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EDUCATION

Doctor of Medicine (MD)

Rush Medical College, Rush University Medical Center, Chicago, IL (2010–2019)

Doctor of Philosophy (PhD), Biochemistry

Rush University Medical Center, Chicago, IL (2014–2018)

Master of Science (MS), Anatomy & Cell Biology

Rush University Medical Center, Chicago, IL (2013–2014)

Bachelor of Science (BS), Biological Sciences

University of Illinois Chicago, Chicago, IL (2007–2010)

POSTGRADUATE TRAINING

NIH T32 Postdoctoral Fellow, Orthopedic Surgery & Internal Medicine

Rush University Medical Center, Chicago, IL (2019–2021)

FACULTY APPOINTMENTS

2025 – Present; Assistant Professor

Department of Orthopedic Surgery, Rush University Medical Center, Chicago, IL

2021 – 2025; Instructor

Department of Orthopedic Surgery, Rush University Medical Center, Chicago, IL

HONORS & AWARDS

2025

New Investigator Research Award Finalist (To mentee: Oike J.)

Orthopaedic Research Society 2026 Annual Meeting, Charlotte, North Carolina

Podium presentation: CMTX-101 Treatment in a Mouse Model of Periprosthetic Joint Infection

(Authors: Oike J., Caplan B.E., Jimenez-Urbe A.P., Cao Y., Sansom S.E., Hall D.J., Moran

M.M., Hall V., McOsker C., Wimmer M.A., Markovics A., Hamilton J.L.)

2024

ORS/OREF Travel Grant in Orthopaedic Research Translation

Sigma Xi Research Honor Society

New Investigator Research Award Finalist

Orthopaedic Research Society 2024 Annual Meeting, Long Beach, California

Podium presentation: Prevention of Periprosthetic Joint Infection Through Electrophoretic

Deposition of Gentamicin into Titanium Nanotubes: An In Vivo Investigation (Authors: Hamilton

J.L., Gianotti S., Impergre A., AbuAlia M., Markovics A., Wimmer M.A.)

2021

New Investigator Research Award Finalist

Orthopaedic Research Society 2021 Annual Meeting

Podium presentation: Therapeutic Assessment of an Immunomodulator Based Approach to Control Periprosthetic Joint Infection (Authors: Hamilton J.L., Mohamed M.F., Witt B., Giroto L., Wimmer M.A., Shafikhani S.H.)

2018

Dean's Award for Leadership and Student Service

Rush Graduate College, Rush University Medical Center

Medical Staff Scholarship

Rush Graduate College, Rush University Medical Center

2016

1st Place, Graduate College Student Council Award

Annual Rush Research Forum, Chicago, Illinois

Abstract: Role and Therapeutic Inhibition of VEGF in Osteoarthritis Progression and Pain
(Authors: Hamilton J.L., Li X., Kroin J., Liu Z., Levine B.R., Im H.J.)

2015

2nd Place, Sigma Xi Award

Annual Rush Research Forum, Chicago, Illinois

Abstract: Role and Therapeutic Inhibition of VEGF in Osteoarthritis Progression and Pain
(Authors Hamilton J.L., Li X., Kroin J., Liu Z., Levine B.R., Im H.J.)

2010

Honors and Department Distinction in Biological Sciences

University of Illinois Chicago

2009

Golden Key International Honour Society

UIC Chancellor's Student Service and Leadership Award

University of Illinois Chicago

RESEARCH FUNDING

A. PEER-REVIEWED GRANTS (FEDERAL & FOUNDATIONS)

04/2024 – 03/2026

NIH NIAMS – R21 AR084167

Use of Bacterial Biofilm Disrupting Antibodies to Prevent and Treat Periprosthetic Joint Infection

Role: Principal Investigator

04/2025 – 03/2026

Rush Translational Sciences Consortium (Searle Program)

Targeting Periprosthetic Joint Infection via the Application of mRNA-encoded Lysostaphin

Role: Co-Investigator

02/2024

Orthopaedic Research Society (ORS) / Orthopaedic Research & Education Foundation (OREF)

