

Richard C. Lindsey

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Education & Training

- 2024 – present **Fellow, Endocrinology, Diabetes, & Metabolism**, Mayo Clinic School of Graduate Medical Education, Rochester, MN
- 2024 – present **Fellow, Clinician Investigator Training Program**, Mayo Clinic School of Graduate Medical Education, Rochester, MN
- 2021 – 2024 **Resident, Internal Medicine**, Mayo Clinic School of Graduate Medical Education, Rochester, MN
- 2012 – 2021 **Doctor of Medicine**, Loma Linda University School of Medicine, Loma Linda, CA
- 2014 – 2019 **Doctor of Philosophy, Biochemistry**, Loma Linda University School of Medicine, Loma Linda, CA
Dissertation: *Signaling Pathways in Skeletal Development and Metabolism*
Advisor: Subburaman Mohan, PhD
- 2008 – 2012 **Bachelor of Science, Biochemistry**, Biola University, La Mirada, CA, *Summa cum laude*
Minor: Mathematics
Perpetual member, Torrey Honors College

Certifications & Licensure

- 2024 – present **American Board of Internal Medicine**, *Internal Medicine*
- 2022 – present **Medical License**, Minnesota Board of Medical Practice, 71991

Publications

Richard C. Lindsey, Shaohong Cheng, and Subburaman Mohan. Vitamin C effects on 5-hydroxymethylcytosine and gene expression in osteoblasts and chondrocytes: Potential involvement of PHD2. *PLoS ONE*, 14(8):e0220653, 2019.

Richard C. Lindsey, Catrina Godwin, and Subburaman Mohan. Skeletal effects of nongenomic thyroid hormone receptor beta signaling. *J. Endocrinol.*, June 2019.

Richard C. Lindsey, Weirong Xing, Sheila Pourteymoor, Catrina Godwin, Alexander Gow, and Subburaman Mohan. Novel Role for Claudin-11 in the Regulation of Osteoblasts via Modulation of ADAM10-mediated Notch Signaling. *J. Bone Miner. Res.*, May 2019.

Richard C. Lindsey, Charles H. Rundle, and Subburaman Mohan. Role of IGF1 and EFN-EPH signaling in skeletal metabolism. *J. Mol. Endocrinol.*, 61(1):T87–T102, July 2018.

Richard C. Lindsey, Patrick Aghajanian, and Subburaman Mohan. Thyroid Hormone Signaling in the Development of the Endochondral Skeleton. *Vitam. Horm.*, 106:351–381, 2018.

Nikita M. Bajwa, Cheryl P. Sanchez, **Richard C. Lindsey**, Heather Watt, and Subburaman Mohan. Cortical and trabecular bone are equally affected in rats with renal failure and secondary hyperparathyroidism. *BMC Nephrol*, 19(1):24, February 2018.

Richard C. Lindsey and Subburaman Mohan. Thyroid hormone acting via TR β induces expression of browning genes in mouse bone marrow adipose tissue. *Endocrine*, 56(1):109–120, April 2017.

Richard C. Lindsey and Subburaman Mohan. Skeletal effects of growth hormone and insulin-like growth factor-I therapy. *Mol. Cell. Endocrinol.*, 432:44–55, September 2016.

