

CURRICULUM VITAE

Matthew R. Steensma, M.D.

Orthopaedic Oncology
Spectrum Health Medical Group
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Center for Skeletal Disease and Tumor Metastasis
333 Bostwick Ave. NE
Grand Rapids, MI 49503
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Birth Date: April 8, 1975
Birthplace: Grand Rapids, MI
Citizenship: United States of America

Education

Hospital for Special Surgery (Goldring) Memorial Sloan Kettering Cancer Center (Healey) New York, NY	Postdoctoral Research Fellow	2009-2010
Van Andel Research Institute (Vande Woude; Hay) Grand Rapids, MI	Postdoctoral Research Fellow	2007-2008
Wayne State University School of Medicine Detroit, MI	Doctor of Medicine	1998-2002
Hope College Holland, MI	B.A. Chemistry	1993-1997

Clinical Education

Musculoskeletal Surgical Oncology Department of Surgery (Healey) Memorial Sloan Kettering Cancer Center New York, NY	Fellowship	2008-2009
Orthopaedic Surgery Grand Rapids Orthopaedic Surgery Residency Program Grand Rapids, MI	Residency	2003-2007
Orthopaedic Surgery Grand Rapids Orthopaedic Surgery Residency Program Grand Rapids, MI	Internship	2002-2003

Honors and Awards

2015	Spectrum Health Synergy Award
2014	Francis S. Collins Scholars Award, Neurofibromatosis Therapeutics Acceleration Program, Johns Hopkins University, Baltimore, MD
2014	Excellence in Basic Science Teaching Award, Grand Rapids Medical Education Partners

2014 Spectrum Health Synergy Award
2013 Excellence in Teaching Award, Grand Rapids Medical Education Partners
2013 Spectrum Health Synergy Award
2012 Best Podium Presentation. "A genetically tractable explant model of human disc degeneration." GRMEP Research Day, Grand Rapids, MI
2012 Spectrum Health Synergy Award
2011 Best Case Report Presentation. "Radiation-induced osteosarcoma of the hand", GRMEP Research Day
2011 Best Case Report Presentation. "A novel somatic translocation in a rapidly growing exostosis", GRMEP Research Day
2011 Teacher Of The Year Finalist, Grand Rapids Orthopaedic Surgery Residency Program, Grand Rapids, MI
2010 John Haddad Young Investigator Award, Advances in Mineral Metabolism/American Society of Bone and Mineral Research
2008 Teacher Of The Year Finalist, Grand Rapids Orthopaedic Surgery Residency Program, Grand Rapids, MI
2007 Resident Of The Year Award, Grand Rapids Orthopaedic Surgery Residency Program/Grand Rapids Medical Education Partners, Grand Rapids, MI
2002 Penfil Award, Wayne State University School of Medicine, Detroit, MI
2002 Alpha Omega Alpha, Wayne State University School of Medicine, Detroit, MI
2000 – 2002 Aesculapian Honor Society, Wayne State University School of Medicine, Detroit, MI
1997 Dean for Arts and Humanities Writing Award, Hope College, Holland, MI
1997 Phi Beta Kappa, Hope College, Holland, MI
1997 Magna Cum Laude, Hope College, Holland, MI
1996 – 1997 Jaecker Chemistry Scholar, Hope College, Holland, MI
1994 Award for Outstanding Academic Achievement in Organic Chemistry, Hope College, Holland, MI

Teaching Experience

2010 – Present Assistant Professor, Van Andel Research Institute, Van Andel Institute Graduate School, Grand Rapids, MI
2010 – Present Assistant Professor, Department of Surgery, Michigan State University College of Human Medicine, Grand Rapids, MI
2007 – 2008 Clinical Instructor, Department of Surgery, Michigan State University College of Human Medicine, Grand Rapids, MI
2007 – 2008 Director of Research, Grand Rapids Orthopaedic Surgery Residency Program, Medical Education and Research Center, Grand Rapids, MI

Administrative Experience

2015 – Present Associate Program Director, Grand Rapids Orthopaedic Surgery Residency Program
2013 – 2016 Vice Chairman, IRB, Van Andel Research Institute, Grand Rapids, MI
2013 – 2016 Member, Board of Directors, Spectrum Health Medical Group, Grand Rapids, MI
2013 – 2016 Governance Committee, Spectrum Health Medical Group, Grand Rapids, MI
2012 – Present Finance Board, Spectrum Health Medical Group, Grand Rapids, MI
2012 – Present IRB Member, Van Andel Research Institute, Grand Rapids, MI
2010 – Present Admissions Committee, Van Andel Research Institute, Van Andel Institute Graduate School, Grand Rapids, MI