ORS/OREF Travel Grant in Orthopaedic Research Translation

Role: Award Recipient

05/2022 – 05/2023

Institute for Translational Medicine (ITM), funded via NIH NCATS UL1TR002389

Utilization of the National COVID Cohort Collaborative (N3C) to Evaluate the Association of Dexmedetomidine Use and Mortality in COVID-19

Role: Principal Investigator

09/2019 – 09/2020

NIH NIAMS – T32 AR073157

Post-Doctoral Training in Joint Health

Role: Post-Doctoral Scholar

07/2016 – 06/2018

NIH NIAMS – F31 AR070002

Anti-VEGF Therapy in Osteoarthritis and Associated Pain

Role: Principal Investigator (Predoctoral Fellow)

B. INDUSTRY-SPONSORED RESEARCH

04/2024 – 04/2025

Clarametyx Biosciences

Preclinical Evaluation of CMTX-101 Treatment for Periprosthetic Joint Infection

Role: Principal Investigator

PATENTS & INTELLECTUAL PROPERTY

Coating of medical and implant biomaterials with an anti-biofilm agent to prevent and treat infection

Inventors: **Hamilton J.L.**, Wimmer M.A., Markovics A., Schmid T.M.

U.S. Provisional Patent Application No. 63/600,274

Filed November 17, 2023

Utilization of electrophoretic deposition to coat medical implants with therapeutic agents in a sterile clinical setting

Inventors: **Hamilton J.L.**, Wimmer M.A., Markovics A., Della Fara G.

International Application No. PCT/US2023/018967

International Publication No. WO 2023/205163 A1

Published October 26, 2023

Alpha-2 adrenergic receptor agonists to reduce mortality and improve outcomes in viral respiratory syndromes

Inventors: **Hamilton J.L.**, Wimmer M.A.

International Application No. PCT/US2021/056580

International Publication No. WO 2022/093767 A1

Published May 5, 2022

PROFESSIONAL SOCIETIES, LEADERSHIP & SERVICE

A. PROFESSIONAL SOCIETIES, LEADERSHIP & EXTERNAL ROLES

International Consensus Meeting (ICM) for Musculoskeletal Infection

Delegate (2021 – Present)

Musculoskeletal Infection Research Interest Group, Rush University Medical Center

Co-Leader (2025 – Present)

Orthopaedic Research Society (ORS)

Member (2016 – Present)

Reviewer, ORS Annual Meeting Abstracts in Musculoskeletal Infection (2024 – Present)

Session Organizer, Musculoskeletal Infection Research Interest Group (RIG) Session,

ORS 2026 Annual Meeting (March 27–31, 2026; Charlotte, North Carolina)

International Society for Technology in Arthroplasty (ISTA) Member (2022 – Present)

American Medical Association (AMA)

Member (2011 – Present)

American Medical Student Association (AMSA), Rush Medical College

Vice-President, Programming (2011 – 2012)

Professional Action Committee Chair (2010 – 2011)

Grant Review & Funding Agency Service

Reviewer, Rush Medical College Summer Research Proposals (2020 – Present)

Reviewer, Swim Across America / Bears Care (2023)

Reviewer, John G. Searle Innovator Awards (2023)

B. EDITORIAL & JOURNAL PEER-REVIEW SERVICE

Journal Peer Reviewer

Journal of Orthopaedic Research

Journal of Bone and Mineral Research Plus

Journal of Oral and Maxillofacial Surgery

NPJ Biofilms and Microbiomes (Nature Portfolio)

Journal of Emergency and Critical Care Medicine

Tribology

C. INSTITUTIONAL LEADERSHIP & COMMITTEE SERVICE (RUSH UNIVERSITY)

Biochemistry Graduate Program Committee, Department of Biochemistry

Member (2014 – 2018)

Medical College Curriculum Committee, Rush Medical College

Member (2013 – 2015)

Honor Code Committee, Rush Graduate College

Member (2014 – 2017)

Graduate College Student Council, Rush Graduate College

Co-President (2014 – 2016); Member (2014 – 2018)

Graduate College Re-engineering Committee, Rush Graduate College

Member (2014 – 2015)

Interprofessional Education Committee, Rush University Medical Center

Member (2015 – 2017)

University Council, Rush University

Member (2014 – 2016)

