

Theresa W. Chan

Curriculum Vitae

Ironwood Cancer & Research Centers, a Division of Ironwood Physicians, PC

FELLOWSHIP **University of California San Francisco, Department of Surgery**
Breast Surgical Oncology Fellowship, SSO-accredited, 08/01/2020 – 07/31/2021

RESIDENCY **University of California San Diego Health Systems**
General Surgery Residency Program, 07/01/2014 – 06/30/2016
General Surgery Residency Program, 07/01/2018 – 06/30/2020

INTERNSHIP **University of California San Diego Health Systems**
General Surgery Internship, 06/24/2013 – 06/30/2014

EDUCATION **University of Cincinnati**, College of Medicine
Doctor of Medicine, 08/01/2009-06/01/2013

Cornell University, College of Engineering
Master of Engineering: Biomedical Engineering, 08/01/2006 – 06/01/2007

Cornell University, College of Engineering
Bachelor of Science: Biological Engineering, *cum laude*, 08/01/2002 – 06/01/2006

**EMPLOYMENT/
TEACHING &
MENTORSHIP** Ironwood Physicians, PC
10/01/2021- Current - Surgeon/ Breast Surgeon

Taste for the Cure 2020, Wisdom Study Presentation Mentor (Halle Thannickel, Alison Cheng, Oct 2020), *UC San Francisco*
General Surgery Medical Student Review Lecture Series (Mar 2018), *UC San Diego*
Plastic Surgery: Wound Healing – Medical Student Lecture (Nov 2013), *UC San Diego*
Biochemistry Discussion Group Leader (2010 – 2011), *University of Cincinnati College of Medicine*
Electrical and Chemical Physiology Teaching Assistant (2007), *Department of Biomedical Engineering, Cornell University*

**PROFESSIONAL
SOCIETIES &
ACTIVITIES** Society of Surgical Oncology, *Candidate Member*
American Society of Breast Surgeons, *Candidate Member*
American College of Surgeons, *Member*
Association for Academic Surgery, *Candidate Member*
American Medical Association, *Member*
Shock Society (2016-2018)
Surgical Infections Society (2016-2018)
Neuroscience Scholars Program (2009 – 2013), *University of Cincinnati, College of Medicine*
Pediatrics Club (2009 -2011), *University of Cincinnati, College of Medicine, Shadowing Co-Chair*
Master of Engineering Student Association (2006 – 2007), *Cornell University, Vice President*
Engineering Ambassadors (2002 – 2006), *Cornell University*

**HONORS
& AWARDS** 2018 First Place, Basic Science – UC San Diego Department of Surgery Surgical Sciences
Research Symposium
2017 Second Place, Basic Science – American College of Surgeons Committee on Trauma Papers
Competition, National Competition
2017 First Place, Basic Science – American College of Surgeons Committee on Trauma Papers

Competition, Region IX Competition
 2017 American Association for the Surgery of Trauma Annual Meeting Scholarship Recipient
 2017 Shock Society Research Investigator Fellowship Award Recipient
 2016 Second Place, Basic Science – American College of Surgeons Committee on Trauma Papers Competition, National Competition
 2016 First Place, Basic Science – American College of Surgeons Committee on Trauma Papers Competition, Region IX Competition
 2016 Post-doctoral Training Grant, Otolaryngology Training in Immunology, Virology and Molecular Biology – T32-DC000028, National Institute on Deafness and other Communication Disorders, National Institute of Health
 2012 First Place – Clinical Vignettes Medical Grand Rounds Poster Presentation
 2010 Third Place – Medical Student Summer Research Program Fall Poster Session
 2010 Medical Student Summer Research Program Fellowship Recipient
 2006 Finalist – Cornell University Engineering Graduate Research Showcase
 2006 Cornell University Dean’s List – 6 Semesters
 2005 Alpha Epsilon Iota Beta Chapter – Biological Engineering Honor Society

**RESEARCH
 EXPERIENCE**

Trauma Surgery Research Fellowship (07/01/2016-06/30/2018)

Division of Trauma, Surgical Critical Care, and Burns University of California, San Diego, Department of Surgery, PI: Todd Costantini

- ♦ Studied the effects of a uniquely human gene *CHRFAM7A* on the response to injury in transgenic mice

VEGF Inhibitor Reduction of Microhemorrhages in Immune-mediated Neurologic Diseases

University of Cincinnati, College of Medicine, PI: Aaron Johnson, PhD (06/01/2010-08/31/2010)

- ♦ Devised an algorithm that interpreted MRI images and generated calculations for brain mass volume changes

Staff Research Associate I, II (11/01/2007 – 06/30/2009)

University of California, San Francisco, PI: Michael McManus, PhD

- ♦ Developed sensor cell lines and performed high throughput screens with shRNA libraries to identify cellular components involved in miRNA silencing *in vitro*

High Throughput Dialysis System (08/01/2005 – 06/30/2007)

Cornell University, College of Engineering, PI: David Putnam, PhD

- ♦ Designed and tested a high throughput dialysis system for purification of polymer gene vectors

Wireless Video-endoscopic Assessment of Laryngeal Hemiplegia (08/01/2006 –06/30/2007)