Prior Hospital Appointments

2007 – 2008 Associate Director, Wege Orthopaedic Specialty Clinic, Saint Mary's Medical Center, Grand Rapids, MI
2007 – 2008 Attending Physician, River Valley Orthopaedics, Saint Mary's Medical Center, Grand Rapids, MI

Organization Membership

2015 – Present	Member, American Society of Human Genetics
2010 – Present	Member, Orthopaedic Research Society
2010 – Present	Member, American Society for Bone and Mineral Research
2010 – Present	Member, Musculoskeletal Tumor Society
2007 – Present	Emerging Leaders Program Member, American Orthopaedic Association
2007	Elected to Clinician Scientist Development Program, American Academy of Orthopaedic Surgeons
2007 – Present	Member, Michigan State Medical Society
2002 – 2008	Member, Michigan Orthopaedic Society
2002 – Present	Member, American Academy of Orthopaedic Surgeons

Adjudication/Editorial Positions

2015 – present	Ad hoc reviewer, Acta Orthopaedica
2014 – present	Ad hoc reviewer, Cancer Treatment Reviews
2014	Scientist Reviewer, Department of Defense/Neurofibromatosis Research Program (NFRP) Molecular Biology peer review panel. Washington, DC
2013 – present	Ad hoc reviewer, Orphanet Journal of Rare Diseases
2013	Scientist Reviewer, Department of Defense/Neurofibromatosis Research Program (NFRP) Molecular Biology peer review panel. Washington, DC
2012 – Present	Abstract Reviewer, Orthopaedic Research Society
2011 – Present	Reviewer, PLOS One
2012	Judge, City-wide Research Day, Grand Rapids Medical Education and Research Center
2008 – Present	Associate Editor – Musculoskeletal Oncology Section, Orthopaedicsone Website, www.orthopaedicsone.com
2007	Judge, City-wide Research Day, Grand Rapids Medical Education and Research Center

Licensure

2008 – Present	New York
2002 – Present	Michigan

Certifications

United States Medical Licensing Examination (USMLE), Passed Steps 1-3 (>98th percentile)
Fellow, American Board of Orthopaedic Surgery (2012)

Publications

1. Lane BR, Bissonnette J, Waldherr T, Ritz-Holland D, Chesla D, Cottingham SL, Alberta S, Liu C, Thompson AB, Graveel C, MacKeigan JP, Noyes SL, Smith J, Lakhani N, **Steensma MR**. Development of a Center for Personalized Cancer Care at a Regional Cancer Center: Feasibility Trial of an Institutional Tumor Sequencing Advisory Board. *J Mol Diagn*. 2015 Aug 30. PMID: 26331835.
2. Foley JM, Scholten DJ II, Monks NR, Cherba D, Monsma DM, Davidson P, Dylewski D, Dykema K, Winn ME, **Steensma MR**. Anoikis-Resistant Subpopulations of Human Osteosarcoma Display Significant Chemoresistance and Are Sensitive to Targeted Epigenetic Therapies Predicted by Expression Profiling. In-press, *Journal of Translational Medicine*. 2015.
3. Peacock JD, Dykema KJ, Toriello HV, Mooney MR, Scholten DJ 2nd, Winn ME, Borgman A, Duesbery NS, Hiemenga JA, Liu C, Campbell S, Nickoloff BP, Williams BO, **Steensma MR**. Oculoectodermal syndrome is a mosaic RASopathy associated with KRAS alterations. *Am J Med Genet A*. 2015 Mar 21. PMID: 25808193.
4. Pelle DW, Peacock JD, Schmidt CL, Kampfschulte K, Scholten DJ 2nd, Russo SS, Easton KJ, **Steensma MR**. Genetic and functional studies of the intervertebral disc: a novel murine intervertebral disc model. *PLoS One*. 2014 Dec 4;9(12):e112454. PMID: 25474689
5. Scholten DJ 2nd, Timmer CM, Peacock JD, Pelle DW, Williams BO, **Steensma MR**. Down regulation of Wnt signaling mitigates hypoxia-induced chemoresistance in human osteosarcoma cells. *PLoS One*. 2014 Oct 27;9(10):e111431. PMID: 25347326
6. Puhaindran ME, Hamilton K, Schlumbohm S, Rich M, Mitchell D, **Steensma MR**. Radiation-induced osteosarcoma of the hand: case report. *J Hand Surg Am*. 2014 Jun;39(6):1151-4. Epub 2014 May 3. PMID: 24799140.