D. COMMUNITY SERVICE (RUSH UNIVERSITY MEDICAL CENTER)

Rush Community Service Initiatives Program (RCSIP) — RU Caring

Health Screening & Clinical Coordinator (2010 – 2012)

RU Caring Steering Committee (2010 – 2012)

Member (2010 – 2012)

E. UNDERGRADUATE LEADERSHIP & SERVICE (UNIVERSITY OF ILLINOIS CHICAGO)

Medical Research Funding Society, University of Illinois Chicago

President (2008 – 2010)

New Life Volunteer Services, University of Illinois Chicago

Health Education Committee (2008 – 2010); Health Educator (2008 – 2010)

Student Organization Funding Allocation Board, University of Illinois Chicago

Member (2008 – 2010)

Dean's Student Advisory Council, University of Illinois Chicago

Member (2007 – 2009)

F. PROFESSIONAL & LEADERSHIP TRAINING

Drug and Medical Device Development: A Strategic Approach

Massachusetts Institute of Technology (MIT) xPRO Course Certification (2023 – 2024)

Co-Curricular Leadership Certification

UIC Student Leadership Development and Volunteer Service

University of Illinois Chicago (2009 – 2010)

TEACHING & MENTORSHIP

A. RESEARCH FELLOWS

2024 – Present

Jun Oike, MD, PhD — Research Fellow

Ongoing data collection; 7 abstracts; 2 presentations; NIRA Finalist, ORS 2026 Annual Meeting.

Current Position: Assistant Professor, Department of Orthopaedic Surgery, Showa University, Japan

2023 – 2024

Julia Fischer, MD — Research Fellow

Awarded competitive DAAD research scholarship based on work completed at Rush; 2 publications, 5 abstracts

Current Position: Physician, Anesthesiology & Critical Care Medicine, Sana Krankenhaus Gerresheim Hospital

B. GRADUATE STUDENTS (MS)

2022 – 2023

Sofia Gianotti, MS — Graduate Student

MS in Biomedical Engineering (UIC); 2 publications; 4 abstracts.

Current Position: R&D Project Specialist, Medacta International

2021 – 2022

Greta Della Farra, MS — Graduate Student

MS in Biomedical Engineering (UIC); Outstanding Thesis & Dissertation Award; 2 publications, 3 abstracts, 1 first-author podium presentation, 1 patent (co-inventor)

Current Position: R&D Project Engineer, Permedica Orthopaedics

2020 – 2021

Lorenzo Girotto, MS — Graduate Student

MS in Biomedical Engineering (UIC); 1 publication; 1 abstract.

Current Position: Clinical Support Specialist, Johnson & Johnson

C. MEMBERSHIP ON STUDENT THESIS COMMITTEES

2022 – 2023

Sofia Gianotti, MS candidate, University of Illinois Chicago

Role: MS Thesis Committee Member

BIBLIOGRAPHY / PUBLICATIONS

A. PEER-REVIEWED ARTICLES (NUMBERED, REVERSE CHRONOLOGICAL)

1. Oral E., Chisari E., Choe H., Cichos K.H., Coenye T., Coraça-Huber D.C., Drago L., **Hamilton J.L.**, Jensen L.K., Jennings J.A., Saeed K., Moriarty T.F., Muthukrishnan G., Nishitani K., Norton N., Parvizi J., Priddy L.B., Schwarz E.M., Siverino C., Sekar A., Trobos M., Wildemann B. The 2025 International Consensus Meeting on musculoskeletal infection: research priorities and future directions. *J Orthop Res*. 2025. Submitted.
2. Gupta P., Guruprasad V., Paramasivan M., Zhan E., **Hamilton J.L.**, Wimmer M.A., Mathew M.T. A point-of-care electrochemical biosensor for early detection and monitoring of periprosthetic joint infection. *J Biomed Mater Res B Appl Biomater*. 2025. Submitted.