Presentations

- 2024 **American Society for Bone and Mineral Research Annual Meeting**, Toronto, ON, CAN
Poster: “Co-culture With Aged Immune Cells Decreased Markers of Osteoblast Differentiation but Did Not Induce Cellular Senescence in Murine Mesenchymal Bone Cells”
Lindsey, RC; Monroe, DG; and Khosla, S.
- 2023 **American Society for Bone and Mineral Research Annual Meeting**, Vancouver, BC, CAN
Poster: “Bisphosphonate Use and Mortality in Olmsted County, MN, USA: A Population Based Analysis”
Lindsey, RC; Chamberlain AM; Atkinson, EJ; Sfeir, JG; and Khosla, S.
- 2018 **American Society for Bone and Mineral Research Annual Meeting**, Montreal, QC, CAN
Poster: “Skeletal Effects of Non-genomic Thyroid Hormone Receptor (TR) β 1 Signaling”
Lindsey, RC; Godwin, C; and Mohan, S.
Poster: “Targeted Deletion of *Claudin (Cldn)-11* Gene Promotes Chondrocyte Differentiation and Reduces Articular Cartilage Thickness in Mice”
Lindsey, RC; Xing, W; Godwin, C; Pourteymoor, S; and Mohan, S.
- 2018 **12th Annual Forum on Metabolic Bone Diseases**, Montreal, QC, CAN
Poster: “Skeletal Effects of Non-genomic Thyroid Hormone Receptor (TR) β 1 Signaling”
Lindsey, RC; Godwin, C; and Mohan, S.
- 2017 **American Society for Bone and Mineral Research Annual Meeting**, Denver, CO
Poster: “Epigenetic Regulation of Articular Chondrocytes by Vitamin C Involving Prolyl Hydroxylase Domain-containing Protein 2 (PHD2): Role of Vitamin C Deficiency in the Pathogenesis of Osteoarthritis”
Lindsey, RC; Cheng, S; Pourteymoor, S; Godwin, C; and Mohan, S.
Poster: “Targeted Deletion of *Claudin (Cldn)-12* Gene Inhibits Chondrocyte Differentiation and Increases Articular Cartilage”
Lindsey, RC; Xing, W; Aghajanian, P; Godwin, C; Pourteymoor, S; and Mohan, S.
- 2016 **American Society for Bone and Mineral Research Annual Meeting**, Atlanta, GA
Oral Presentation: “Novel Role for Claudin-11 in the Regulation of Osteoblasts via Modulation of ADAM10-mediated Notch Signaling”
Lindsey, RC; Cheng, S; Xing, W; Alarcon, C; Pourteymoor, S; Gow, A; and Mohan, S.
Poster: “Epigenetic Regulation of Osteoblast Differentiation by Vitamin C Involving Prolyl Hydroxylase Domain-containing Protein 2 (PHD2)”
Lindsey, RC; Cheng, S; Pourteymoor, S; Alarcon, C; and Mohan, S.
- 2016 **ENDO 2016 (Endocrine Society Annual Meeting)**, Boston, MA
Poster: “Ascorbic Acid Effect on Trabecular Bone Mass is Skeletal Site Dependent”
Lindsey, RC and Mohan, S.
- 2015 **American Society for Bone and Mineral Research Annual Meeting**, Seattle, WA
Poster: “Thyroid Hormone Induces Browning of Bone Marrow Adipose Tissue via Activation of TR β Signaling”
Lindsey, RC; Pourteymoor, S; Alarcon, C; and Mohan, S.

- 2015 **ENDO 2015 (Endocrine Society Annual Meeting)**, San Diego, CA
Poster: "Thyroid Hormone Regulation of Bone Marrow Adipose Tissue" [Selected for poster-preview presentation]
Lindsey, RC; Abreu, CM; Cheng, A; Pourteymoor, S; Alarcon, C; and Mohan, S.
- 2015 – 2018 **18th–21th Annual Basic Sciences Research Symposium**, Loma Linda University School of Medicine, Loma Linda, CA
 Posters presented every year.
- 2010 – 2018 **10th–18th Annual Health Disparities Symposium**, Loma Linda University School of Medicine, Loma Linda, CA
 Posters presented every year. Flash oral presentation in 2017.

Awards

- 2020 **Excellence in Research Award**, Loma Linda University Medical Center Diabetes Treatment Center
- 2018 **12th Annual Forum on Metabolic Bone Diseases Award**, Endocrine Fellows Foundation
- 2016 **Dean's Award for Outstanding Performance on the Written Comprehensive Examination**, Loma Linda University School of Medicine Department of Basic Sciences
- 2016 **3rd Place, Excellent Poster Presentation**, Loma Linda University School of Medicine Department of Basic Sciences
- 2016 **Young Investigator Travel Grant**, American Society for Bone and Mineral Research
- 2016 **Outstanding Abstract Award**, Endocrine Society
- 2015 **Outstanding Abstract/Featured Poster Award**, Endocrine Society
- 2014 – 2019 **LLU-NIH Initiative for Maximizing Student Development**
- 2014 – 2019 **Dean's Merit Award**, Loma Linda University School of Medicine
- 2012 **Epsilon Kappa Epsilon**, Biola University Honor Society
- 2008 – 2012 **Dean's List**, Biola University
- 2008 – 2012 **Science Department Scholarship**, Biola University
- 2008 – 2012 **E.F. "Dinty" Mohr Scholarship**, Beach Cities Masonic Lodge #753
- 2008 **National Merit Scholarship Finalist**

Research & Work Experience

Research

- 2024 – present **Postdoctoral Research**, Mayo Clinic, Rochester, MN
 Khosla Lab, Robert & Arlene Kogod Center on Aging
 Division of Endocrinology, Diabetes, Metabolism, & Nutrition
 Mentor: Sundeep Khosla, MD
- 2020 **Feasibility Study with Personalized Closed Loop (PCL)**, Loma Linda University Medical Center Diabetes Treatment Center, Loma Linda, CA
 A multicenter non-randomized significant risk IDE feasibility study designed to collect safety data and performance data utilizing a novel new artificial intelligence/artificial pancreas device system in patients with type 1 diabetes. The Diabetes Treatment Center is collecting information on the utilization of a meal prediction algorithm which intends to predict the quantity, quality, and type of food a patient will eat based on prior patient preferences entered into the device system. I helped develop the regulatory binder and will participate in protocol, device, and subject aspects of the study.