7. Pelle DW, Ringler JW, Peacock JD, Kampfschulte K, Scholten DJ 2nd, Davis MM, Mitchell DS, **Steensma MR**. Targeting receptor-activator of nuclear kappaB ligand in aneurysmal bone cysts: verification of target and therapeutic response. *Transl Res*. 2014 Mar 21. [Epub ahead of print] PubMed PMID: 24726460.
8. Peacock JD, Cherba D, Kampfschulte K, Smith MK, Monks NR, Webb CP, **Steensma MR**. Molecular-guided therapy predictions reveal drug resistance phenotypes and treatment alternatives in malignant peripheral nerve sheath tumors. *J Transl Med*. 2013 Sep 17. PubMed PMID: 24040940
9. Monks NR, Cherba DM, Kamerling SG, Simpson H, Rusk AW, Carter D, Eugster E, Mooney M, Sigler R, **Steensma MR**, Grabinski T, Marotti KR, Webb CP. A multi-site feasibility study for personalized medicine in canines with Osteosarcoma. *J Transl Med*. 2013 Jul 1;11(1):158. [Epub ahead of print] PubMed PMID: 23815880
10. **Steensma MR**, Tyler WK, Shaber AG, Goldring SR, Ross FP, Williams BO, Healey JH, Purdue PE. Targeting the giant cell tumor stromal cell: functional characterization and a novel therapeutic strategy. *PLoS One*. 2013 Jul 26;8(7):e69101. doi: 10.1371/journal.pone.0069101. PMID: 23922683
11. Valkenburg KC, **Steensma MR**, Williams BO, Zhong Z. Skeletal Metastasis: Treatments, Mouse Models, and Wnt Signaling. *Chin J Cancer*. 2013 Jan 18. doi: 10.5732/cjc.012.10218. PubMed PMID: 23327798.
12. **Steensma MR**, Healey JH. Trends in the Surgical Treatment of Pathologic Proximal Femur Fractures Among Musculoskeletal Tumor Society Members. *Clin Orthop Relat Res*. 2012 Dec 18. PubMed PMID: 23247815.
13. Zhong Z, Williams BO, **Steensma MR**. Commentary on “The activation of Beta-catenin by Gs contributes to the etiology of phenotypes seen in Fibrous dysplasia and McCune – Albright syndrome.” *IBMS BoneKEY* (2012)9, Article number:113.
14. **Steensma MR**, Boland PJ, Morris CD, Athanasian E, Healey JH. Endoprosthetic Treatment is More Durable for Pathologic Proximal Femur Fractures. *Clin Orthop Relat Res*. 2012 Mar;470(3):920-6. Epub 2011 Aug 31. PMID: 21879407.
15. Puhaindran M, Farooki N, **Steensma MR**, Hameed M, Healey J, Boland P. Atypical Subtrochanteric Femoral Fractures in Patients with Skeletal Malignant Involvement Treated with Intravenous Bisphosphonates. *J Bone Joint Surg Am*. 2011;93(13):1235-1242. PMID 21776577
16. Puhaindran M, **Steensma MR**, Athanasian E. Partial hand preservation for large soft tissue sarcomas of the hand. *J Hand Surg Am*. 2010 Feb; 35(2):291-5. PMID: 20141899
17. **Steensma MR**, Jabara M, Anderson J, Bohay D. Flexor hallucis longus tendon transfer for hallux claw toe deformity and vertical instability of the metatarsophalangeal joint. *Foot Ankle Int*. 2006 Sep;27(9):689-92. PMID: 17038279
18. **Steensma MR**, Anderson J, Bohay D. Update on diseases and treatment of the peroneal tendon including peroneal tendon tear, subluxating peroneal tendon, and tendinosis. *Curr Opinion Ortho* (2):60-64, 2005.

Book Chapters

1. **Steensma M**, Jebson P. Primary Bone Sarcomas of the Upper Extremity. American Society for Surgery of the Hand. 2015
2. **Steensma M**. Ewing’s Sarcoma. In: Biermann S, ed. *Orthopaedic Knowledge Update: Specialty Series*. Rosemont: AAOS. 2013

Manuscripts in Submission

1. Peacock J, Dodd R, Cardona D, Chen M, Kirsch D, Koeman J, Peck A, Dono R, Maina F, Graveel C, Steensma M. Enhanced MET signaling drives malignant tumorigenesis in a mouse model of Neurofibromatosis Type 1. Submitted to *Oncogene*, May 2015.