3. Muthukrishnan G., Coraça-Huber D.C., Atkins G.J., Abbaszadeh A., Abedi A.A., Abuhussein E., Bingham J.S., Cichos K.H., Coenye T., Drago L., **Hamilton J.L.**, Hickok N.J., Iannotti F., Jennings J.A., Jensen L.K., Li B., Manzary M., Moriarty T.F., McDonald K., Nishitani K., Norton N., Oral E., Parvizi J., Raafat D.G., Saeed K., Sallai I., Schwarz E.M., Siverino C., Sekar A., Tate J., Trobos M., Tubbs A., Yeasmin R. 2025 International Consensus Meeting on musculoskeletal infection: summary from the biofilm workgroup on biofilm formation, persistence, and host–environment interactions. *J Orthop Res.* 2025. Submitted.
4. Jennings J.A., Abdelbary H., Abdulla F.S., Arafah O., Benzouak T., Choe H., Coenye T., Coraça-Huber D.C., Drago L., Garcia R.G., **Hamilton J.L.**, Hamoudeh R., Hickok N.J., Jensen L.K., Gaitan Lee H., Li B., Manzary M., Markovics A., McDonald K., Moriarty T.F., Muthukrishnan G., Nishitani K., Norton N.J., Oral E., Parvizi J., Del Pozo J., Priddy L.B., Saeed K., Spiegel C., Schwarz E.M., Siverino C., Trobos M., Tubbs A., Yeasmin R. 2025 International Consensus Meeting on musculoskeletal infection: summary from the biofilm workgroup on treatment of biofilm-related infection and preclinical models. *J Orthop Res.* 2025. Submitted.
5. Fischer J., Hall D.J., Moran M.M., Markovics A., Pennekamp P.H., **Hamilton J.L.**, Wimmer M.A. Antibacterial electrophoretically loaded titania nanotubes on titanium alloy implants enhance osseointegration. *Pathogens.* 2025;14(11):1072.
6. **Hamilton J.L.**, Gianotti S., Fischer J., Della Fara G., Impergre A., De Vecchi F., AbuAlia M., Fischer A., Markovics A., Wimmer M.A. Electrophoretic deposition of gentamicin into titania nanotubes prevents evidence of infection in a mouse model of periprosthetic joint infection. *J Orthop Res.* 2024.
7. **Hamilton J.L.**, Baccile R., Best T.J., Desai P., Landay A., Rojas J.C., Wimmer M.A., Balk R.A.; on behalf of the N3C Consortium. Association between dexmedetomidine use and mortality in patients with COVID-19 receiving invasive mechanical ventilation. *J Clin Med.* 2024;13(12).
8. Jennings J.A., Arts J.J., Abuhussein E., Alt V., Ashton N., Baertl S., Bhattacharyya S., Cain J.D., Dintakurthi Y., Ducheyne P., Duffy H., Falconer R., Gautreaux M., Gianotti S., **Hamilton J.L.**, Hylen A., van Hoogstraten S., Libos A., Markovics A., Mdingi V., Montgomery E.C., Morgenstern M., Obremskey W., Priddy L.B., Tate J., Ren Y., Ricciardi B., Tucker L.J., Weeks J., Vanvelk N., Williams D., Xie C., Hickok N., Schwarz E.M., Moriarty F.T. 2023 International Consensus Meeting on musculoskeletal infection: summary from the treatment workgroup and consensus on treatment in preclinical models. *J Orthop Res.* 2024;42(3):500–511.
9. Della Fara G., Markovics A., Radice S., **Hamilton J.L.**, Chiesa R., Sturm A., Angenendt K., Fischer A., Wimmer M.A. Electrophoretic deposition of gentamicin and chitosan into titanium nanotubes to target periprosthetic joint infection. *J Biomed Mater Res B Appl Biomater.* 2023;111(9):1697–1704.
10. **Hamilton J.L.**, Vashi M., Kishen E.B., Fogg L.F., Wimmer M.A., Balk R.A. The association of an alpha-2 adrenergic receptor agonist and mortality in patients with COVID-19. *Front Med.* 2021;8:797647.
11. **Hamilton J.L.**, Mohamed M.F., Witt B.R., Wimmer M.A., Shafikhani S.H. Therapeutic assessment of N-formyl-methionyl-leucyl-phenylalanine (fMLP) in reducing periprosthetic joint infection. *Eur Cell Mater.* 2021;42:122–138.
12. Shekhawat V.K., **Hamilton J.L.**, Pacione C.A., Schmid T.M., Wimmer M.A. A moving contact of articulation enhances the biosynthetic and functional responses of articular cartilage. *Biotribology.* 2021;26:100180.
13. Zhang Z., Yi D., Xie R., **Hamilton J.L.**, Kang Q.L., Chen D. Postaxial limb hypoplasia (PALH): the classification, clinical features, and related developmental biology. *Ann N Y Acad Sci.* 2017;1409(1):67–78.

