**Jackie A. Fretz, Ph.D.** ***CIRRICULUM VITAE***

**Department of Orthopaedics and Rehabilitation**

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**Career/Academic Appointments:**

July 2019- Associate in Research III, Manager of the Histology and Histomorphometry Laboratory,

Present Department of Orthopaedics and Rehabilitation
Yale School of Medicine, New Haven, CT

July 2017- Secondary Appointment, Assistant Professor, Department of Pathology

July 2019 Yale School of Medicine, New Haven, CT

July 2014- Assistant Professor, Department of Orthopaedics and Rehabilitation

July 2019 Yale School of Medicine, New Haven, CT

July 2011- Associate Research Scientist,

June 2014 Yale School of Medicine, New Haven, CT

 **Supervisor:** Mark C. Horowitz, Department of Orthopaedics and Rehabilitation

**Education and Training:**

January 2008- Postdoctoral Associate

June 2011 Yale School of Medicine, New Haven, CT

 **Supervisor:** Dr. Mark C. Horowitz, Department of Orthopaedics and Rehabilitation

 **Project Focus:** *Investigate the role of EBF1 in regulating mesenchymal stem cell fate choice between adipocytes and osteoblasts and the differences between marrow fat and other adipocytes*

 **Collaborations:** Clifford J. Rosen – Maine Medical Center; Valerie Horsley – Department of Molecular, Cellular, and Developmental Biology at Yale University; Ormond MacDougald – University of Michigan Medical School; Clifford J. Rosen – Maine Medical Center; Matthew Rodheffer – Department of Comparative Medicine, Yale School of Medicine; Peter Arner – Unit for Endocrinology and Diabetes, Karolinska Institutet; Gilbert Moeckel – Department of Internal Medicine: Nephrology and Department of Pathology, Yale School of Medicine; Lloyd G. Cantley – Department of Internal Medicine: Nephrology, Yale School of Medicine; Shuta Ishibe – Department of Internal Medicine: Nephrology, Yale School of Medicine

Sept 2007- Postdoctoral Researcher,

December 2007 University of Wisconsin-Madison, Madison, WI

 **Supervisor:** Dr. J. Wesley Pike, Department of Biochemistry

 **Project Focus:** *Genomic control by the Vitamin D Receptor in osteoblast differentiation*

Fall 2002- Ph.D. Biochemistry

Summer 2007 University of Wisconsin-Madison, Madison, WI

 **Supervisor:** Dr. J. Wesley Pike, Department of Biochemistry

**Dissertation Title:** *Exploring the transcriptional activities of NFATc1: The master regulator of RANKL-induced osteoclast formation*

 **Collaborations:** Charles O’Brien– University of Arkansas for Medical Sciences

Spring 2000- Undergraduate Research

Spring 2002 University of New Hampshire, Durham, NH

 **Supervisor:** Dr. Gale B. Carey, Department of Nutrition and Animal Science

**Project Focus:** *Identification of an Adipocyte Plasma Membrane Protein with Ecto-Phosphodiesterase Activity*

Fall 1999- Laboratory Assistant

Spring 2002 UNH Research Greenhouses, UNH, Durham, NH,

 **Supervisor:** Dr. Paul Friesen, Department of Plant Science

**Project Focus:** *Optimization of plant growth, root mass, chlorophyll content, and economic cost benefits analysis to maximize yield at the lowest price for several common greenhouse plants*

Fall 1998- B.S. Biochemistry *cum laude*

Spring 2002 University of New Hampshire, Durham, NH, Department of Biochemistry

**Teaching Experience:**

Fall 2017- Mentor, Quinnipiac University

Spring 2019 **Responsibilities:** Masters students from Quinnipiac University completed their research requirement for their MS degree in my laboratory. Graduate students formulated a research topic, investigated it for 1.5 years (part time between completing other program requirements), wrote a thesis, and presented their progress and results to their committee one three separate occasions.

Summer 2015, Mentor, O’Brien Center KUH (kidney, urology, and hematology) Summer Research Program

2016, 2017 **Responsibilities:** Undergraduate students from across the country come to Yale for the summer to participate in kidney-focused research programs. They are mentored in our laboratories and present their results at the end of the summer at a national meeting. Structured lectures are also given by the participating faculty on various topics of kidney development, biology, and pathology.