International/National Presentations

1. Management of upper extremity sarcomas. Instructional Course Lecture, ASSH conference, Seattle, WA. 2015
2. Management of upper extremity tumors. Instructional Course Lecture, AAOS conference, Las Vegas, NV. 2015
3. Jacqueline D. Peacock, Kevin Kampfschulte, **Steensma M**. MET activation in the context of NF1 loss-of-heterozygosity results in enhanced tumorigenesis in a novel murine model of NF1. Platform Presentation, 2014 Children’s Tumor Foundation Conference, Washington DC
4. Pelle DW, Peacock J, Easton K, Russo S, **Steensma M**. Murine intervertebral disc ex-vivo organ culture: a novel model for genetic and functional studies. Accepted for podium presentation to: 2013 North American Spine Society Summer Meeting, August 2013, Naples, Florida
5. Pelle DW, Peacock J, Easton K, Russo S, **Steensma M**. Ex-vivo genetic studies of the murine intervertebral disc: methods and modeling. Accepted for podium presentation to: 2013 North American Spine Society Annual Meeting, October 2013, New Orleans, Louisiana
6. Pelle DW, Peacock J, Easton K, Russo S, **Steensma M**. Murine intervertebral disc ex-vivo organ culture: a novel model for genetic and functional studies. Poster presented at: 2013 ASCI/AAP Joint Meeting.

7. DJ Scholten II, J Foley, N Monks, C Webb, **M Steensma** Exploring Stemness and Hypoxia in Osteosarcoma; Connecting Hypoxia-inducible factors to Tumor-Initiating Cells. American Society for Clinical Investigation/Association of American Physicians Joint Meeting – April 26-28, 2013, Chicago, IL
8. Popa M, Ringler J, Beurger T, Grabinski T, **Steensma M**. A murine model of post-radiation femur fractures. Van Andel Research Institute; Grand Rapids Medical Education Partners/Grand Rapids Orthopaedic Surgery Residency Program; Helen DeVos Children’s Hospital/Spectrum Health Medical Group. Accepted for podium presentation at the annual meeting of the International Bone and Mineral Society (Lyon, France); poster presentation at Connective Tissue Oncology Society (Prague, Czech Republic), Orthopaedic Research Society (San Antonio, Tx), American Academy of Orthopaedic Surgery (Chicago, IL), Mid-America Orthopaedic Society (Amelia Island, FL).
9. National University of Singapore. Orthopaedic Surgery Grand Rounds. “Surgical treatment of long bone metastasis” June 19, 2012.
10. **Steensma M**, Tyler W, Healey J, Ross P, Goldring S, Purdue E. The differential effects of Wnt and BMP signal activation on osteoclast formation in giant cell tumor of bone. Accepted for presentation at the American Academy of Orthopaedic Surgeons meeting, February, 2011.
11. **Steensma M**, Tyler W, Healey J, Ross P, Goldring S, Purdue E. The differential effects of Wnt and BMP signal activation on osteoclast formation in giant cell tumor of bone. Presented at the Advances In Mineral Metabolism Annual Meeting, April 2010.
12. Tyler W, Healey J, **Steensma M**, Goldring S, Purdue E. Molecular profiling of cell types in giant cell tumor of bone: role of the Wnt pathway in tumor osteolysis. Presented at the American Academy of Orthopaedic Surgeons National Meeting, March 2010.
13. **Steensma M**, Boland P, Morris C, Athanasian E, Healey J. A comparative analysis of hemiarthroplasty versus intramedullary nailing for proximal femoral metastases. Presented at the American Academy of Orthopaedic Surgeons National Meeting, March 2010.
14. **Steensma M**, Boland P, Morris C, Athanasian E, Healey J. One bone, one operation? The frequency and consequences of reoperation for failed surgical treatment of femoral metastases. Accepted for presentation at the American Academy of Orthopaedic Surgeons National Meeting, March 2010.
15. **Steensma M**, Healey J, Boland P, Morris C. Limb preservation in children less than 10 years old for lower extremity bone sarcomas. Presented at the Musculoskeletal Tumor Society/International Society of Limb Salvage International Meeting, September 2009.
16. **Steensma M**, Jelinek J, Galluch D, Braunohler W. All Polyethylene, Press-Fit Patella: 5-9 Year Follow-Up. Presentation at Mid-America Orthopaedic Association annual meeting, April 2005.
17. **Steensma M**, Jabara M, Anderson J, Bohay D. Flexor hallucis longus transfer for the treatment of hallux claw toe and vertical instability of the first metatarsophalangeal joint. Presentation at American Orthopaedic Foot and Ankle Society national meeting, June 2003.
18. **Steensma M**, Irwin C. Effects of an Educational Program Designed to Increase Syphilis Surveillance. Presentation at Society of Academic Emergency Medicine conference, November 1999.