14. Nagao M., **Hamilton J.L.**, Kc R., Berendsen A.D., Duan X., Cheong C.W., Li X., Im H.J., Olsen B.R. Vascular endothelial growth factor in cartilage development and osteoarthritis. *Sci Rep.* 2017;7:13027.
15. Zhou Y., Wang T., **Hamilton J.L.**, Chen D. Wnt/ β -catenin signaling in osteoarthritis and in other forms of arthritis. *Curr Rheumatol Rep.* 2017;19(9):53.
16. Chen D., Shen J., Zhao W., Wang T., Han L., **Hamilton J.L.**, Im H.J. Osteoarthritis: toward a comprehensive understanding of pathological mechanism. *Bone Res.* 2017;5:16044.
17. Kc R., Li X., Kroin J.S., Liu Z., Chen D., Xiao G., Levine B.R., Li J., **Hamilton J.L.**, van Wijnen A.J., Piel M., Shelly D.A., Brass D., Kolb E., Im H.J. PKC δ null mutations in a mouse model of osteoarthritis alter osteoarthritic pain independently of joint pathology by augmenting NGF/TrkA-induced axonal outgrowth. *Ann Rheum Dis.* 2016;75(12):2133–2141.
18. **Hamilton J.L.**, Nagao M., Levine B.R., Chen D., Olsen B.R., Im H.J. Targeting VEGF and its receptors for the treatment of osteoarthritis and associated pain. *J Bone Miner Res.* 2016;31(5):911–924.
19. Kim J.S., Ali M.H., Wydra F., Li X., **Hamilton J.L.**, An H.S., Cs-Szabo G., Andrews S., Moric M., Xiao G., Wang J.H., Chen D., Cavanaugh J.M., Im H.J.
Characterization of degenerative human facet joints and facet joint capsular tissues. *Osteoarthritis Cartilage.* 2015;23(12):2242–2251.
20. Kim J.S., Ahmadiania K., Li X., **Hamilton J.L.**, Andrews S., Haralampus C.A., Xiao G., Sohn H.M., You J.W., Seo Y.S., Stein G.S., Van Wijnen A.J., Kim S.G., Im H.J. Development of an experimental animal model for lower back pain by percutaneous injury-induced lumbar facet joint osteoarthritis. *J Cell Physiol.* 2015;230(11):2837–2847.
21. Gu S.X., Li X., **Hamilton J.L.**, Chee A., Kc R., Chen D., An H.S., Kim J.S., Oh C.D., Ma Y.Z., van Wijnen A.J., Im H.J. MicroRNA-146a reduces IL-1-dependent inflammatory responses in the intervertebral disc. *Gene.* 2015;555(2):80–87.
22. Ross R.D., **Hamilton J.L.**, Wilson B.M., Sumner D.R., Viridi A.S. Pharmacologic augmentation of implant fixation in osteopenic bone. *Curr Osteoporos Rep.* 2014;12(1):55–64.

B. BOOK CHAPTERS

23. **Hamilton J.L.**, Li J., Levine B.R., Chen D. Cartilage repair techniques. In: *Encyclopedia of Bone Biology*. Elsevier; 2020.
24. **Hamilton J.L.**, Levine B.R. Knee arthritis: pathology and progression. In: *The Adult Knee*. 2nd ed. Wolters Kluwer; 2020.

C. THESES / DISSERTATIONS

25. **Hamilton J.L.** PhD dissertation: the role and inhibition of VEGF in osteoarthritis and associated pain. ProQuest; 2018.
26. **Hamilton J.L.** Master's thesis: tracking bone marrow mesenchymal stem cell mobilization and homing in response to AMD3100 and IGF-1 in a novel ectopic bone formation model. ProQuest; 2014.

SCIENTIFIC PRESENTATIONS & ABSTRACTS

A. INVITED SEMINARS & LECTURES

1. A future without surgeries for implant-associated infections? Evaluation of anti-biofilm antibody therapy in a mouse model of periprosthetic joint infection. Musculoskeletal Infection Research Interest Group Seminar. Rush University Medical Center. April 4, 2025. Chicago, Illinois.