Spring 2017- Postdoctoral Committee Member, Xiuqi Li Department of Pathology PhD candidate

Summer 2020 **Responsibilities:** Meeting annually with the student to evaluate her progress and provide guidance regarding how to proceed for the upcoming year

2016 Postdoctoral Preliminary Qualifying Literature Committee Member, Xiuqi Li Department of Pathology PhD candidate

 **Responsibilities:** Students in the Pathology program at Yale have to research a topic different from their proposed research and then draft and present a theoretical research project on that alternate topic to the committee. During separate sessions across 6 weeks I instructed Xiuqi on the different identities of marrow stromal cells and what their functions are in maintenance of the hematopoietic niche and support of the marrow vasculature and the cell fates within that tissue.

Fall 2004- Coordinator, Biochemistry Peer Mentor Tutoring Program, UW-Madison, Madison, WI

Spring 2006 **Responsibilities:** I instructed a group of four undergraduates to be peer advisors to provide additional help to students taking introductory biochemistry. I imparted the mentors with tools, tricks, songs, visual aids, participatory techniques to help convey the biochemistry topics with their own small groups. This program was run jointly with the Chemistry and Physics Peer Mentoring programs. Weekly, I worked with the staff coordinators of those other programs to educate the mentors on best practice techniques for teaching and make the mentors aware of various topics related to the science of learning. I also held my own joint review sessions with all the small group attendees before each test.

Spring 2003 Teaching Assistant, UW-Madison

 Undergraduate Introductory Biochemistry (521)

 **Responsibilities:** One other TA and I were responsible for attending all lectures, grading weekly homework assignments in a coordinated fashion, holding office hours, and grading tests.

2001-2002 Peer Mentor, Hood House, UNH, Durham, NH

 **Responsibilities:** I worked one on one with students who came to Hood House seeking additional one-on-one tutoring in various science courses. We, the tutors, were instructed in best practice techniques and much of the science of learning in weekly group sessions that were provided to us by the Hood House Staff.

2004**-**2019 Laboratory Mentor: through my career I have personally trained and guided the research projects of 11 undergraduate students, two Ph.D. candidates, and three Masters candidates

**Professional Honors and Recognition:**

***International/National/Regional:***

2022 ASBMR Mid-Career Travel grant, ASBMR Annual Meeting, Austin, TX

2022 Oral Abstract, ASBMR Annual Meeting, Austin, TX

2021 Oral Abstract, 63rd ASH Meeting and Exposition, Atlanta, GA

2021 Plenary Poster, ASBMR 41st Annual Meeting, San Diego, CA

2019 Oral Abstract, 8th Congress of the International BioIron Society, Heidelberg, Germany

2018 Oral Abstract, ASBMR 38th Annual Meeting, Montreal, QC

2017 Travel Award, NIH Workshop- FGF-23: An Interdisciplinary Dialog for Chronic Kidney Diseases, Bethesda, MD

 2015 Plenary Poster, ASBMR 35th Annual Meeting, Seattle, WA

2011 ASBMR President’s Poster Award, Annual Meeting San Diego, CA

2010 John Haddad Young Investigator Award, Advances in Mineral Metabolism and American Society for Bone and Mineral Research