Regional Presentations

1. Review of sarcoma management. MICRA conference, Grand Rapids, MI, October 2014
2. Grabinski T, Williams BO, Peacock J, Rispler D, Steensma M. Dkk-1 mediates osteoclastogenesis through tumor-stromal interaction in osteosarcoma. Basic Science Regional Teleconference. Grand Rapids Medical Education Partners/Grand Rapids Orthopaedic Surgery Residency Program. May, 2012.
3. Orthopaedic Science Fundamentals: Parts I and II. Invited speaker at Regional Basic Science Lecture Series. Grand Rapids Medical Education Partners/Grand Rapids Orthopaedic Surgery Residency Program. May, 2010.
4. Steensma M, Jelinek J, Galluch D, Braunohler W. All Polyethylene, Press-Fit Patella: 5-9 Year Follow-Up. Presentation at Michigan Orthopaedic Society annual meeting, June 2004.
5. Steensma M, Jabara M, Anderson J, Bohay D. Flexor hallucis longus transfer for the treatment of hallux claw toe and vertical instability of the first metatarsophalangeal joint. Presentation at Michigan Orthopaedic Society annual meeting, June 2003.

Local Presentations

1. Pelle DW, Peacock J, Easton K, Russo S, Steensma M. Murine intervertebral disc ex-vivo organ culture: a novel model for genetic and functional studies. Podium presentation to: Grand Rapids Research Day April 2013
2. Musculoskeletal Tumors. Grand Rounds Presentation, Grand Rapids Orthopaedic Surgery Residency Program, Grand Rapids Medical Education and Research Center. September, 2009.
3. Shoulder Tumors: Lesions of Bone. Grand Rounds Presentation, Grand Rapids Orthopaedic Surgery Residency Program, Grand Rapids Medical Education and Research Center. September, 2009.

4. Shoulder Tumors: Lesions of Soft Tissue. Grand Rounds Presentation, Grand Rapids Orthopaedic Surgery Residency Program, Grand Rapids Medical Education and Research Center. September, 2009.
5. Management of Osseous Metastatic Disease in The Extremities – Part 2. Orthopaedic Oncology Grand Rounds, Department of Surgery, Memorial Sloan Kettering Cancer Center. September, 2009.
6. Management of Osseous Metastatic Disease in The Extremities – Part 1. Department of Surgery: Orthopaedic Oncology Grand Rounds. Memorial Sloan Kettering Cancer Center. August, 2009.
7. A Case Presentation of Subtotal Sacrectomy. Sarcoma Conference. Memorial Sloan Kettering Cancer Center. July, 2009.
8. Mathematical Modeling of Tumor Growth. Orthopaedic Oncology Grand Rounds. Memorial Sloan Kettering Cancer Center. March, 2009.
9. A Case Presentation of Dermatofibrosarcoma Protuberans. Sarcoma Conference. Memorial Sloan Kettering Cancer Center. September, 2008.
10. Transgenic hHGF/SF Murine Model of Human Osteosarcoma. Alumni Conference. Grand Rapids Orthopaedic Surgery Residency Program. June, 2008.
11. The Role of the Met Oncogene in Human Osteosarcoma. Guest Lecturer. Graduate School of the Van Andel Research Institute. February, 2008.
12. Orthopaedic Oncology Review. Grand Rounds Presentation. Grand Rapids Orthopaedic Surgery Residency Program. October, 2007.
13. Basic Science Review. Grand Rounds Presentation. Grand Rapids Orthopaedic Surgery Residency Program. October, 2007.
14. Advanced Trauma Life Support. Grand Rounds Presentation. Grand Rapids Orthopaedic Surgery Residency Program. July, 2007.