2. A leap into translational periprosthetic joint infection research at Rush. T32 Joint Seminar Series. Rush University Medical Center. June 5, 2023. Chicago, Illinois.
3. Association between dexmedetomidine use and mortality in patients with COVID-19 receiving invasive mechanical ventilation: a US National COVID Cohort Collaborative (N3C) study. Institute for Translational Medicine Executive Advisory Board Seminar. University of Chicago. May 26, 2023. Chicago, Illinois.
4. Therapeutic assessment of an immunomodulator-based approach to control periprosthetic joint infection. Joint Seminar Series. Rush University Medical Center. February 21, 2021. Chicago, Illinois.
5. Interprofessional journal club and seminars: opportunities for research education. Interprofessional Education Series. Rush University Medical Center. September 23, 2015. Chicago, Illinois.
6. Anti-VEGF therapy in osteoarthritis and associated pain. Rheumatology Research Conference. Rush University Medical Center. April 16, 2015. Chicago, Illinois.

B. PODIUM PRESENTATIONS (REGIONAL, NATIONAL, INTERNATIONAL MEETINGS)

1. Oike J., Caplan B.E., Jimenez-Urbe A.P., Cao Y., Sansom S.E., Hall D.J., Moran M.M., Hall V., McOsker C., Wimmer M.A., Markovics A., **Hamilton J.L.** CMTX-101 treatment in a mouse model of periprosthetic joint infection. ORS Annual Meeting. March 27–31, 2026. Charlotte, North Carolina. *New Investigator Recognition Award (NIRA) Finalist.*
2. Oike J., Markovics A., Fischer J., Godoy M., Pourzal R., Wimmer M.A., **Hamilton J.L.** Do Implant Material Properties Influence Bacterial Burden in a Mouse Model of Periprosthetic Joint Infection? 2025 Frontiers in Translational and Clinical Research Symposium, March 26, Chicago, Illinois
3. **Hamilton J.L.**, Schmid T.M., Rhodes J., Markovics A., Goodman S.D., Bakaletz S.D., Wimmer M.A. Titanium coated with anti-DNABII monoclonal antibody disrupts bacterial biofilm. AO Research Institute Davos Orthopaedic Infection Conference. June 24–26, 2024. Davos, Switzerland.
4. **Hamilton J.L.**, Gianotti S., Impergre A., AbuAlia M., Markovics A., Jacobs J.J., Della Valle C.J., Wimmer M.A. Prevention of periprosthetic joint infection through electrophoretic deposition of gentamicin into titanium nanotubes: an in vivo investigation. International Hip Society Meeting. May 15–18, 2024. Athens, Greece.
5. **Hamilton J.L.**, Gianotti S., Impergre A., AbuAlia M., Markovics A., Wimmer M.A. Prevention of periprosthetic joint infection through electrophoretic deposition of gentamicin into titanium nanotubes: an in vivo investigation. ORS Annual Meeting. February 2–6, 2024. Long Beach, California. *New Investigator Recognition Award (NIRA) Finalist.*
6. **Hamilton J.L.**, Baccile R., Best T.J., Desai P.J., Landay A., Rojas J.C., Balk R.A., Wimmer M.A. Association between dexmedetomidine use and mortality in patients with COVID-19 receiving invasive mechanical ventilation: a US National COVID Cohort Collaborative (N3C) study. Institute for Translational Medicine Annual Meeting. May 26, 2023. Chicago, Illinois.
7. Stacy G.M., Best T.J., **Hamilton J.L.**, Adegunsoye A., Baccile R., Ross L., Jacobs J.J., Solway J. Clinician scientist and data scientist partnerships catalyze COVID-19 research at the Institute for Translational Medicine. Annual Meeting for National Institutes of Health Clinical and Translational Science Awards (CTSA). November 1–2, 2022. Washington, DC.
8. **Hamilton J.L.**, Markovics A., Della Fara G., Impergre A., Wimmer M.A. Use of electrophoretic deposition in the hospital setting to coat medical implants with therapeutic agents to prevent or treat biomaterial-associated infection. ISTA Annual Congress. August 31–September 3, 2022. Maui, Hawaii.
9. Della Fara G., Markovics A., **Hamilton J.L.**, Wimmer M.A. Electrophoretic deposition of gentamicin and chitosan into titanium nanotubes to prevent periprosthetic joint infection. Annual Congress of the International Society for Technology in Arthroplasty. August 31–September 3, 2022. Maui, Hawaii.

