

BIOGRAPHICAL SKETCH

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NAME Kristy L. Weber	POSITION TITLE Professor of Orthopaedic Surgery		
eRA COMMONS USER NAME Kweber6			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Missouri-Columbia, Missouri	B.S.	1987	Animal Science
Johns Hopkins School of Medicine	M.D.	1991	Medicine
University of Iowa Hospitals and Clinics-Iowa City	Intern, Resident	1996	Orthopaedic Surgery
Mayo Clinic, Rochester, Minnesota	Fellow	1998	Orthopaedic Oncology

A. Personal Statement

I am a clinician-scientist with a translational research focus in metastatic bone disease. I have over 10 years of experience with murine cancer models and multiple modes of tumor cell injection. I have collected renal cell carcinoma bone metastasis human samples for 12 years and have developed a large tissue bank as well as viable renal cell carcinoma cell lines derived from bone metastasis. We have focused on identifying potential molecular targets within renal cell carcinoma to decrease tumor growth and bone destruction. I have experience with basic imaging modalities (x-ray, CT) and processing of murine tissues for immunohistochemistry. This expertise qualifies me to perform the studies in the developmental project targeting HIF for treating metastatic bone disease.

B. Positions and Honors

Positions and Employment

1997-98	Instructor, Dept. of Orthopaedic Surgery, Mayo Medical School, Rochester, Minnesota
1998-03	Assistant Professor, Dept. of Surgical Oncology, U.T. M.D. Anderson Cancer Center, Houston, Texas
2000-03	Assistant Professor, Dept. of Cancer Biology, University of Texas M.D. Anderson Cancer Center
2002-03	Clinical Assistant Professor, Dept. of Orthopaedic Surgery, Baylor College of Medicine
2003	Associate Professor, Johns Hopkins University, Department of Orthopaedic Surgery, Director of the Division of Orthopaedic Oncology
2004	Associate Professor, Johns Hopkins University, Department of Oncology
2004	Virginia M. and William Percy Chair, Department of Orthopaedic Surgery, Johns Hopkins University
2008	American Academy of Orthopaedic Surgeons (AAOS) - Chair, Council on Research, Quality Assessment and Technology
2009	Professor, Johns Hopkins Departments of Orthopaedic Surgery and Oncology

Honors and Awards

1991	Phi Beta Kappa, Johns Hopkins Medical School
1991	Alpha Omega Alpha, Johns Hopkins Medical School
1997	Best Basic Science Research Award, Mayo Laboratory Medicine/Pathology and Cancer Center Symposium
1999	North American Traveling Fellow (NATF), American Orthopaedic Association
2000	Finalist-New Investigator Recognition Award, Orthopaedic Research Society, Orlando, FL
2000	Young Investigator Award, Connective Tissue Oncology Society, Amsterdam
2002	Finalist - New Investigator Recognition Award, Orthopaedic Research Society, Dallas, Texas
2003	American, British, Canadian Traveling Fellow (ABC), American Orthopaedic Association
2005	Leadership Fellows Program (LFP) – American Academy of Orthopaedic Surgeons

2005 American Bone and Joint Surgeons (ABJS) Scholar
2005 Leadership Development Program (LDP) – Johns Hopkins Hospital
2006 Elizabeth Winston Lanier Kappa Delta Award for Research

Board Certification

2000-10 American Board of Orthopaedic Surgery (ABOS)
Thru-12/2010 ABOS Recertification

