

Margaret Eileen Cooke, MD

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EDUCATION/TRAINING:

8/2019 – 1/2020	Shriners Hospitals Northern CA, Congenital Hand Fellowship. Sacramento CA
8/2018 – 8/2019	Hospital for Special Surgery, Hand and Upper Extremity Fellowship. New York NY
6/2012 – 6/2018	Boston University Orthopaedic Surgery Residency Program. Boston MA Orthopaedic Research Resident 6/2014— 6/2015 <i>Outstanding Chief Resident Research Award 6/2018</i>
9/2006 – 6/2012	UCSF Medical School. San Francisco CA Howard Hughes Medical Institute (HHMI) Research Fellowship, 7/2010—7/2011 MD with Thesis: <i>Structured three-dimensional co-culture of mesenchymal stem cells with chondrocytes promotes chondrogenic differentiation without hypertrophy</i>
9/2002 – 6/2006	Stanford University. Stanford CA Bachelor of Science in Biological Science

AWARDS AND GRANTS:

2018	Outstanding Chief Resident Research Award
2017	Third Place Award in the OREF Northeast Resident Research Symposium
2016	Top 10 Foot & Ankle Papers at the AAOS 2016: Paper 746
2015	AAOS Resident Delegate, representing Boston University
2010	UCSF Dean's Prize in Outstanding Medical Student Research
2010 – 2011	Howard Hughes Research Fellowship Award
2009 – 2011	MD with Thesis
2009 – 2011	Certificate Program in Biomedical Sciences
2010	PACCTR Quarterly Research Fellowship
2009	Dean's Quarterly Research Fellowship
2007	Medical Student Curriculum Ambassador Grant/Program
2004	American Heart Association Undergraduate Student Research Grant.

LEADERSHIP:

2016	AOA Resident Leadership Forum
2015 – 2018	AAOS Resident Delegate, representative for Boston University Orthopaedic Residency Program
2015 – 2018	Member, AAOS Resident Assembly Research Committee
2015	Thesis Committee Member, Mentor of Pete Foster, Master of Science, Boston University SOM
2015	Thesis Committee Member, Mentor of Gloria Boye, Master of Science, Boston University SOM
2012 – 2018	Howard Hughes Medical Institute (HHMI) Medical Fellows Alumni mentor
2007 – 2012	UCSF School of Medicine Education Committees, UCSF, San Francisco CA Core Clerkship Oversight Committee (4/08-06/12), student representative Essential Core Course Committee (9/07-4/08), student representative Essential Core Compass (6/07-04/08), student representative Essential Core Small Group Oversight Committee (9/07-4/08), student representative
2007 – 2009	Associated Students of the School of Medicine (ASSM) UCSF, San Francisco CA
2007	Co-coordinator, OR Assist: Surgical Training for Medical Students, UCSF, San Francisco CA
2006 – 2007	Mentor, UCSF MedLink Mentoring Program, San Francisco CA
2006 – 2007	Volunteer, UCSF Students' Homeless Clinic, San Francisco CA
2005 – 2006	Health Instructor, Health Education for Life, Garfield Charter School, Redwood City CA
2003 – 2005	Volunteer, Arbor Free Clinic, Menlo Park, CA

RESEARCH EXPERIENCE:

6/2002 – 9/2002

Undergraduate Student Research

Stanford Department of Cardiovascular Medicine, Stanford CA

Peripheral blood leukocyte counts in CMV infected heart transplant patients: Impact of acute disease vs. subclinical infection

PI: Hannah Valantine, PhD

6/2004 – 9/2004

American Heart Association (AHA) Undergraduate Research Award

Undergraduate Student Research

Stanford Department of Biochemistry, Stanford CA

Characterization of the Rho-Rab9 binding domain

PI: Suzanne Pfeffer, PhD

6/2007 – 9/2007

UCSF Medical Student Curriculum Ambassador Grant

Research assistant

UCSF Department of Medical Research, San Francisco CA

Evaluation of assessments of professionalism and communication exhibited by medical students

PI: Arianne Teherani, PhD

3/2009 – 8/2009

Research Fellow

UCSF Department of Orthopaedic Surgery, San Francisco CA

Transfusion-related acute lung injury after transfusion of maternal blood

PI: Mohammed Diab, MD

7/2009 – 7/2010

UCSF Dean's Quarterly Research Fellowship

PACCTR Grant (Pathways to Careers in Clinical and Translational Research)

Research Fellow

UCSF Department of Orthopaedic Surgery, San Francisco CA

Substrate stiffness promotes chondrocyte differentiation through coordinated activation of the TGF-beta pathway.

PI: Tamara Alliston, PhD

7/2010 – 7/2011

Howard Hughes Medical Institute (HHMI) Research Fellowship

Certificate Program in Biomedical Research

Research Fellow

UCSF Department of Orthopaedic Surgery, San Francisco CA

Structured 3D co-culture of mesenchymal stem cells with chondrocytes promotes chondrogenic differentiation without hypertrophy.

