – 01/2007	Hemodynamic Monitoring, Eberhard-Karls-University Tübingen, 45 students, 2 hours lecture per week, 4 weeks (total 8 hours lecture)
01/2004 – 01/2007	Specialized anesthesia, Eberhard-Karls-University Tübingen, 50 students, 1-hour lecture per week, 2 weeks (total 2 hours lecture)
01/2001 – 01/2007	General anesthesia, Eberhard-Karls-University Tübingen, 50 students 2 hours lecture per week, 12 weeks (total 24 hours lecture)
01/2001 – 01/2007	Emergency medical aid, Eberhard-Karls-University Tübingen, 105 students, 1-hour lecture per week, 9 weeks (total 9 hours lecture)
07/2001-01/2008	Medical school courses at the University Hospital of Tübingen (practical courses and lectures in emergency medical aid, general anesthesia, specialized anesthesia and basic science)
07/1997-04/2004	Cellular and Molecular Biology courses for PhD students at the Institute of Virology, University of Tübingen, 20 students, 2 hours lecture per week, 9 weeks (total 18 hours lecture)

Teaching Videos

http://www.jove.com/video/2526/use-of-a-hanging-weight-system-for-coronary-artery-occlusion-in-mice
Metrics: Seen by over 120 institutions worldwide. March 2024 cumulative views 21,253

https://www.jove.com/video/2525/pressure-controlled-ventilation-to-induce-acute-lung-injury-in-mice
Metrics: Seen by over 160 institutions worldwide. March 2024 cumulative views 17,892

Mentorship

Examples of outstanding careers based on mentoring

2022 - 2025	Julia Bertazzo, MD	Clinical Trial Nurse CU	hired, trained and mentored, on 3 Publications, now Postdoctoral Fellow in Cardiology CU, pubmed
2022 - 2024	Meghan Prin, MD	Clinical Faculty CU	trained and mentored, on 3 publications, 2 NIH training grants, now independent physician-scientist, pubmed
2019 - 2020	Sydney Shuff, BSN	Research Assistant CU	hired, trained and mentored, on 5 publications, now PhD candidate cancer biology Emory University, pubmed
Since 2018	Josh Douin, MD	Clinical Faculty CU	mentored since residency, on 2 publications, now Associate Professor, pubmed
Since 2016	Yoshimasa Oyama, MD, PhD	Postdoctoral Fellow CU	hired, trained and mentored, on 14 Publications, 2019 AHA Postdoctoral Fellowship, Grant, now Professor at Oita University, Japan, pubmed
2016-2018	Jennifer Gile, MD	Research Fellow CU	hired, trained, mentored, on 5 Publications, DREAM award 2016, ARCS Scholarship 2016, Senior Alpha Omega Alpha member 2018, now hematology/oncology fellow, Mayo Clinic, Rochester, pubmed

Since 2015	Colleen Bartman, PhD	PhD candidate CU	graduate student 2015-2018, 2018-2022 postdoctoral fellow at Mayo Clinic, Rochester, CCTSI Grant 2015, AHA Predoc Grant 2016, ARCS Scholarship 2017, 6 publications based on training and mentoring efforts, now Assistant Professor, pubmed
Since 2015	Benjamin Scott, MD	Clinical Faculty CU	trained and mentored on two 2 special editions, mentioned on several clinical projects, 9 publications based on training and mentoring efforts, now Associate Professor at CU, Medical Director of the Virtual ICU and Associate Medical Director for Virtual Health at UCH, pubmed
2012-2018	Christine Vohwinkel, MD	Postdoctoral Fellow	trained, mentored to obtain NIH K08, 2 publications based on training and mentoring efforts, now Associate Professor, pubmed
2013-2017	Jason Brainard, MD	Clinical Faculty CU	trained, mentored to obtain 3 manuscripts. Regarding the manuscript on emergent Intubations with Dr. Colby Simmons, I mentored and guided the team, rewrote and reperformed figures and analyses and performed the revision for the manuscript, now Professor, Section Chief and Director of Critical Care at UCH, pubmed
2012-2015	Seong-Wook Seo, MD, PhD	Postdoctoral fellow	Trained and mentored, anesthesia residency, UNM, Albuquerque, now board certified in interventional pain medicine, 3 Publications based on training and mentoring efforts, pubmed
2012-2013	Kelly Hughes, BS	PRA	Trained and mentored, Law School, University of Boulder, Colorado, now patent lawyer, 4 publications based on training and mentoring efforts, pubmed
Since 2010	Stephanie Bonney, PhD	PRA/PhD candidate CU	PRA 2010-2013, PhD graduate student 2013-2019 (Cell Biology, Stem Cells and Development, CU), postdoctoral fellow at Seattle Children's, NIH Award based on mentoring efforts: 1F31NS100565-01A1, 11 publications based on training and mentoring efforts, now Assistant Professor at CU, pubmed
2009-2012	Michael Koeppen	Instructor	trained, mentored, 17 publications based on training and mentoring efforts: pubmed, awarded the German anesthesia intensive care award (Hanse Preis), German K08 (dfg.de), now Vice Chair of Finance, University of Tuebingen
2008-2012	Doug Kominsky, PhD	Instructor	mentored, trained to obtain NIH R01, 3 publications based on training and mentoring efforts, now Associate