2009 Plenary Poster, New Frontiers in Skeletal Research: Bone, Fat and Brain Connections, Bethesda, MD

2009 Plenary Poster, ASBMR 31st Annual Meeting, Denver, CO

2009 ASBMR Young Investigator Award, Frontiers in Skeletal Research: Bone, Fat and Brain Connections, Bethesda, MD

***University:***

2006 Graduate Excellence in Teaching Award, Biochemistry, UW-Madison, Madison, WI

2002 Movers and Shakers Award, UNH, Durham, NH

2001 UNH Summer Undergraduate Research Fellowship

**Funding History:**

***Agency:*** Nonmalignant Hematology Pilot Grant YCCEH Pilot Grant (Fretz)

***Title:*** A Novel Mouse Model of the Anemia of Renal Failure

***Role:*** PI

***Project Period:*** 11/1/2016 – 10/31/2017

***Agency:*** Yale O’Brien Center Pilot Grant O’Brien Center Pilot (Fretz)

***Title:*** Early B Cell Factor 1 (EBF1) and Transcriptional Regulation of Glomerulosclerosis

***Role:*** PI

***Project Period:*** 8/1/2016 – 7/31/2018

***Agency:*** NIH/NIDDK K99/R00 DK093711-01A1
 Pathway to Independence Award **(**Parent K99/R00)

***Title:*** Regulation of Podocyte Differentiation by the Transcription Factor EBF1

***Role:*** PI

***Project Period:*** 7/15/2012 - 6/30/2017

***Agency:*** Yale Diabetes Research Center (DRC) DRC Pilot Grant (Fretz)

***Title:*** Depot Specific Adipose Transplantation and Lipodystrophy in the Ebf1-Deficient Mouse

***Role:*** PI

***Project Period:*** 2/1/2012 – 1/31/2014

***Agency:*** American Heart Association of New England Undergraduate Research Fellowship

***Title:*** Identification of an Adipocyte Plasma Membrane Protein with Ecto-Phosphodiesterase Activity

***Role:*** PI

***Project Period:*** 6/1/2001 – 8/31/2001

***Agency:*** University of New Hampshire Undergraduate Research Fellowship

***Title:*** Identification of an Adipocyte Plasma Membrane Protein with Ecto-Phosphodiesterase Activity

***Role:*** PI

***Project Period:*** 6/1/2001 – 8/31/2001

**Pending Applications:**

***None***

**Professional Service:**

***Peer Review Groups/Grant Study Sections:***

2019-2020 Member, Bone Marrow Adipocyte Society (BMAS) Methods Working Group

2018 Abstract Reviewer, Osteocytes Section, Annual Meeting of theAmerican Society for Bone and Mineral Research (ASBMR)

2017 Abstract Reviewer, Paracrine Regulators Section, Annual Meeting of theAmerican Society for Bone and Mineral Research (ASBMR)

***Professional Affiliations:***

2011-2019 Member, American Society of Nephrology (ASN)

2005-2021 Member, American Society for Bone and Mineral Research (ASBMR)

***University Committees:***

2017 Resident Research Track Committee, Department of Orthopaedics and Rehabilitation, Yale School of Medicine

2005-2006 Chair, Biochemistry Student Faculty Liaison Committee, UW-Madison

2003-2007 Member, Biochemistry Student Faculty Liaison Committee, UW-Madison

**Public Service:**

 2008-2016 Judge, New Haven School District Science Fairs, New Haven, CT

**Invited Speaking Engagements, Presentations, Symposia, & Workshops:**

***Invited Talks:***

2019: University of Delaware, Department of Medical and Molecular Sciences, “Regulation of mesenchymal cell fate by Early B cell Factor 1 (EBF1)”

2018: YCCEH Seminar Series, Yale University, “A Novel Mouse Model of the Anemia of Renal Failure “

2018: Research Seminar Series, Department of Endocrinology, Yale University, “FGF-23 regulation during early Chronic Kidney Disease”

2017: Endocrinology Annual Retreat, Yale University, “Elevations in FGF-23 precede disruptions in either phosphate or iron homeostasis in the *Ebf1*-CKO mouse model of renal insufficiency”

2014: YCCMD, Yale University, “Ebf1: A Tale of 2 Tissues”

2010: Advances in Mineral Metabolism, Snowmass, CO, “Bone Marrow Adipocyte Differentiation and Linage Allocation”

***Peer Reviewed Oral Presentations:***

2022: Annual Meeting, American Society of Bone and Mineral Research, San Diego, CA, “Bone Marrow Sinusoidal Endothelial Cells Induce *Fgf23* Expression During Iron Deficiency Anemia”

2021: 63rd American Society of Hematology Meeting and Exposition, Atlanta, GA, “The Tmprss6-/- Mouse Model of Iron Refractory Iron Deficiency Anemia (IRIDA) Exhibits Disrupted Phosphate Homeostasis, Elevated Circulating FGF23 Levels, and Increased Fgf23 Expression in Bone Marrow”