PI: Tamara Alliston, PhD

12/2011 – 2/2012

Research Fellow

UCSF Department of Orthopaedic Surgery, San Francisco CA

Co-culture with mesenchymal stem cells protects juvenile chondrocytes against cytokine-induced up-regulation of MMP13

PI: Tamara Alliston, PhD

6/2014 – 8/2015

Basic Science Fellow

Boston University Department of Orthopaedic Surgery, Boston MA

PI: Louis Gerstenfeld, PhD

6/2014 – 9/2015

Clinical Research Fellow

Boston University Department of Orthopaedic Surgery, Boston MA

PI: Paul Tornetta III, MD

PUBLICATIONS:

Cooke ME, Potena L, Luikart H, and Valentine H. Peripheral Blood Leukocyte Counts in Cytomegalovirus Infected Heart Transplant Patients: Impact of Acute Disease Versus Subclinical Infection. *Transplantation*. December 15, 2006; 82: 1419-1424.

Dunbar N, **Cooke M**, Diab M, Toy P. Transfusion-related acute lung injury after transfusion of maternal blood: a case control study. *Spine*. November 1, 2010; 35(23):E1322-7.

Cooke ME, Allon AA, Cheng T, Kuo AC, Kim HT, Vail TP, Marcucio RS, Schneider RA, Lotz J, Alliston T. Structured three-dimensional co-culture of mesenchymal stem cells with chondrocytes promotes chondrogenic differentiation without hypertrophy. *Osteoarthritis and Cartilage*. October 2011; 19(10):1210-8.

Allen JL, **Cooke ME**, Alliston T. ECM stiffness primes the TGFB pathway to promote chondrocyte differentiation. *Mol Biol Cell*. September 2012; 21(18):3731-42.

Cooke ME, Hussein AI, Lybrand KE, Wulff A, Simmons E, Choi JH, Litrenta J, Ricci WM, Nascone JW, O'Toole RV, Morgan EF, Gerstenfeld LC and Tornetta P. Correlation between RUST assessments of fracture healing to structural and biomechanical properties. *J. Orthop. Res.* September 2017. doi:10.1002/jor.23710 [Epub ahead of print]

Hussein AI, Mancini C, Lybrand KE, **Cooke ME**, Matheny HE, Hogue BL, Tornetta P 3rd, Gerstenfeld LC. Serum proteomic assessment of the progression of healing. *J. Orthop. Res.* October 2017. Doi: 10.1002/jor.23754 [Epub ahead of print]

Cooke, ME and Duncan S. "The History of Carpal Tunnel" [Book Chapter] in *Carpal Tunnel Syndrome and Related Median Neuropathies*. Springer September 2017; 7-12.

Cooke ME, Welch T, Gusakov O, Tornetta III P. "Are Continuous Femoral Nerve Catheters Beneficial for Pain Management after Operative Fixation of Tibial Plateau Fractures?" *J Orthop Trauma*. December 2019; 33(12);e447-51.

(in preparation):

Puri S, **Cooke ME**, Lee SL. "Diagnosis and Repair of Peripheral Nerve Injuries" [Book Chapter] in *Orthopaedic Basic Science 5*. Wolters Kluwer, AAOS Books.

Cooke ME, Tornetta III P, Phieffer L, Jones C, Mullis B, Egol K, Collinge C, Ertl JP, Gardner M, Ricci W, Teague D, Ertl W, Leighton R, Joshi Ojas. "Peroneal Irritation after Lateral Malleolar Fractures: A multi-center prospective evaluation."

Cooke ME, Tornetta III P, Vallier H, Weinberg DS, Firoozabadi R, Alton TB, Shimota MR, Westberg JR, Schmidt A, Bosse M, Leas DP, Archdeacon M, Kakazu R, Nzegwu I, McClary K, Chen W, O'Toole RV, Costales TG, Coale M, Mullis B, Usmani RH, Egol K, Kottmeier S, Sanders D, Jones C, Miller AN, Horwitz DS, Kepegowda H, Morshed S, Belaye T, Teague D. "Open Ankle Fractures: What Predicts Infection?"

Cooke ME, Tornetta III P, Egol K, Jones C, Ertl JP, Mullis B, Perez E, Collinge C, Ostrum R, Humphrey C, Dunbar R, Gardner M, Ricci W, Phieffer L, Teague D, Ertl W, Born C, Zonno A, Siegel J, Sagi HC, Pollak A, Schmidt A, Templeman D, Sems A, Friess D, Pape H. "The Effect of Knee Flexion Contracture on Outcomes of Distal Femur Fractures."

Cooke ME, Tornetta III P, Egol K, Jones C, Ertl JP, Mullis B, Perez E, Collinge C, Ostrum R, Humphrey C, Dunbar R, Gardner M, Ricci W, Phieffer L, Teague D, Ertl W, Born C, Zonno A, Siegel J, Sagi HC, Pollak A, Schmidt A, Templeman D, Sems A, Friess D, Pape H. "The effect of coronal plane angulation on the outcomes of operatively treated distal femur fractures: A multi-center prospective evaluation."

SPECIAL INTERESTS – ATHLETICS:

Cycling - Recreational

Long Distance Running

- 2014 Newport Rhode Races, 13.6 miles
- 2010 Nike Women Half Marathon, 13.6 miles
- 2010 US Half Marathon 2 San Francisco, 13.6 miles
- 2010 US Half Marathon 1 San Francisco, 13.6 miles
- 2009 Golden Gate Relay, 191 miles
- 2004 Angel Island 25K

Brazilian Jiu Jitsu, Bay Area Ricks, San Mateo CA

- 2011 Jiu Jitsu by the Sea Tournament

Stanford Women's Rugby Team, Stanford University, Stanford CA

- 2006 National Champions
- 2005 National Champions
- 2004 Sweet Sixteen
- 2003 Elite Eight