10. **Hamilton J.L.**, Mohamed M.F., Witt B., Giroto L., Wimmer M.A., Shafikhani S.H. Therapeutic assessment of an immunomodulator-based approach to control periprosthetic joint infection. ORS Annual Meeting. February 12–16, 2021.
11. **Hamilton J.L.**, Li X., Liu Z., Levine B.R., Im Sampen H.J. Anti-VEGF therapy for inhibition of osteoarthritis progression and pain. ORS Annual Meeting. March 5–8, 2016. Orlando, Florida.
12. Kc R., Kroin J., **Hamilton J.L.**, Li X., Liu Z., Im H.J. NGF selective inhibition therapy on facet joint pain. ORS Annual Meeting. March 5–8, 2016. Orlando, Florida.
13. Jorgensen C., Kc R., Muhammad T., Li X., Liu Z., **Hamilton J.L.**, Buvanendran A., Im H.J. Cartilage-specific conditional deletion of PKC Δ protects joint degeneration without relieving joint pain in a mouse model of osteoarthritis. ORS Annual Meeting. March 5-8, 2016. Orlando, Florida.

C. CONFERENCE ABSTRACTS & POSTER PRESENTATIONS

1. Oike J., Alexis P., Hall D., Moran M., Sato T., Kamijo S., Hall V., McOske C., Markovics A., Wimmer M.A., **Hamilton J.L.** Biofilm-targeted monoclonal antibody therapy in a mouse model of periprosthetic joint infection. Japanese Orthopaedic Association 99th Annual Meeting. May 21–24, 2026. Kobe, Japan.
2. Oike J., Pourzal R., Sato T., Kamijo S., Markovics A., Wimmer M.A., **Hamilton J.L.** Do implant material properties influence bacterial burden in a mouse model of periprosthetic joint infection? Japanese Orthopaedic Association 99th Annual Meeting. May 21–24, 2026. Kobe, Japan.
3. Oike J., Caplan B.E., Jimenez-Urbe A.P., Cao Y., Sansom S.E., Hall D.J., Moran M.M., Hall V., McOske C., Wimmer M.A., Markovics A., **Hamilton J.L.** CMTX-101 treatment in a mouse model of periprosthetic joint infection. ORS Annual Meeting. March 27–31, 2026. Charlotte, North Carolina. NIRA Finalist — Podium & Poster, Paper #56.
4. Gupta P., Guruprasad V., Paramasivan M., Zhan E., **Hamilton J.L.**, Wimmer M.A., Mathew M.T. A point-of-care electrochemical biosensor for early detection and monitoring of periprosthetic joint infection. ORS Annual Meeting. March 27–31, 2026. Charlotte, North Carolina.
5. Oike J., Markovics A., Fischer J., Godoy M., Pourzal R., Wimmer M.A., **Hamilton J.L.** Do implant material properties influence bacterial burden in a mouse model of periprosthetic joint infection? ORS Annual Meeting. February 7–11, 2025. Phoenix, Arizona.
6. Oike J., Markovics A., Fischer J., Godoy M., Pourzal R., Wimmer M.A., **Hamilton J.L.** Do implant material properties influence bacterial burden in a mouse model of periprosthetic joint infection? Rush Medical College Trainee Research Day. March 27, 2025. Chicago, Illinois.
7. Fischer J., Hall D., Moran M.M., Pennekamp P.H., Markovics A., Wimmer M.A., **Hamilton J.L.** Antibacterial electrophoretically-loaded titania nanotubes on titanium implants do not prevent osseointegration. ORS Annual Meeting. February 7–11, 2025. Phoenix, Arizona.
8. **Hamilton J.L.**, Gianotti S., Fischer J., Della Fara G., Impergre A., De Vecchi F., AbuAlia M., Fischer A., Markovics A., Wimmer M.A. Electrophoretic deposition of gentamicin into titanium nanotubes prevents prosthetic joint infection. ARI Orthopaedics 2024. June 24–26, 2024. Davos, Switzerland.
9. **Hamilton J.L.**, Gianotti S., Impergre A., AbuAlia M., Markovics A., Jacobs J.J., Della Valle C.J., Wimmer M.A. Prevention of periprosthetic joint infection through electrophoretic deposition of gentamicin into titanium nanotubes: an in vivo investigation. International Hip Society Meeting. May 15–18, 2024. Athens, Greece.
10. **Hamilton J.L.**, Gianotti S., Impergre A., AbuAlia M., Markovics A., Wimmer M.A. Prevention of periprosthetic joint infection through electrophoretic deposition of gentamicin into titanium nanotubes: an in vivo investigation. ORS Annual Meeting. February 2–6, 2024. Long Beach, California.
11. Gianotti S., Fischer J., Schmid T., **Hamilton J.L.**, Wimmer M.A., Markovics A.M. Antibody-based quantification of gentamicin release from orthopedic implants. ORS Annual Meeting. February 2–6, 2024. Long Beach, California.

