ALISSA JANE TRZECIAK

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EDUCATION

2015 – Present
University of Rochester, Rochester, NY
Doctor of Philosophy (PhD) Student in Immunology, Minsoo Kim Lab
Anticipated graduation date: *August 2019*

2012 – 2014
New York University, New York, NY
Master of Science in Biology, Juan Lafaille Lab, graduated with distinction.

2003 – 2008
McGill University, Montreal, QC, Canada
Bachelor of Science in Physiology

RESEARCH EXPERIENCE

Sept 2014- Aug 2015

University of Rochester, Center for Vaccine Biology & Immunology, Microbiology and Immunology Department, Rochester, NY

- Doctoral research focusing on the early detection and long-term effects of sepsis under the supervision of Dr. Minsoo Kim.
- First project resulting in a submitted manuscript studying cognitive dysfunction in animal models of sepsis and the cellular phenotype in recovered brains.
- Second project resulting in a manuscript studying new prognostic markers for the diagnosis and outcome of sepsis in human patients using animal models and human septic patient samples.

Sept 2014- Aug 2015

Kadmon Corporation, Immunology Department, New York, NY

- Research Technician at a pharmaceutical company studying anti-inflammatory properties of new drug compounds on clinical trial samples from psoriasis and GVHD patients.
- Responsibilities included processing human blood and testing new drug compounds on autoimmune T cells using ELISA based assays and shRNA knockdowns.

Jan 2013- Dec 2014

New York University, NYU Medical Center, Molecular Pathogenesis Department, New York, NY

- Masters student developing a new model of experimental autoimmune encephalomyelitis to study the role of T helper 17 cells in brain inflammation and disease progression under the supervision of Dr. Juan Lafaille.
- Project involved growing and differentiating primary Th17 cells in culture and adoptively transferring into recipient mice to study an atypical EAE phenotype.

Aug 2012- Dec 2014

Hospital for Special Surgery, Autoimmunity and Inflammation Program, New York, NY

- Lab Technician in Dr. Alessandra Pernis' Lab whose tasks included T Cell purification from mouse and human samples, immunofluorescence, flow cytometry, western blotting, ELISA, mammalian cell transfection and other various molecular and biochemical techniques to study the effects of different genes in the onset and severity of Lupus.
- Additionally, *in vitro* T-cell cultures were used to test the effects of various statin drugs on inflammation.

Aug 2011 - July 2012

McGill University, Montreal General Hospital, Experimental Surgery Department, Plastic Surgery Program, Montreal, QC

- Research Assistant with Dr. Anie Philip and affiliated with the Canadian Scleroderma Research Group.
- Goals included developing a bleomycin-induced skin fibrosis model of

scleroderma using transgenic mice and analyzing differences in wound healing by histology, western blotting, ELISA, RT-PCR, and other biochemical methods.

- Further translational research was done using human scleroderma skin biopsies to discover downstream effects of hypoxia on the TGF-beta-signaling pathway.

MANUSCRIPTS

Trzeciak, A, Lerman, Y, Kim, T, Mai, N, Halterman, MW, and Kim, M. Long-term microgliosis driven by acute systemic inflammation. (*Under review*, JCI insight, Feb 2019)

PUBLICATIONS

Sarangi PP, Lee HW, Lerman YV, **Trzeciak A**, Harrower EJ, Rezaie AR, Kim M. Activated Protein C attenuates severe inflammation by targeting VLA-3 (high) neutrophils subpopulation in mice. J Immunology. 2017 Oct 15; 199(8):2930-2936. Epub 2017 Sep 06.

Zanin-Zhorov A, Weiss J, **Trzeciak A**, Chen W, Zhang J, Nyuydzefe M, Arencibia C, Polimera S, Fuentes-Duculan J, Bonifacio K, Kunjravia N, Cueto I, Soung J, Fleischmann R, Kivitz A, Lebwohl M, Nunez M, Woodson J, Smith S, West R, Berger M, Kruger J, Ryan J, Waksal S. Selective oral ROCK2 inhibitor reduces clinical scores in patients with psoriasis vulgaris and normalizes skin pathology via concurrent regulation of IL-17 and IL-10. J Immunology. 2017 April 7. doi: 10.4049.

Weiss JM, Chen W, Nyuydzefe MS, **Trzeciak A**, Flynn R, Tonra JR, Marusic S, Blazar BR, Waksal SD, Zanin-Zhorov A. ROCK2 signaling is required to induce a subset of T follicular helper cells through opposing effects on STATs in autoimmune settings. Science Signaling. 2016 July 19. Volume 9, Issue 437: 73-83.