2008-2012	Carol Aherne, PhD	Instructor	Professor, pubmed mentored, trained to obtain NIH K08, on 1 major publication (Cell Reports), now associate professor pubmed
2005-2008	David Kohler, PhD	Postdoctoral Fellow	trained and mentored, now Assistant Professor and research group leader 8 publications based on training and mentoring efforts: pubmed, based on acquired animal surgery model and mentoring efforts: dfg.de, dfg2.de
2003-2008	Andreas Redel, MD	Postdoctoral Fellow	now Professor and Chair, training and mentoring on animal model, 2 publications based on training and mentoring efforts: pubmed

Past Trainees (PhD thesis with summa cum laude only)

1. Katharina Goehring, BS: PhD Thesis: Entwicklung neuer genotypischer Analyseverfahren zur Detektion der Virostatikaresistenz humaner Cytomegaloviren.
2. Lars Fuellbier, MD: PhD Thesis: Role of nucleotide phosphohydrolysis in modulating ventilator-induced lung injury.
3. David Koehler, BS: PhD Thesis: Protective role of extracellular ATP/ADP-phosphohydrolysis in myocardial ischemia.
4. Melanie Falk, MD: PhD Thesis: Evaluation of a novel of cardiac ischemic preconditioning and role of ecto-5'-nucleotidase in ischemic preconditioning of the heart.
5. Anne-Kathrine Stenz, MD: PhD Thesis: Pro-inflammatory role of P2Y6 receptor signaling during vascular inflammation.
6. Colleen Bartman, BS (UC Denver): PhD Thesis: Mechanisms of circadian rhythm protein PER2 in cardioprotection

PhD student thesis committees (CSD program, CU)

Stephanie Bonney BS, Colleen Bartman, BS, Taylor Wallace, BS, Ian Stancil, BS

Current and Past Mentees at UC Denver only

Laura Ivan BS, Michael Koeppen MD, Jessica Bauerle BS, Katherine Hartmann BS, Carol Aherne PhD, Emily Kewley PhD, Eric Clambey PhD, Leslie Cabrera BS, Joseph Westrich BS, Stephanie Bonney BS, Susie Reithel BS, Megan Bonney BS, Kelly Hughes BS, Merit Gobel BS, Seo, Seong-Wook, PhD, Jens Poth, MD, Viola Dengler, MD, Lindsay Weitzel, PhD, Anja Frank, MD, Sandra Hoegel, MD, Andreas Redel, MD, PhD, Molly Thayer, BS, Benjamin Scott, MD, Jason Brainard, MD, Karsten Bartels, MD, Daniel Sehrt, MD (Medical Student/FAER program), Colleen Bartman, BS (Graduate Student), Meagan Johnson (Intern, High School), Sara Shahid, MS, Doug Kominsky, PhD, Christine Vohwinkel, MD, Stephanie Bonney BS (Graduate Student), Christine Tompkins, MD (Cardiology Fellow), Jennifer Gile, BS (Medical Student), Oyama Yoshimasa, MD, PhD (Research Fellow), Mellissa Delcont (MD/PhD Candidate/ Preceptor clinical), Alexander Kolb, PhD (Postdoc), Justin Blaskowsky (Modern Human Anatomy Program, Capstone Project 2017/18), Damon Wallace, MD (Clinical Mentor FAER Summer Student 2017), Andrea Hess (Mentor FAER Summer Student 2018), Madelyn Voorhees (College Student, Clinical Mentor 2018), Abigail Schirmer (Clinical Mentor FAER Summer Student 2019), Sahand Fallahi (college graduate 2019), Sydney Shuff, BS (PRA 2019), Alexis Nicole Thomson (College Student, Clinical Mentor 2019), Meghan Prin, MD (2021, Clinical Faculty/Postdoc), Simmons Colby, MD (2022, Clinical Faculty), Mario Villasenor, MD (2022, Clinical Faculty), Jeremy Bengson, MD (2022, Clinical Faculty), Julia Bertazzo, MD (2024, Visiting Researcher from Brazil/Postdoc), Finneas Gordon (2024, undergraduate student, CU Boulder), Scott Vogel, MD (2024 Clinical Faculty), Julio Montejano, MD (2024, Clinical Faculty), Kelsey Repine, MD (Fellow), Matthew Lyman, MD (2025, Clinical Faculty).