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S. John Calise

Graduate Research Assistant
Laboratory of Edward K.L. Chan, PhD
Department of Oral Biology
Interdisciplinary Program in
Biomedical Sciences

EDUCATION

University of Florida
Gainesville, FL
Graduate Research Assistant
Interdisciplinary Program in Biomedical Sciences
Concentration: Molecular Cell Biology
Mentor: Edward K.L. Chan, PhD
Aug 2015 – present

University of Florida
Gainesville, FL
B.S. in Business Administration
Major: Finance
Graduated with Honors
Aug 2007 – May 2011

RESEARCH POSITIONS

University of Florida
Gainesville, FL
Laboratory Manager
Laboratory of Edward K.L. Chan, PhD
Department of Oral Biology
Sept 2011 – Aug 2015

Projects

▪ Characterization of the structure and function(s) of autoantigenic rod/ring structures in mammalian cells. Autoantibodies targeting these structures are associated with hepatitis C patients treated with pegylated interferon and ribavirin therapy.

▪ MicroRNA expression in rheumatoid arthritis patients. RNA is isolated from peripheral blood mononuclear cells (PBMCs) collected from whole blood samples. TaqMan quantitative real-time PCR is then utilized to measure expression levels of various microRNAs.

UNDERGRADUATE MENTORING EXPERIENCE

Mentored four undergraduate research assistants:

- Ms. Thuy Nguyen, co-author on Calise et al. *J Cell Sci* and Calise et al. *Auto Immun Highlights.* **2013 – 2016**
- Ms. Dania A. Saleem, co-author on Calise et al. *J Cell Sci.* **2013 – 2015**
- Ms. Joyce D. Yin, co-author on Calise et al. *Cell Mol Life Sci.* and Calise et al. *J Cell Sci*. **2013 – 2014**
  Current position: DMD student at University of Pennsylvania, Philadelphia, PA.
- Ms. Claire Krueger, co-author on Calise et al. *Cell Mol Life Sci.* and Calise et al. *J Cell Sci*. **2012 – 2013**
  Current position: DDS student at Virginia Commonwealth University, Richmond, VA.

HONORS AND AWARDS (GRADUATE AND PROFESSIONAL)

- Pre-doctoral Fellow, Department of Oral Biology NIH Training Grant T90DE021990-06, Aug 2016 – present
- American Society for Cell Biology Graduate Student Travel Award, December 2015
- University of Florida Graduate School Grinter Fellowship Award 2015 – 2018 (scholarship)
- 2nd Place, IWAA Prize for Oral & Poster Communication at the 12th International Workshop on Autoantibodies and Autoimmunity, São Paulo, Brazil, August 2014
- 1st Place, Dresden Prize for the Study of Autoantibodies at the 11th Dresden Symposium on Autoantibodies, Dresden, Germany, September 2013

HONORS AND AWARDS (UNDERGRADUATE)

▪ Graduated with Honors (Cum Laude), University of Florida, May 2011
▪ Warrington College of Business Administration Dean's List (multiple semesters)
▪ University of Florida Honors Program Member, 2007 – 2011
▪ Beta Gamma Sigma International Honor Society
▪ Golden Key International Honour Society
▪ National Society of Collegiate Scholars
▪ Florida Academic Scholars Award (full tuition paid), 2007 – 2011

PROFESSIONAL SOCIETY MEMBERSHIPS

▪ American Society for Cell Biology, 2015 – present

PEER REVIEW EXPERIENCE

▪ Assisted PI in reviewing eight manuscripts for *Clinica Chimica Acta, Critical Reviews in Biochemistry and Molecular Biology, European Journal of Immunology, Experimental Cell Research, Journal of Autoimmunity, Journal of Cell Science, Journal of Medical Virology,* and *Journal of Viral Hepatitis*.

▪ Assisted PI in reviewing a grant application submitted to the Prinses Beatrix Spierfonds, an independent financial supporter for neuromuscular research in the Netherlands.

