BIOGRAPHICAL SKETCH

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NAME: Esther, Robert

eRA COMMONS USERNAME (credential, e.g., agency login): ROBERT_ESTHER

POSITION TITLE: Clinical Professor, Department of Orthopaedics, UNC Chapel Hill

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
Wake Forest University	B.A.	1991	History
University of Oxford	B.A.	1993	Modern History
Vanderbilt University	M.D.	1998	Medicine
University of London	M.Sc.	1996	Health Policy, Planning, and Financing
University of North Carolina		1999	General Surgery Internship
University of North Carolina		2004	Orthopedic Residency
Mayo Clinic		2006	Musculoskeletal Oncology Fellowship

A. Personal Statement

As the sole Orthopedic Oncologist at University of North Carolina and one of the state's leading orthopedic tumor surgeons, I am uniquely qualified to serve as a clinical partner to Dr. Thaxton's Sarcoma Immunotherapy group at University of North Carolina. The addition of Dr. Thaxton to University of North Carolina's Lineberger Comprehensive Cancer Center (LCCC) has enabled the formation of a translationally focused research group dedicated to development of novel immunotherapies for our sarcoma and metastatic bone disease patient populations. Other surgical and medical oncologists within LCCC have a particular affinity for sarcoma research, such as Hong Jin Kim, MD, Division Chief, Surgical Oncology, and Mark Woodcok, MD, Medical Oncology. Thus, the resources and team for Dr. Thaxton's expansion of sarcoma research at UNC LCCC are rich. While I plan to supply Dr. Thaxton's group with primary peripheral blood and tumor tissue form sarcoma patients, I am enthusiastic to contribute to the basic science direction of her program to generate new clinical trials for sarcoma patients at LCCC. Given the abovementioned clinical interest in Dr. Thaxton's research goals, I am certain there will be robust support to carry out the proposal at hand. Moreover, I serve within the national collaborative research group, Musculoskeletal Oncology Research Initiative, and can provide expansion of the projects to a national network should the need arise. The aim of this work is to expand upon previous work in Dr. Thaxton's laboratory to investigate the role of ER stress in modulation and regulation of T cell immune function. My clinical activity has made access to abundant rare malignant tissue and sarcomas possible for this investigation. My collaboration in Dr. Thaxton's group makes me uniquely suited to provide clinical and investigatory consultation regarding human aspects of the research aims. I will work to ensure that the proposed investigation is both clinically relevant and translational.

B. Positions and Honors

Positions and Employment

2013 – Present Orthopaedic Resident Program Director, UNC-Chapel Hill
2013 – Present Associate Clinical Professor, UNC-Chapel Hill

2006 – 2013 Assistant Clinical Professor, UNC-Chapel Hill
2005 – 2006 Instructor in Orthopaedics, Mayo Medical School

Other Experience and Professional Memberships

2015 – Present American Orthopaedic Association
2010 – Present American Academy of Orthopaedic Surgeons
2012 – Present Interurban Orthopaedic Society
2009 – Present Musculoskeletal Tumor Society
2008 – Present Lineberger Comprehensive Cancer Center
2008 – Present American Board of Orthopaedic Surgeons
2006 – Present Mayo Clinic Ivins Society

Honors

2016 Frank Wilson Chief Resident Teaching Award, UNC Department of Orthopaedics
2016 Faculty Teaching Award, UNC Musculoskeletal Course
2015 Faculty Teaching Award, UNC Musculoskeletal Course
2014 Faculty Teaching Award, UNC Musculoskeletal Course
2013 Faculty Teaching Award, UNC Musculoskeletal Course
2012 Faculty Teaching Award, UNC Musculoskeletal Course
2009-2012 Inaugural H. Robert Brashear Teaching Fellow in Orthopaedics
2009 Faculty Teaching Award, UNC Musculoskeletal Course
2008 Faculty Teaching Award, UNC Musculoskeletal Course
2004 Orthopaedic Resident of the Year, Department of Orthopaedics, WakeMed Hospital, Raleigh, NC
2004 William Patton Chief Resident Teaching Award, UNC Department of Orthopaedics
2000 Resident Teaching Award, UNC Musculoskeletal Course
1993 First Class in Modern History, Oxford University
1991 Rhodes Scholar
1991 Phi Beta Kappa, Wake Forest University
1991 Wake Forest Award for highest graduating G.P.A. in senior class
1991 Award of outstanding original research in European history, Wake Forest University
1991 Forrest Clonts Award (outstanding graduating history major), Wake Forest University
1987 Presidential Scholar, U.S. Dept. of Education (2 students selected from each state)