Posters

1. Peacock J, Dykema K, Toriello H, Mooney M, Scholten DJ, Winn M, Borgman A, Duesbery N, Hiemenga J, Liu C, Campbell S, Nickoloff B, Williams BO, **Steensma M**. Oculoectodermal Syndrome is a Mosaic RASopathy Associated with KRAS Alterations. RASopathies Meeting, Seattle, WA. 2015
2. DJ Scholten II, J Foley, N Monks, **M Steensma**. Characterizing Hypoxia-Inducible Factors in Osteosarcoma cells: Making Connections to a Tumor-Initiating Cell Phenotype. Orthopaedic Research Society Annual Meeting – March 15-18, 2014; New Orleans, LA
3. Grabinski T, Ringler J, **Steensma M**. The role of Dkk-1 in osteoclastogenesis in human osteosarcoma. Poster presentation at the annual combined meeting of the Musculoskeletal Tumor Society/Connective Tissue Oncology Society, October 2011.
4. Grabinski T, Ringler J, **Steensma M**. The role of Dkk-1 in osteoclastogenesis in human osteosarcoma. Poster presentation at the annual meeting of the American Society for Bone and Mineral Research, August 2011.
5. Steensma M, Boland P, Morris C, Athanasian E, Healey J. A comparative analysis of hemiarthroplasty versus intramedullary nailing for proximal femoral metastases. Poster presentation at the American Academy of Orthopaedic Surgeons National Meeting, March 2010.
6. Tyler W, Healey J, **Steensma M**, Goldring S, Purdue E. Molecular profiling of cell types in giant cell tumor of bone: role of the Wnt pathway in tumor osteolysis. Poster presentation at the Orthopaedic Research Society National Meeting, March 2010.
7. **Steensma M**, Easton K, Golladay G. An Atypical Presentation of Foot Drop. Poster presentation at Michigan Orthopaedic Society annual meeting, June 2005.

Ongoing Research Support

1. Francis S. Collins Scholars Award, Neurofibromatosis Therapeutics Acceleration Program, Johns Hopkins University, Baltimore, MD, \$550,000
2. “Mouse model characterization of a novel mosaic rasopathy” Employee Impact Campaign, Van Andel Research Institute; Pilot project funding, \$13,000.

Pending Research Support

None

Completed Research Support

1. “Targeting the osteosarcoma cancer stem cell” Hyundai Scholars Grant. Hyundai Hope on Wheels Program. Project Mentor, \$70,000 (5% effort).
2. “An animal model of tumor initiating cells in human osteosarcoma” Helen DeVos Children’s Hospital Foundation. Investigator, \$20,000 (5% effort).

3. "Outliers program" VAI/Spectrum Health cooperative program development. Co-PI (Steensma/Williams) \$10,000.
4. Pediatric Cancer Translational Research Program. Dick & Betsy DeVos Foundation (DBDVF). Co-Investigator, \$1,000,000 (5% effort).
5. A novel murine model of post-radiation necrosis following simulated soft-tissue sarcoma resection. Helen DeVos Children's Hospital Foundation. Investigator, \$20,000 (5% effort).
6. A new technique for measuring tumor pressure in human osteosarcoma xenografts. Helen DeVos Children's Hospital Foundation. Investigator, \$20,000 (5% effort)
7. A prospective, randomized surgical trial comparing endoprostheses to internal fixation for the treatment of pathologic proximal femur fractures. Orthopaedic Research and Education Foundation, \$150,000. Co-PI
8. Molecular profiling of cell types in giant cell tumor of bone: role of the Wnt pathway in tumor osteolysis. Weill Cornell Medical College, Clinical and Translational Science Center Award, \$8,500. Fellow
9. Transgenic hHGF/SF Murine Model of Human Osteosarcoma. Orthopaedic Research and Education Foundation. July 2007, \$20,000. PI

Current Research Activities

1. Steensma M, Hingtgen C, VanderLaan K, Eisenga B, Williams B, Nickoloff B. Environmental factors as a primary contributor to cutaneous neurofibroma development. Spectrum Health/Helen DeVos Children's Hospital, Michigan State University College of Human Medicine, Van Andel Research Institute.
2. Steensma M, Post J. A prospective randomized surgical trial comparing outcomes between internal fixation and endoprosthetic strategies for the treatment of pathologic proximal femur fractures. Spectrum Health, Memorial Sloan-Kettering Cancer Center, Mayo Clinic, University of Rochester, Syracuse University New York.
3. Peacock J, Steensma M. Mechanisms of tumorigenesis and sarcomagenesis in NF1. Van Andel Research Institute/Spectrum Health.
4. Steensma M, Williams BO. Genetic outliers program. Van Andel Research Institute/Spectrum Health.