BIOGRAPHICAL SKETCH

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NAME: **CHEUNG, EMILIE V**

eRA COMMONS USER NAME (credential, e.g., agency login): CHEUNG.EMILIE

POSITION TITLE: **Associate Professor, Orthopedic Surgery**

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
UCLA, Los Angeles, CA	B.S.	06/1996	Physiological Science
New York Medical College, Valhalla, NY	M.D	06/2000	Medicine

A. Personal Statement

I have been involved in basic science and clinical research for over 14 years, at the PI and Co-PI level. I am an active clinician with interest in soft tissue injury, repair and reconstruction. I am a recognized clinician scientist in sports medicine and shoulder surgery. I am an active member of the American Shoulder and Elbow Surgeon's society and the American Academy of Orthopedic Sugeons. Combining my clinical skills and expertise, I believe that I can contribute to your lab and research project for in vivo evaluation, leading to a lengthy collaboration of clinically relevant research. More specifically, I have been collaborating with Dr. Yang for more than 5 years. We have produced a few co-authored abstracts and received one joint Stanford translational seed grant in 2017. This work has global implications to patients with a myriad of musculoskeletal problems throughout the body. I have worked in many interdisciplinary groups for research with very productive outcomes. I feel that this team is suited well for success.

1. Dai Fei Elmer, Ker, Dan Wang, Anthony William, Behn, Evelyna Tsi Hsin, Wang, Xu Zhang, Benjamin Yamin, Zhou, Ángel Enrique, Mercado-Pagán, Sungwoo Kim, Burhan, Gharaibeh, Yaser, Shanjani, Nelson, Drew, Marc, Safran, **Emilie V., Cheung**, Phil, Campbell, and **Yunzhi Peter, Yang**. Functionally-Graded, Bone- and Tendon-Like Polyurethane for Rotator Cuff Repair, *Advanced Functional Materials*. 2018 May;28(20). pii: 1707107. doi: 10.1002/adfm.201707107
2. Dai Fei Elmer, Ker, Anthony William, Behn, Evelyna Tsi Hsin, Wang, Benjamin Yamin, Zhou, Ángel Enrique, Mercado-Pagán, Sungwoo Kim, Dan, Wang, Burhan, Gharaibeh, Yaser, Shanjani, Drew, Nelson, Marc, Safran, **Emilie, Cheung**, Phil, Campbell, Lee, Weiss and **Yunzhi Peter, Yang**. Reduction of stress concentration and spatial control of osteoblast and tenocyte differentiation in a mechanically-graded, growth factor-biopatterned bone- and tendon-like biomaterial. ORS 2016 Annual Meeting March 5-8, 2016 Disney's Coronado Springs Resort Orlando, Florida. POSTER SESSION #: PS1-001. POSTER SESSION TITLE: Biomaterials – Other. POSTER #: 418
3. Dai Fei Elmer, Ker, Dan, Wang, Anthony William, Behn, Evelyna Tsi Hsin, Wang, Benjamin Yamin, Zhou, Ángel Enrique, Mercado-Pagán, Sungwoo Kim, John Kleimeyer, Burhan, Gharaibeh, Yaser, Shanjani, Drew, Nelson, Marc, Safran, **Emilie, Cheung**, Phil, Campbell, Lee, Weiss and **Yunzhi Peter, Yang**. Functionally-graded and Growth Factor-Biopatterned Biomaterials for Rotator Cuff Repair. the ORS 2018 Annual Meeting, March 10-13, 2018, in New Orleans, Louisiana. Control Number 2018-LB-4311-ORS. Poster Session #LB199; Poster #2110.

B. **Positions and Honors**

Positions

2000-2005	Internship and Residency in Orthopedic Surgery, Drexel University, Philadelphia, PA
2005-2006	Fellowship in Shoulder Elbow Surgery, Mayo Clinic, Rochester, MN
9/1/2006 - Present	Associate Professor, Chief of Shoulder Elbow Surgery, Department of Orthopedic Surgery, Stanford University, Stanford, CA

Honors and Awards

1992-1993	UCLA Dean's List
1993-1996	UCLA Departmental Honors, Physiological Scienc
1993-1996	Golden Key National Honor Society
1993-1996	Alpha Lambda Delta National Honor Society
1993-1996	Phi Eta Sigma National Honor Society
2002	First Place Award, Drexel Orthopedics Residents Research Day
2004	Third Place Award, Drexel Orthopedics Residents Research Day
2004	AOA-Zimmer Residents Leadership Forum
2005	Second Place Award, Drexel Orthopedics Residents Research Day
2005	First Place Award, Residents' Bowl, Philadelphia Orthopedic Society
C.	
2012	Stanford University Department of Orthopedic Surgery Research Founders Day Award, Primary Investigator for resident
2013	Stanford University Department of Orthopedic Surgery Research Founders Day Award, Primary Investigator for resident
2015	Western Orthopaedic s Organization (WOA) Young Investigators Award Recipient. Coeur D'Alene, ID July 2015.
2015	California Orthopedic Association (COA) Annual Meeting, Palm Desert, April 15, 2015. Lloyd W. Taylor, M.D. Resident Award 2015