12. Gianotti S., **Hamilton J.L.**, Wimmer M.A., Markovics A. Competitive enzyme-linked immunosorbent assay for gentamicin detection. University of Illinois Chicago Research Day. March 10, 2023. Chicago, Illinois.
13. Markovics A., **Hamilton J.L.**, Della Fara G., AbuAlia M., Impergre A., Wimmer M.A. Electrophoretic deposition of gentamicin into titanium nanotubes to prevent and eradicate periprosthetic infection. ORS Annual Meeting. February 10–14, 2023. Dallas, Texas.
14. Stacy G.M., Best T.J., **Hamilton J.L.**, Adegunsoye A., Baccile R., Ross L., Jacobs J.J., Solway J. Clinician scientist and data scientist partnerships catalyze COVID-19 research at the Institute for Translational Medicine. NIH Clinical and Translational Science Awards (CTSA) Annual Meeting. November 1–2, 2022. Washington, DC.
15. **Hamilton J.L.**, Mohamed M.F., Witt B., Giroto L., Wimmer M.A., Shafikhani S.H. Therapeutic assessment of an immunomodulator-based approach to control periprosthetic joint infection. ORS Annual Meeting. February 12–16, 2021
16. **Hamilton J.L.**, Li X., Liu Z., Levine B.R., Im Sampen H.J. Anti-VEGF therapy for inhibition of osteoarthritis progression and pain. ORS Annual Meeting. March 5-8, 2016. Orlando, Florida.
17. R., Kroin J., **Hamilton J.L.**, Li X., Liu Z., Im H.J. NGF selective inhibition therapy on facet joint pain. ORS Annual Meeting. March 5-8, 2016. Orlando, Florida.
18. Jorgensen C., Kc R., Muhammad T., Li X., Liu Z., **Hamilton J.L.**, Buvanendran A., Im H.J. Cartilage-specific conditional deletion of PKCdelta protects joint degeneration without relieving joint pain in a mouse model of osteoarthritis. ORS Annual Meeting. March 5-8, 2016. Orlando, Florida
19. **Hamilton J.L.**, Li X., Kroin J., Liu Z., Levine B.R., Im H.J. Role and therapeutic inhibition of VEGF in osteoarthritis progression and pain. Rush Research Forum. February 27, 2016. Chicago, Illinois.

MEDIA INTERVIEWS / EXPERT OPINION

1. *Pediatrics Nationwide Magazine* (Fall/Winter 2024)

Interview with quotes for the cover story of the 2024 Fall/Winter print issue of *Pediatrics Nationwide Magazine* (September 23, 2024) regarding collaboration with Lauren Bakaletz at Nationwide Children's Hospital and research with anti-biofilm antibodies. Article also published online:

<https://pediatricsnationwide.org/2024/09/23/biofilms-the-good-the-bad-the-groundbreaking/>

2. *Nature Research Media* (2024)

Interview with quotes for *Nature Research Media* for the following article to be published in 2024: "Biofilm Battles-Storming and Repurposing the Bacterial Fortress". Published online:

<https://www.nature.com/articles/d42473-024-00192-2>