Flynn R, Paz K, Du J, Reichenback DK, Taylor PA, Panoskaltsis-Mortari A, Vulic A, Luznik L, Macdonald KP, Hill G, Nyuydzefe MS, Weiss JM, Chen W, **Trzeciak A**, Serody JS, Murphy WJ, Maillard I, Munn D, Koreth J, Cutler CS, Antin JH, Ritz J, Waksal SD, Zanin-Zhorov A, Blazar BR. Targeted Rho-associated kinase 2 (ROCK2) inhibition decreases clinical and immune pathology of murine and human chronic GVHD through Stat3-dependent mechanism. Blood. 2016 Mar 16.

Lin J, Yang L, Moura-Silva H, **Trzeciak A**, Choi Y, Schwab SR, Dustin ML, Lafaille JJ. Increased generation of Foxp3+ regulatory T cells by manipulating antigen presentation in the thymus. Nature Communications. 2016 Feb 29. Issue 7:10562.

Winocour S, Vorstenbosch J, **Trzeciak A**, Lessard L, Philip A. CD109, a novel TGF-β antagonist, decreases fibrotic responses in a hypoxic wound model. Experimental Dermatology. 2014 May 11. doi: 10.1111/exd.12439.

Vorstenbosch J, Gallant-Behm C, **Trzeciak A**, Roy S., Mustoe T, Philip A. Transgenic mice over-expressing CD109 in the epidermis display decreased inflammation and granulation tissue and improved collagen architecture during wound healing. Wound Repair and Regeneration. 2013 Feb 25. Volume 21, Issue 2: 235-246.

Vorstenbosch J, Al-Ajmi H, Winocour S, **Trzeciak A**, Lessard L., Philip A. CD109 overexpression ameliorates skin fibrosis in a bleomycin-induced mouse model of scleroderma. Arthritis & Rheumatism. 2013 Feb 22. doi: 10.1002/art.37907.

PUBLISHED ABSTRACTS

Vorstenbosch J, Gallant-Behm C, **Trzeciak A**, Fang R, Mustoe T, and Philip A. Overexpression of CD109 in the Epidermis Reduces Inflammation, Improves Wound Healing and Scarring. Plastic and Reconstructive Surgery, Supplement, May 2010.

Al-Ajmi H, Vorstenbosch J, Winocour S, **Trzeciak A,** Lessard L and Philip A. Overexpression of CD109 in the Epidermis Reduces Scarring in a Bleomycin-Induced Model of Fibrosis. Plastic and Reconstructive Surgery, Supplement, May 2010.

Winocour S, Vorstenbosch J, **Trzeciak A**, Lessard L, and Philip A. CD109, A Novel TGF-β Antagonist, Regulates Dermal Thickness in a Skin Flap-Induced Ischemic Wound Model. Plastic and Reconstructive Surgery, Supplement, May 2010.

Al-Ajmi H, Vorstenbosch J, Winocour S, **Trzeciak A**, Lessard L and Philip A. CD109, a Novel TGF-β Co-Receptor, Enhances Collagen Organization and Decreases Dermal Thickness in a Mouse Model of Skin Fibrosis. Wound Repair and Regeneration, 18(2), April 2010.

Winocour S, Vorstenbosch J, **Trzeciak A**, Lessard L and Philip A. CD109, a Novel TGF-β Antagonist, Decreases Extracellular Matrix Protein Production in the Skin Under Ischemic Conditions. Wound

POSTERS

Trzeciak, A, Lerman, Y, Kim, T, Mai, N, Halterman, MW, and Kim, M. Long-term microgliosis driven by acute systemic inflammation. Myeloid Keystone Symposium, Santa Fe, NM. Feb 2019.

Trzeciak, A, Lerman, Y, Kim, T, Mai, N, Halterman, MW, and Kim, M. Long-term microgliosis driven by acute systemic inflammation. Immune Imaging Symposium. University of Rochester. Nov, 2018.

Trzeciak, A, Lerman, Y, Mai N, Halterman M, Kim, M. Chronic brain dysfunction driven by acute systemic inflammation. Immune Imaging Symposium. University of Rochester. Nov, 2017.