C. Contributions to Science

My scientific contributions have been in the realm of clinical outcomes after complex situations flowing shoulder surgery. Some recent highlights of my work are listed below. In the first paper listed below, we address the efficacy of Computer-Navigation in the realm of Shoulder Arthroplasty. In the second paper, we evaluate risk-factors for the most common complication following reverse total shoulder arthoplasty. In the third paper, we evaluated a novel polyurethane which was functionally graded for rotoator cuff repair in a rat model. In the fourth paper, we studied the cost-effectiveness of treatment optios for irreparable rotator cuff tears. In the last paper, we evaluated glenoid component loosening, the most common complication following anatomic total shoulder arthroplasty utilizing a novel augmented glenoid component in a prospective multi-center study.

1: Barrett I, Ramakrishnan A, Cheung E. Safety and Efficacy of Intraoperative Computer-Navigated Versus Non-Navigated Shoulder Arthroplasty at a Tertiary Referral. Orthop Clin North Am. 2019 Jan;50(1):95-101. doi: 10.1016/j.ocl.2018.08.004. Epub 2018 Oct 25. Review. PubMed PMID: 30477710.

2: Cheung EV, Sarkissian EJ, Sox-Harris A, Comer GC, Saleh JR, Diaz R, Costouros JG. Instability after reverse total shoulder arthroplasty. J Shoulder Elbow Surg. 2018 Nov;27(11):1946-1952. doi: 10.1016/j.jse.2018.04.015. Epub 2018 Jun 19. PubMed PMID: 29934280.

3: Ker DFE, Wang D, Behn AW, Wang ETH, Zhang X, Zhou BY, Mercado-Pagán ÁE, Kim S, Kleimeyer J, Gharaibeh B, Shanjani Y, Nelson D, Safran M, Cheung E, Campbell P, Yang YP. Functionally Graded, Bone- and Tendon-Like Polyurethane for Rotator Cuff

Repair. Adv Funct Mater. 2018 May;28(20). pii: 1707107. doi: 10.1002/adfm.201707107. Epub 2018 Mar 30. PubMed PMID: 29785178; PubMed Central PMCID: PMC5959293.

4: Kang JR, Sin AT, Cheung EV. Treatment of Massive Irreparable Rotator Cuff Tears: A Cost-effectiveness Analysis. Orthopedics. 2017 Jan 1;40(1):e65-e76. doi: 10.3928/01477447-20160926-06. Epub 2016 Sep 30. PubMed PMID: 27684078.

5: Friedman RJ, Cheung E, Grey SG, Flurin PH, Wright TW, Zuckerman JD, Roche CP. Clinical and radiographic comparison of a hybrid cage glenoid to a cemented polyethylene glenoid in anatomic total shoulder arthroplasty. J Shoulder Elbow Surg. 2019 Dec;28(12):2308-2316. doi: 10.1016/j.jse.2019.04.049. Epub 2019 Jul 16. PubMed PMID: 31324502.

Complete List of Published Work in My Bibliography (**48** peer reviewed papers):

https://www.ncbi.nlm.nih.gov/pubmed/?term=emilie+cheung

D. Additional Information: Research Support and/or Scholastic Performance

On-going Research Support

a. Prospective Multi-Center Study of the Equinoxe Total Shoulder Arthorplasty. Industry-funded by Exactech Orthopedics 12/01/2014-11/30/2018. Role: PI

The objective of the project is to evaluate the efficacy of the Equinoxe Total Shoulder Arthroplasty.

Completed Research Support

a. Development of rotator cuff injury model and its use for medical device. Stanford Spectrum MedTech Pilot Grant. 01/01-12/31/2017 Role: PI (Co-PI: Yang).

The one-year project aims to establish a rotator cuff tear model for medical device evaluation.

b. Prospective Multi-Center Study of the Reverse Shoulder Arthroplasty. Industry-funded by DJO Orthopedics. 12/01/2010-11/30/2016. Role: PI

The objective of this project is to evaluate the efficacy of the Reverse Shoulder Arthroplasty in clinic.