2019: 8th Congress of the International BioIron Society, Heidelberg, Germany, “Tmprss6-/- mice show plasma FGF23 elevation that is influenced by Fgf23 gene dosage”

2018: Annual Meeting, American Society of Bone and Mineral Research, Montreal, QC, “Marrow adiposity and vascular morphology are regulated by EBF1 in adult bone”

2017: 7th Congress of the International BioIron Society, Los Angeles, CA, “Genetic loss of Tmprss6, the gene mutated in iron-refractory iron deficiency anemia, disrupts phosphate homeostasis in mice”

2017: 7th Congress of the International BioIron Society, Los Angeles, CA, “Elevations in FGF-23 precede disruptions in either phosphate or iron homeostasis in the Ebf1-KO model of renal insufficiency

2017: 59th American Society of Hematology Meeting and Exposition, Atlanta, GA. “The Tmprss6-/- Mouse Model of Iron Refractory Iron Deficiency Anemia (IRIDA) Exhibits Disrupted Phosphate Homeostasis, Elevated Circulating FGF23 Levels, and Increased Fgf23 Expression in Bone Marrow”

2017: Advances in Mineral Metabolism, Snowmass, CO, “Elevations in FGF-23 precede disruptions in either phosphate or iron homeostasis in the EBF1-KO model of renal insufficiency”

2015: Workshop on Kidney and Bone Disorders, American Society of Bone and Mineral Research, Seattle, WA, “Specific deletion of EBF1 within the kidney mesangium results in renal osteodystrophy, growth reduction, and premature death”

2010: Annual Winter Meeting, Bone Biology and Clinical Medicine, Sugarloaf, ME, "Early B Cell Factor 1 (EBF1), Osteoblasts, Adipocytes and Anorexia”

**Scientific Conference Abstracts / Posters / Presentations:**

2023: Annual Meeting, American Society of Bone and Mineral Research, Vancouver BC, Canada, **“**Bone Marrow Sinusoidal Endothelial Cells Show Fgf23 Upregulation in Murine Beta-Thalassemia and in Response to Direct Administration of EPO”

2023: 9th Congress of the International BioIron Society, Darwin, Australia, “Bone Marrow Sinusoidal Endothelial Cells Show *Fgf23* Upregulation in Murine b-Thalassemia and in Response to Direct Administration of EPO”

2022: European Iron Club (EIC) Meeting, Oxford, UK, “Bone Marrow Sinusoidal Endothelial Cells Are a Site of *Fgf23* Upregulation in Iron Deficiency Anemia”

2022:Annual Meeting, American Society of Bone and Mineral Research, Austin TX, **“**Bone Marrow Sinusoidal Endothelial Cells Induce *Fgf23* Expression During Iron Deficiency Anemia”

2022: Annual Meeting, American Society of Bone and Mineral Research, Orlando, FL, “The transcription factor EBF1 is required for GR-mediated adipogenesis from bone marrow progenitors”

2021: 63rd American Society of Hematology Meeting and Exposition, Atlanta, GA, “Bone Marrow Sinusoidal Endothelial Cells Are a Site of *Fgf23* Upregulation in Iron Deficiency Anemia”

2021: Annual Meeting, American Society of Bone and Mineral Research, San Diego, CA, “Mesenchymal lineage expression of EBF1 facilitates fracture repair”

2021: Annual Meeting, American Society of Bone and Mineral Research, San Diego, CA, “Comparison of bisphosphonate versus RANKL inhibition on bone turnover during lactation in mice”

2019: 8th Congress of the International BioIron Society, Heidelberg, Germany, “Tmprss6-/- mice show plasma FGF23 elevation that is influenced by Fgf23 gene dosage”

2019: Kidney Week, American Society of Nephrology, Washington, DC. “Podocyte-Specific Deletion of Early B Cell Factor 1 Minimizes Sclerotic Damage After Glomerular Injury”

2019: Annual Meeting, American Society of Bone and Mineral Research, Orlando, FL, “The transcription factor EBF1 is required for GR-mediated adipogenesis from bone marrow progenitors”