Trzeciak, A, Lerman, Y, Mai N, Halterman M, Kim, M. Chronic brain dysfunction driven by acute systemic inflammation. Neuroinflammation Keystone Symposium, Keystone, CO. June, 2017.

Trzeciak, A, Kim, TH, Lerman, Y, Harrower, E, Kim, M. Sepsis Induced Neuroinflammation. Immune Imaging Symposium. University of Rochester. Nov, 2016.

Trzeciak, A, Saminathan, P, Hammond, JH, Lu, SM, Tong, N, Gelbard, HA. Intercellular adhesion molecule-5 (ICAM-5) facilitates a unique and dynamic relationship between CD4+ T cells and hippocampal neurons during HIV-associated neurocognitive disorder (HAND). Society for Neuroscience, San Diego, CA. Nov, 2016.

Trzeciak, A, Lerman, Y, Kim, M. Sepsis Induced Neuroinflammation. Graduate Student Society Poster Session. University of Rochester. May, 2016.

ORAL PRESENTATIONS

Trzeciak, A, Lerman, Y, Kim, T, Mai, N, Halterman, MW, and Kim, M. Long-term microgliosis driven by acute systemic inflammation. Selected for Poster and Oral Presentation at the 4th annual Immune Imaging Symposium, University of Rochester. Nov, 2018.

Trzeciak A, Al-Ajmi H, Vorstenbosch J, Winocour S, Lessard L, Philip A. Role of CD109, a TGF-beta coreceptor, in wound healing and scarring in the skin. Selected for a Poster and Oral Presentation at the 3rd Annual Meeting of the Canadian Scleroderma Research Group. Winnipeg, Canada. October 2009.

FUNDING

Spring 2017- Present **Pathogenesis Training Grant**: T32 AI118689

Summer 2009 **Summer Studentship**
Canadian Scleroderma Research Group

AWARDS

Nov 2016 **Best Poster Award**. Immune Imaging Symposium, Rochester, NY.

TEACHING EXPERIENCE

Fall 2016 **University of Rochester, Microbiology and Immunology Department, Rochester, NY.**

- Teaching assistant for *Introduction to Immunology* taught by Dr. Alexandra Livingstone and Dr. Michael Elliott.
- Tasks included grading workshop assignments and exams, running recitation courses, and leading exam review sessions.

Jan 2013- Dec 2014 **New York University, CORE Department, New York, NY**

- Teaching Adjunct for *Molecules of Life*; a biochemistry course for undergraduate non-science majors taught by Professor Trace Jordan.
- Tasks included attending lectures and facilitating discussions, instructing two laboratory sessions of forty students, reviewing and grading all assignments, quizzes, and exams.

- Supplementary one-on-one tutoring was provided for students in need of additional help.

WRITING EXPERIENCE

Sept 2014- Aug 2015 **New York University, CORE Department, New York, NY**

- Editorial Assistant to Dr. Trace Jordan.
- Tasks include making figures, editing scientific data, and writing practice questions for a biochemistry textbook.
- Publication: Jordan, T and Kallenbach, N. *Chemistry: The Molecules of Life*. Oxford University Press: Feb 2017.

LEADERSHIP AND MENTORING

2017-2019 **Immunology Recruitment Representative**

- Student delegate with responsibilities including organizing applicant interviews, student and faculty-hosted dinners, and being lead contact for follow-up questions from immunology recruits.

Mentored:

Fall 2018 - **Hangchuan Shi**, Translational Biomedical Science, PhD Student
2017- 2018 - **Sidney Duchette**, University of Rochester, Undergraduate student
Winter 2015 - **James Schwabacher**, Kadmon Institute, Undergraduate Intern
Fall 2014 - **Sumner Kilmarx**, Kadmon Institute, Undergraduate Intern

SKILLS AND PROFESSIONAL DEVELOPMENT

Professional Development Courses:

Winter 2018 - Leadership and Management for Scientists
Fall 2017 - Communication in Science

Specialized skills include:

Technical mouse surgeries:

- Cecal Ligation and Puncture sepsis model
- Thin Skull for Live Multi-photon Imaging

Clinical Sample Processing:

- Septic patient neutrophil isolation from blood
- Psoriasis patient PBMC isolation from blood
- Keratinocyte and fibroblast isolation and culture from human skin biopsies

Basic knowledge of coding in RStudio for production of complex heat maps

MEMBERSHIPS

2016-2017 **Society for Neuroscience Student Member**
2015-2016 **American Association of Immunologists**