C. Contributions to Science

1. Clinical care of sarcoma patients.

In collaboration with others, I have pursued research related to the clinical care of patients with soft tissue sarcoma. This work includes evaluation of the role of radiation therapy, treatment of osseous metastasis, and the implications of osteosarcoma in a historical cohort of patients treated before current chemotherapy regimens were established.

a. Jernigan EW, Tennant JN, **Esther RJ.** 2018. Not all patients undergoing stabilization of impending pathologic fractures for renal cell carcinoma metastases to the femur need preoperative embolization. Clin Orthop Relat Res. 476(3): 529- 534.
b. Rosenberg LA, **Esther RJ**, Erfanian K, Green R, Kim HJ, Sweeting R, Tepper JE. 2013. Wound complications in preoperatively irradiated soft-tissue sarcomas of the extremities. Int J Radiat Oncol Biol Phys. 85(2): 432-7.
c. Louie RJ, Wang K, Royce TJ, Beaty BT, **Esther RJ**, Tepper JE, Kim HJ. 2020. Does timing matter? Surgical outcomes in high-grade sarcomas after neoadjuvant radiation therapy. J Surg Res. 254:118-124. doi: 10.1016/j.jss.2020.04.016. Online ahead of print.
d. Gaffney R, Unni KK, Sim FH, Slezak JM, **Esther RJ**, Bolander ME. 2006. Follow-up study of long-term survivors of osteosarcoma in the prechemotherapy era. Hum Pathol. 37(8):1009-14, 2006.

2. Laboratory-based and clinical musculoskeletal research

During the course of residency and fellowship training, I participated in several laboratory and clinical research projects that included cell culture and molecular techniques with application to musculoskeletal and oncologic conditions.

a. **Esther RJ**, Creighton RA, Draeger RW, Weinhold PS, Dahners LE. 2008. Effect of NKISK on tendon lengthening: an in vivo model for various clinically applicable dosing regimens. J Orthop Research 26(7); 971-6.
b. Pendse AA,Wobker SE, Greene KG, Smith SV, **Esther RJ**, Dodd LG. 2018. Intraosseous Rosai-Dorfman disease diagnosed by touch imprint cytology evaluation: a case series. Diagn Cytopathol. 2018 Jan; 46 (1): 83-87. Epub 2017 Aug 23.
c. **Esther RJ,** Battacharya R, Ruan M, Bolander ME, Mukhopadhyay D, Sarkar G, Mukherjee P. 2005. Gold Nanoparticles do not affect the global transcriptional program of human umbilical vein endothelial Cells: A DNA-microarray Analysis. J Bio Nanotech. 1(3): 328-355.
d. Fritchie KJ, Renner JB, Rao KW, **Esther RJ**. 2012. Osteolipoma: radiological, pathological, and cytogenetic analysis of three cases. J Skeletal Radiol. 41(2):237-244.

3. Educational research

Given my medical school and graduate medical education teaching roles, I have been actively engaged in curricular and program development for medical students, residents, and practicing orthopaedists. This includes basic science education on the medical school level, development and leadership of our orthopaedic training program, and development of educational materials for practicing orthopaedic surgeons.

a. Wilson FC, **Esther RJ**. 2010. Development and use of a second-year musculoskeletal organ-system curriculum: A forty-year experience. J. Bone Joint Surg., Am. 92: e14.
b. Clement RC, Olsson E, Katti P, **Esther RJ.** 2016. Fringe benefits among US Orthopaedic residency programs vary considerably: a national survey. HSS J. 12(2): 158-64.
c. Jernigan EW, **Esther RJ**. 2015. Soft tissue masses for the general orthopaedic surgeon. Orthop Clin North Am. 46(3) 417-428. Epub 2015 Apr 11