2019: Annual Meeting, American Society of Bone and Mineral Research, Orlando, FL, “Osteocytic peri-lacunar remodeling and angiogenesis in lactating mice treated with osteoprotegerin (OPG)”

2018: Annual Meeting, American Society of Bone and Mineral Research, Montreal, QC, “Marrow adiposity and vascular morphology are regulated by EBF1 in adult bone”

2018: 12th International Podocyte Conference, Montreal, QC, “Podocyte-specific deletion of Early B Cell Factor 1 minimizes sclerotic damage following glomerular injury”

2018: Keystone Symposia: Gene Control in Development and Disease. Whistler, BC, “Genetic regulation by Early B cell Factor 1 (EBF1) in mesangial populations is an essential mediator of both nephrogenesis and response to glomerular injury**”**

2017: Annual Biomedical Research Conference for Minority Students (ABRCMS), Phoenix, AZ, “IL1β Stimulates FGF23 Production from Osteocytes during CKD”

2017: Annual Meeting, American Society of Bone and Mineral Research, Denver, CO, “Inflammation, not Phosphate or Anemia, Stimulates the Initial Rise in FGF-23 at the Onset of Chronic Kidney Disease”

2017: Kidney Week, American Society of Nephrology, “Inflammation, not Phosphate or Anemia, Stimulates the Initial Rise in FGF-23 at the Onset of Chronic Kidney Disease”

2017: 59th American Society of Hematology Meeting and Exposition, Atlanta, GA, “The Tmprss6 -/- Mouse Model of Iron Refractory Iron Deficiency Anemia (IRIDA) Exhibits Disrupted Phosphate Homeostasis, Elevated Circulating FGF23 Levels, and Increased Fgf23 Expression in Bone Marrow”

2017: 7th Congress of the International BioIron Society, Los Angeles, CA, “Genetic loss of Tmprss6, the gene mutated in iron-refractory iron deficiency anemia, disrupts phosphate homeostasis in mice”

2017: 7th Congress of the International BioIron Society, Los Angeles, CA, “Elevations in FGF-23 precede disruptions in either phosphate or iron homeostasis in the Ebf1-KO model of renal insufficiency”

2017: NIH Workshop- FGF-23: An Interdisciplinary Dialog for Chronic Kidney Diseases, Bethesda, MD, “Mice with Genetic Loss of Tmprss6, a Negative Regulator of Hepcidin Expression, Exhibit FGF23 Elevation and Disrupted Phosphate Homeostasis”

2017: NIH Workshop- FGF-23: An Interdisciplinary Dialog for Chronic Kidney Diseases, Bethesda, MD, “Elevations in FGF-23 Precede Disruptions in Either Phosphate or Iron Homeostasis in the Ebf1-KO Model of Renal Insufficiency”

2016: Kidney Week, American Society of Nephrology, “Elevations in FGF23 Precede Abrogation of Either Phosphate or Iron Homeostasis in a Mouse Model of Renal Insufficiency”

2016: Annual Meeting, American Society of Bone and Mineral Research, Atlanta, GA, “Elevations in FGF23 precede abrogation of either phosphate or iron homeostasis in the Ebf1-KO model of renal insufficiency”

2015: Annual Meeting, American Society of Bone and Mineral Research, Seattle, WA, “Both phosphate replacement and high fat diet are necessary to improve survival and bone quality in Ebf1-deficient mice”

2015: Annual Meeting, American Society of Bone and Mineral Research, Seattle, WA, “Foxd1 lineage tracing during skeletal development identifies a unique subset of osteogenic precursors”

2015: Annual Meeting, American Society of Bone and Mineral Research, Seattle, WA, “Specific deletion of Ebf1 within the kidney mesangium results in renal osteodystrophy, growth reduction, and premature death”

2014: Orthopedic Research Society 2014 Annual Meeting, New Orleans, LA, “Bone Marrow Adipogenesis”

2014: 10th International Podocyte Conference, Freiburg, Germany, “Deletion of Ebf1 abrogates Cox-2 expression within podocytes”

2014: Annual Meeting, American Society of Bone and Mineral Research, “Maintenance of proximal tubule phosphate homeostasis requires the transcription factor EBF1”