- 2014 – 2019 **Doctoral Research**, *Loma Linda University School of Medicine*, Loma Linda, CA
Musculoskeletal Disease Center, VA Loma Linda Healthcare System,
Initiative for Maximizing Student Development, Center for Health Disparities and Molecular Medicine
and Division of Biochemistry, Department of Basic Sciences
Mentor: Subburaman Mohan, PhD
- June – August 2012–2013 **Medical Training Program**, *Loma Linda University School of Medicine*, Loma Linda, CA
Research through the LLU Center for Health Disparities and Molecular Medicine culminating in an
abstract and poster session.
- 2011 – 2012 **Directed Research**, *Biola University*, La Mirada, CA
Aging research on *C. elegans* under the direction of Matt E. Cruzen, PhD.
- June – August 2010–2011 **Undergraduate Training Program**, *Loma Linda University School of Medicine*, Loma Linda, CA
Research through the LLU Center for Health Disparities and Molecular Medicine culminating in an
abstract and poster session.
- Work
- 2021 – 2024 **Resident Physician**, *Mayo Clinic*, Rochester, MN
- 2020 – 2021 **Tutor**, *Loma Linda University*, Loma Linda, CA
One-on-one tutoring for underclassman medical students.
- 2009 – 2012 **General Chemistry Tutor and Grader**, *Biola University*, La Mirada, CA
Tutoring and grading for undergraduate General Chemistry lecture and lab classes under the direction
of Brent Ridley, PhD, and Mark Pichaj, MS.
- June – August 2009 **Internship and Clinical Shadowing**, *Molina Healthcare, Inc.*, Long Beach, CA
Statistical public health and health disparities research in the Department of Research and Innovation
and shadowing family practice physicians.

Volunteer Experience

Professional Service

- 2023 – 2024 **Endocrinology Interest Group Co-Chair**, *Mayo Clinic Internal Medicine Residency*, Rochester, MN
- 2022 – 2024 **Resident Advisory Board Member**, *Mayo Clinic Internal Medicine Residency*, Rochester, MN
- 2020 – 2021 **Teaching and Educational Material Design**, *Loma Linda University School of Medicine*, Loma Linda, CA
I worked with two LLU professors to create study materials for and design and give a lecture to the
freshman medical students in addition to serving as a facilitator for freshman discussion-based learning
groups.
- 2018 – 2019 **Basic Science Student Council MD/PhD Representative**, *Loma Linda University*, Loma Linda, CA
I improved procedures to support students transitioning from one part of the program to another,
piloted an MD/PhD Grand Rounds program, and invited an outside speaker to visit the program.
- 2018 – 2019 **Vice President & Board Member, American Physician Scientist Association, LLU Chapter**, *Loma Linda University*, Loma Linda, CA
- 2016 – 2017 **Student Poster Judge, Basic Sciences Research Symposium**, *Loma Linda University*, Loma Linda, CA
- 2016 – 2018 **Basic Sciences Research Symposium Steering Committee**, *Loma Linda University*, Loma Linda, CA

- 2012 – 2018 **Pre-Med Night**, *Biola University Health Careers Club*, La Mirada, CA
Yearly presentation to educate undergraduate students about applications, medical school, and career options in medicine.
- 2008 – 2012 **Biola Health Careers Club**, *Biola University*, La Mirada, CA
Educational service club for pre-health professions students.
Officer, Fall 2010; Vice President, Spring 2011; President, Fall 2011 – Spring 2012.
Community Service
- 2016 – 2021 **Teacher**, *Sovereign Grace Orthodox Presbyterian Church*, Redlands, CA
Weekly instruction of junior high and high school students and monthly adult book discussion group.
- 2015 – 2016 **Pastoral Search Committee**, *Sovereign Grace Orthodox Presbyterian Church*, Redlands, CA
Evaluate applicants for the position of Senior Pastor.
- 2012 – 2015 **Community Kids Connection Tutoring**, *Loma Linda University Community-Academic Partners in Service*, San Bernardino, CA
Weekly after-school tutoring for elementary through high school students from underserved areas of San Bernardino.

Professional & Honor Society Memberships

Alpha Omega Alpha, *California Epsilon Chapter*
American Physician Scientist Association
American College of Physicians
American Medical Association
Endocrine Society
American Society for Bone and Mineral Research
International Association of Medical Science Educators

Miscellaneous Skills, Projects, & Hobbies

- Language** Intermediate Spanish proficiency.
- Technology** Linux, Bash, Git, Vim, R (tidyverse), Markdown, \LaTeX , reproducible research workflows, Windows, Microsoft Office, a smattering of HTML/CSS/JavaScript, Python, and Go.
- Hobbies** Books (buying, reading, discussing, giving), podcasts, digital typesetting, knitting, flute, ukulele, making crème brûlée, roasting coffee, gongfu tea.
Software
- microCTr** An R package to analyze microCT data. <https://ricompute.github.io/microCTr/>