Cornell University, Department of Biomedical Engineering, PI: Norm Ducharme, DMV

- ♦ Created prototypes to diagnose laryngeal hemiplegia in horses under racing conditions

Central Intelligence Agency – Undergraduate Co-Op Program (08/01/2004 – 01/31/2005, 06/01/2006 – 07/31/2006)

Biological Technology Center

- ♦ Conducted experiments to analyze microbial fuel cells and the efficacy of microorganisms as regenerative biocatalysts

ABSTRACTS &

Chan TW, et al. “Accuracy of Breast MRI for Surgical Planning After Neoadjuvant Therapy in Invasive Lobular Carcinoma.” American Society of Breast Surgeons’ 22nd Annual Meeting (2021) – *Accepted Poster*

Chan TW. “The Human Response to Inflammation.” UCSD Chief Resident Grand Rounds, San Diego, CA, April 2020

Chan TW, et al. "Uniquely Human Gene *CHRFAM7A* Alters Immune Cell Mobilization after Injury." *Journal of the American College of Surgeons* 227.4 (2018): S276-S277, Boston, MA – *Podium Presentation*

Chan TW, et al. (2018, September) “Modulation of the $\alpha 7$ Nicotinic Acetylcholine Receptor Contributes

to Variability in the Human Inflammatory Response to Injury.” 77th Annual Meeting of the American Association for the Surgery of Trauma and Clinical Congress of Acute Care Surgery, San Diego, CA – *Poster Session*

Chan TW, et al. (2018, September) “An 18-Year Analysis of Border Fence Injuries.” 4th World Trauma Congress, San Diego, CA – *Podium Presentation*

Chan TW, et al. (2018, June) “The Uniquely Human Gene CHRFAM7A Alters the Inflammation Response to Injury.” Shock Society 41st Annual Meeting, Scottsdale, AZ – *Podium Presentation*

Chan TW, et al. (2017, May) “CHRFAM7A Expression Implies a Uniquely Human Mechanism Modulating Tissue Injury Response.” Surgical Infection Society 37th Annual Meeting, St. Louis, MO – *Poster Session*

Chan T, Coberly L, Crist D. “An Alternative Treatment for Metastatic Small Bowel Obstruction in a Patient with Generalized Carcinomatosis.” 2012 Ohio ACP Chapter Scientific Meeting, Columbus, OH – *Poster Session*

PUBLICATIONS

Chan TW, Langness S, Cohen O, Eliceiri BP, Baird A, Costantini TW. “CHRFAM7A Reduces Monocyte/Macrophage Migration and Colony Formation In Vitro.” *Inflamm Res.* (2020) 69:631-633.

Tsai C, Zhao B, **Chan T**, Blair SL. “Treatment for occult breast cancer: A propensity score analysis of the National Cancer Database.” *The American Journal of Surgery* 220.1 (2020) 153-160.

Costantini T, **Chan T**, et al. “The Uniquely-Human CHRFAM7A Gene Increases the Hematopoietic Stem Cell Reservoir and Amplifies Emergency Myelopoiesis.” *Proceedings of the National Academy of Sciences* 116.16 (2019): 7932-7940.

Chan T, Williams E, et al. "CHRFAM7A alters binding to the neuronal alpha-7 nicotinic acetylcholine receptor." *Neuroscience letters* 690 (2019): 126-131.

Williams EC, Coimbra R, **Chan TW**, et al. "Precious Cargo: Modulation of the Mesenteric Lymph Exosome Payload after Hemorrhagic Shock." *Journal of Trauma and Acute Care Surgery* (2018).

Kojima M, Costantini TW, Eliceiri BP, **Chan TW**, et al. "Gut epithelial cell-derived exosomes trigger posttrauma immune dysfunction." *Journal of Trauma and Acute Care Surgery* 84.2 (2018): 257-264.

Lowenthal BM, **Chan TW**, et al. "Gastric Medullary Carcinoma with Sporadic Mismatch Repair Deficiency and a TP53 R273C Mutation: An Unusual Case with Wild-Type BRAF." *Case Reports in Pathology* 2017 (2017).

Kojima M, Gimenes-Junior JA, **Chan TW**, et al. "Exosomes in postshock mesenteric lymph are key mediators of acute lung injury triggering the macrophage activation via Toll-like receptor 4." *The FASEB Journal* 32.1 (2017): 97-110.

Chan TW, et al. "Management of Perioperative Medications Including Steroids, Growth Factors, and Hormone Receptors." *Surgical Emergencies in the Cancer Patient*. Springer International Publishing, 2017. 329-346.

Suidan G, Dickerson J, Johnson H, **Chan T**, et al. “Preserved Vascular Integrity and Enhanced Survival Following Neuropilin-1 Inhibition in a Mouse Model of CD8 T Cell-Mediated CNS Vascular Permeability.” *J. Neuroinflammation*, 2012, 9(1): 218.

Lebbink RJ, Lowe M, **Chan T**, et al. “Polymerase II Promoter Strength Determines Efficacy of microRNA Adapted shRNAs.” *PLoS ONE*, 2011, 6(10): e26213.

Wong SY, **Chan T**, Putnam D. “Simple and Economical High-Throughput Equilibrium Dialysis System.” *J. Comb. Chem.* 2009. 11(2): 202–205.