2013: Kidney Week, American Society of Nephrology, Atlanta, GA, “Whole Exome Profiling Identifies Biological Processes Modified by Ebf1 During Podocyte Maturation"

2013: Annual Meeting, American Society of Bone and Mineral Research, Baltimore, MD, “**Bone Marrow Adipogenesis”**

2012: Annual Meeting, American Society of Bone and Mineral Research, Minneapolis, MN, “Defective Glomerular Maturation in the Ebf1-Deficient Mouse Underlies the Disconnect Between High Circulation Osteocalcin and Decreased Osteoblast Maturation in these Animals”

2011: ASN Kidney Week, Philadelphia, PA, “Early B Cell Factor 1 (Ebf1): A Novel Regulator of Renal Cortex Maturation and Glomerular Function”

2011: Annual Meeting, American Society of Bone and Mineral Research, San Diego, CA, “Ebf1 and Essential Regulator of Mesenchymal Lineage Allocation and Osteoblast Differentiation”

2009: Frontiers in Skeletal Research: Bone, Fat and Brain Connections, American Society of Bone and Mineral Research, Bethesda, MD, “Characterization of the lipodystrophic phenotype that accompanies high bone mass in the Ebf1 deficient mouse”

2009: Annual Meeting, American Society of Bone and Mineral Research, Denver, CO, “Mature Adipocytes and Adipose-Derived Stromal Vascular Cells (SVCs) Suppress Formation of Alkaline Phosphatase-Positive Colonies by Inducing Proliferation of Stroma and Enhancing Differentiation of Macrophages”

2009: Annual Meeting, American Society of Bone and Mineral Research, Denver, CO, “EBF1: A Transcription Factor Required for Regulation of Osteoblast Development and Adipose Tissue Allocation”

2007: Annual Meeting, American Society of Bone and Mineral Research, “Targeted Deletion of a Distant Transcriptional Enhancer of the RANKL Gene Reduces Bone Remodeling and Increases Bone Mass”

2006: Annual Meeting, American Society of Bone and Mineral Research, Philadelphia, PA, “Mice Lacking a Distant Transcriptional Enhancer of the RANKL Gene Display a Blunted Response to PTH and 1,25(OH)2D3 In Vitro and In Vivo”

2005: Great Lakes Nuclear Receptor Conference, Madison, WI, “Estrogens Function at an Intermediate Time in Osteoclast Differentiation to Decrease Cell Number, and Reverse RANKL-Induced Downregulation of Arsenate Resistance Protein 2”

2005: Great Lakes Nuclear Receptor Conference, Madison, WI, “Mechanisms for Estrogen-Mediated Inhibition of Osteoclast Formation”

2005: Annual Meeting, American Society of Bone and Mineral Research, Nashville, TN, “RANKL Activates NFATc1, Induces Autoregulation and Promotes Accumulation of This Transcription factor on Osteoclast Target Genes”

2004: Annual Meeting, American Society of Bone and Mineral Research, Seattle, WA, “Mesenchymal Cells Derived from Human Embryonic Stem Cells Differentiate into Bone Forming Osteoblasts”

2003: Annual Meeting, American Society of Bone and Mineral Research, Minneapolis, MN, “A Deficiency in 1,25-Dihydroxyvitamin D3 Production or Action is Associated with Parathyroid Hormone Resistance at the Level of Osteoblast-Inducted Osteoclast formation”

2002: Experimental Biology, Federation of American Societies for Experimental Biology, New Orleans, LA, “Identification of an Adipocyte Plasma Membrane Protein with Ecto-Phosphodiesterase Activity”