C. Selected peer-reviewed publications. (Selected from >100 articles/chapters)

Most relevant to the current application

1. Weber KL, Bolander ME, Sarkar G: PIG-B: A Homemade Monophasic Cocktail for the Extraction of RNA. *Molecular Biotechnology*, 1998; 9:73-77.
2. Weber KL, Bolander ME, Sarkar G: Selective Differential Fingerprinting: A Method for Identifying Differentially Expressed Genes in a Family between Two Samples. *Molecular Biotechnology*, 1998; 10:77-81.
3. Weber KL, Pathak S, Multani A, Price JE: Characterization of a Renal Cell Carcinoma Cell Line derived from a Human Bone Metastasis and Establishment of an Experimental Nude Mouse Model. *The Journal of Urology*, 2002; 168(2):774-779.
4. Baker CH, Kedar D, McCarty MF, Tsan R, Weber KL, Bucana CD, Fidler IJ: Blockade of Epidermal Growth Factor Receptor Signaling on Tumor Cells and Tumor – associated Endothelial Cells for Therapy of Human Carcinomas. *American Journal of Pathology*, 2002; 161(3):929-938.
5. McGary E, Weber KL, Mills L, Doucet M, Lewis VO, Lev DC, Fidler IJ, Bar-Eli M: Inhibition of Platelet-Derived Growth Factor-Mediated Proliferation of Osteosarcoma Cells by the Novel Tyrosine Kinase Inhibitor ST1571. *Clinical Cancer Research*, 2002; 8:3584-3591
6. Weber KL, Doucet M, Price J, Baker CH, Sun Jim K, Fidler IJ: Blockade of Epidermal Growth Factor-Receptor Signaling Leads to Inhibition of Renal Cell Carcinoma Growth in the Bone of Nude Mice. *Cancer Research*, 2003; 63(11):2940-7.
7. Weber KL, Doucet M, Price JE: Renal Cell Carcinoma Bone Metastasis: Targeting the Epidermal Growth Factor Receptor. *Clinical Orthopaedics and Related Research*, 2003; 415S:86-94.
8. McGary EC, Heimberger A, Mills L, Weber KL, Thomas GW, Shtivelband M, Lev DC, Bar-Eli M: A Fully Human Antimelanoma Cellular Adhesion Molecule/MUC18 Antibody Inhibits Spontaneous Pulmonary Metastasis of Osteosarcoma Cells *In Vivo*, *Clinical Cancer Research*, 9:6560-6566, 2003.
9. Weber KL: Specialty Update: What's New in Musculoskeletal Oncology. *Journal of Bone and Joint Surgery*, 2005; 87:1400-1410.
10. Weber KL, Randall RL, Grossman S, Parvizi J: Management of Lower Extremity Bone Metastasis. *J Bone Joint Surg* 88 (Suppl) 2006; 4:11-19.
11. Kominsky S, Doucet M, Brady K, Weber KL: TGF- β Influences the Development of Renal Cell Carcinoma Bone Metastasis. *J Bone Miner Res* 2007; 22:37-44.
12. Weber K, Doucet M, Kominsky S: Renal cell carcinoma bone metastasis-elucidating the molecular targets. *Cancer Metastasis Rev*, 2007; 26:691-704.
13. Kominsky SL, Abdelmagid SA, Doucet M, Brady K, Weber, KL: MIP-1 δ – A novel osteoclast stimulating factor secreted by renal cell carcinoma bone metastasis. *Cancer Res*, 2008; 68:1261-1266. PMC Journal - In Process.
14. Kominsky SL, Doucet M, Thorpe M, Weber KL: MMP-13 is overexpressed in renal cell carcinoma bone metastasis and is induced by TGF- β 1. *Clinical and Experimental Metastasis*, 2008; 25:865-870. Not NIH Funded.
15. Lau WM, Weber KL, Doucet M, Chou YT, Brady K, Kowalski J, Tsai HL, Yang J, Kominsky SL. Identification of Prospective Factors Promoting Osteotropism in Breast Cancer: A potential role for CITED2. *Int J Cancer*, 2010; 126:876-884. PMC Journal - In Process.

D. Research Support.

Ongoing Research Support

2P50CA103175-06A2 (Bhujwalla)
NCI JHU ICMIC Program

09/22/11 - 07/31/16

This center grant funds an *in vivo* Cellular and Molecular Imaging Center at Johns Hopkins. The program consists of four research components, four developmental projects, one career development award and four resources.

Completed Projects Within Last Three Years

1 R21 AR056373 (Kominsky/Weber)

07/01/09-06/30/11

NIH (NIAMS)

Effect of MIP1 δ on Osteoclast Development and Pathological Bone Resorption

The purpose of the study is to study the signaling pathways used by MIP-1 δ to stimulate osteoclast differentiation and utilize *in vivo* studies to better elucidate specific function.

OREF (Kominsky)

07/01/07-06/30/09

(Orthopaedic Research and Education Foundation)

Bone-Targeted Biodegradable Nano-spheres for Localized Treatment of Skeletal Disease

The purpose of the study is to generate a drug delivery system targeted to sites of bone metastasis.