**Publications:**

***https://orcid.org/0000-0002-6605-869X***

***Scopus Author ID: 14219103000***

***My NCBI:*** <https://www.ncbi.nlm.nih.gov/myncbi/jackie.fretz.1/bibliography/public/>

***Scholarship In Press:***

***Peer-Reviewed Original Research:***

1. Li X, Lozovatsky L, Tommasini SM, **Fretz JA**, Finberg KE. (2023). Bone Marrow Sinusoidal Endothelial Cells Are a Site of Fgf23 Upregulation in a Mouse Model of Iron Deficiency Anemia. Blood Adv. Jul 7; PMID: 37417950 doi: 10.1182/bloodadvances.2022009524. Online ahead of print.
2. Kale SD, Mehrkens BN, Stegman MM, Kastelberg B, Carnes H, Mcneill RJ, Rizzo A, Karyala SV, Coutermarsh-Ott S, **Fretz J**, Sun Y, Koff J, Rajagopalan G. (2020) "Small" intestinal immunopathology plays a "big" role in lethal cytokine release syndrome, and its modulation by Interferon-g, IL-17A and a Janus kinase inhibitor.” Front. Immunol. 26;11:1311: eCollection 2020. PMCID: PMC7333770
3. McKnight Q, Jenkins S, Li X, Nelson T, Finberg KE, **Fretz JA.** (2020). IL-1β drives production of FGF-23 at the onset of chronic kidney disease. J Bone Miner Res. Jul;35(7):1352-1362. PMCID: PMC7363582
4. Nelson T, Velasquez H, Toriano N, **Fretz JA**. (2019). Early B cell factor 1 (EBF1) regulates glomerular development by controlling mesangial maturation and consequently COX-2 expression. J Am Soc Nephrol. 2019 Sep;30(9):1559-1572. PMCID: PMC6727263
5. **Fretz JA**, NelsonT, VelazquezH, Xi Y, Moeckel G, Horowitz MC. (2014). Early B cell factor 1 is an essential transcription factor for postnatal glomerular maturation. Kidney International 85**:**1091–1102. PMID: 24480344
6. Gao H, Mejhert N, **Fretz JA**, Arner E, Lorente-Cebrián S, Ehrlund A, Dahlman-Wright K, Laurencikiene J, Dahlman I, Daub CO, Rydén M, Horowitz MC, Arner P. (2014). Early B-cell Factor 1 Regulates Adipose Morphology and Lipolysis in White Adipose Tissue. Cell Metabolism 19(6):981-92. PMID: 24856929.
7. Scheller EL, Troiano N, VanHoutan JN, BouxseinMA, **FretzJA**, Xi Y, NelsonT, KatzG, BerryR, ChurchCD, DoucetteCR, RodehefferMS, MacDougaldOA, RosenCJ, Horowitz MC. (2014). Use of osmium tetroxide staining with micro-computerized tomography to measure and position bone marrow adipose tissue in vivo. Methods in Emzymology 537:123-39. PMCID: PMC4097010.
8. Festa E, **Fretz JA**, Berry R, Schmidt B, Rodeheffer M, Horowitz MC, Horsley V. (2011). Adipocyte lineage cells contribute to the skin stem cell niche. Cell 146(5):761-71. PMCID: PMC3298746
9. **Fretz JA**, Nelson T, Xi Y, Adams DJ, Rosen CJ, Horowitz MC. (2010). Altered Metabolism and Lipodystrophy in the Ebf1-Deficient Mouse. Endocrinology 151(4):1611-21. PMCID: PMC2657874
10. DuSell CD, Nelson ER, Wittmann BM, **Fretz JA**, Kazmin D, Thomas RS, Pike JW, McDonnell DP. (2010). Regulation of aryl hydrocarbon receptor function by Selective Estrogen Receptor Modulators. Mol Endocrinol 24(1):33-46. PMCID: PMC2802893Hesslein DG, **Fretz JA**, Xi Y, Nelson T, Zhou S, Lorenzo JA, Schatz DG, Horowitz MC. (2009).
11. Horowitz MC, **Fretz JA**. (2009). Interactions between B cell ontogeny and bone. International Bone and Mineral Society Sun Valley Workshop: Musculoskeletal Biology. BoneKEy Aug 9-12.
12. Hesslein DGT, **Fretz JA**, Xi Y, Nelson T, Zhou S, Lorenzo JA, Schatz DG, and Horowitz MC. (2008). Ebf1-dependent control of the osteoblast and adipocyte lineages. Bone 44(4):537-46. PMCID: PMC 2657874
13. **Fretz JA**, Shevde NK, Singh S, Darnay BG, Pike JW. (2008). RANKL-induced nuclear factor of activated T cells (c1) autoregulates its own expression in osteoclasts and mediates the upregulation of tartrateresistant acid phosphatase. Mol Endocrinol 22(3):737-50. PMCID: PMC2262172
14. Galli C, Zella LA, **Fretz JA**, Fu Q, Pike JW, Weinstein RS, Manolagas SC, O'Brien CA. (2008). Targeted deletion of a distant transcriptional enhancer of the receptor activator of nuclear factor-{kappa} b ligand gene reduces bone remodeling and increases bone mass. Endocrinology 149(1):146-53. PMCID: PMC2194617
15. Pike JW, Zella LA, Meyer MB, **Fretz JA**, Kim S. (2007). Molecular actions of 1,25-dihydroxyvitamin D3 on genes involved in calcium homeostasis. J Bone Miner Res 22 Suppl 2:V16-9.
16. Pike JW, Meyer MB, Watanuki M, Kim S, Zella LA, **Fretz JA**, Yamazaki M, Shevde NK. (2007). Perspectives on mechanisms of gene regulation by 1,25-dihydroxyvitamin D3 and its receptor. J Steroid Biochem Mol Biol 103(3-5):389-95. PMCID: PMC1868541
17. **Fretz JA**, Zella LA, Kim S, Shevde NK, Pike JW. (2007). 1,25-Dihydroxyvitamin D3 induces expression of the Wnt signaling co-regulator LRP5 via regulatory elements located significantly downstream of the gene's transcriptional start site. J Steroid Biochem Mol Biol 103(3-5):440-5. PMCID: PMC1868540
18. Kim S, Yamazaki M, Zella LA, Meyer MB, **Fretz JA**, Shevde NK, Pike JW. (2007). Multiple enhancer regions located at significant distances upstream of the transcriptional start site mediate RANKL gene expression in response to 1,25-dihydroxyvitamin D3. J Steroid Biochem Mol Biol 103(3-5):430-4. PMCID: PMC1892901
19. **Fretz JA**, Zella LA, Kim S, Shevde NK, Pike JW. (2006). 1,25-Dihydroxyvitamin D3 regulates the expression of low-density lipoprotein receptor-related protein 5 via deoxyribonucleic acid sequence elements located downstream of the start site of transcription. Mol Endocrinol 20(9):2215-30.

***Chapters, Books, and Reviews:***

1. Tratwal J, Labella R, Bravenboer N, Kerckhofs J, Douni E, Scheller E, Badr S, Karampinos D, Beck-Cormier S, Palmisano B, Poloni A, Moreno-Aliaga AJ, **Fretz J,** Rodeheffer M, Boroumand P, Rosen CJ, Horowitz M, van der Eerden B, Veldhuis-Vlug A, Naveiras O. (2020). Reporting Guidelines, Review of Methodological Standards, and Challenges Towards Harmonization in Bone Marrow Adiposity Research. Report of the Methodologies Working Group of the International Bone Marrow Adiposity Society. Front. Endo. Feb 28;11:65: eCollection 2020. PMCID: PMC7059536
2. Horowitz MC, Berry R, Holtrup B, Sebo Z, Nelson T, **Fretz JA**, Lindskog D, Kaplan JL, Ables G, Rodeheffer MS, Rosen CJ (2017). Bone marrow adipocytes. Adipocyte. Aug 24. PMID: 28872979
3. Berry R, **Fretz JA**, MacDougald O, Klibanski A, Rosen CJ, Rodeheffer M, Horowitz MC*.* (2015). Marrow Adipose Tissue and its Interactions with the Skeletal, Hematopoietic, and Immune Systems. Osteoimmunology: **Interactions of the Immune and Skeletal Systems, 2nd edition. Elsevier 345-352.** ISBN: 978-0-12-800571-2
4. Horowitz MC, **Fretz JA**, Lorenzo JA. (2010). How B cells influence bone biology in health and disease. Bone 47(3):472-9. PMCID: PMC2850234

***Invited Editorials and Commentaries:***

23. Horowitz MC, **Fretz JA**. (2012). Sclerostin: A new mediator of crosstalk between the skeletal and immune systems. J Bone Miner Res. Jul;27(7):1448-50. PMID:22706900