PROFESSIONAL SERVICE (VOLUNTEER)

▪ Grants Evaluator, UF Graduate Student Council Grants Committee **July 2016 – present**
Peer review of university-wide travel grants submitted by graduate students

▪ Interdisciplinary Program in Biomedical Sciences Welcome Buddy **June 2016 – Sep 2016**
Assisting incoming students with their transition to graduate school and UF

▪ Web Designer and Webmaster, AutoAb.org **Oct 2011 – present**
Autoantibody Standardization Committee in Rheumatic and Related Disorders of the International Union of Immunological Societies, World Health Organization, Arthritis Foundation, and Centers for Disease Control and Prevention

PEER-REVIEWED PUBLICATIONS (REVERSE CHRONOLOGICAL ORDER)

1. **Calise SJ**, Bizzaro N, Nguyen T, Bassetti D, Porcelli B, Almi P, Barberio G, Pesce G, Satoh M, and Chan EKL. Anti-rods/rings autoantibody seropositivity does not affect response to telaprevir treatment for chronic hepatitis C infection. *Auto Immun Highlights.* In press.

2. **Calise SJ**, Purich DL, Nguyen T, Saleem DA, Krueger C, Yin JD, and Chan EKL. 'Rod and ring' formation from IMP dehydrogenase is regulated through the one-carbon metabolic pathway. *J Cell Sci.* 2016 Aug 1; 129(15):3042-3052.

3. Chukkapalli S, Rivera-Kweh M, Gehlot P, Velsko I, Bhattacharyya I, **Calise SJ**, Satoh M, Chan EKL, Holoshitz J, and Kesavalu L. Periodontal bacterial colonization in synovial tissues exacerbates collagen-induced arthritis in B10.RIII mice. *Arthritis Res Ther.* 2016 Jul 12; 18(1):161.

4. Keppeke GD, **Calise SJ**, Chan EKL, and Andrade LE. Assembly of IMPDH2-based, CTPS-based, and mixed rod/ring structures is dependent on cell type and conditions of induction. *J Genet Genomics* 2015 Jun 20; 42(6):287-299.

5. **Calise SJ***, Carcamo WC*, Krueger C, Yin JD, Purich DL, and Chan EKL. Glutamine deprivation initiates reversible assembly of mammalian rods and rings. *Cell Mol Life Sci.* 2014 Aug; 71(15):2963-73. *co-first author

6. Carcamo WC, Ceribelli A, **Calise SJ**, Krueger C, Liu C, Daves M, Villalta D, Bizzaro N, Satoh M, and Chan EKL. Differential reactivity to IMPDH2 by anti-rods/rings autoantibodies and unresponsiveness to pegylated interferon-alpha/ribavirin therapy in US and Italian HCV patients. *J Clin Immunol.* 2013 Feb; 33(2):420-6.

REVIEW ARTICLES, BOOK CHAPTERS, AND PROCEEDINGS (REVERSE CHRONOLOGICAL ORDER)

1. Keppeke GD, **Calise SJ**, Chan EKL, and Andrade LE. Anti-rods/rings autoantibody generation in hepatitis C patients during interferon-α/ribavirin therapy. *World J Gastroenterol*. 2016 Feb 14; 22(6):1966-74.

2. Satoh M, Tanaka S, Ceribelli A, **Calise SJ**, and Chan EKL. A Comprehensive Overview on Myositis-Specific Antibodies: New and Old Biomarkers in Idiopathic Inflammatory Myopathy. *Clin Rev Allergy Immunol*. 2015 Sep 30. [Epub ahead of print]

3. **Calise SJ**, Keppeke GD, Andrade LE, and Chan EKL. Anti-rods/rings: a human model of drug-induced autoantibody generation. *Front Immunol*. 2015 Feb 5; 6:41.

4. **Calise SJ**, Carcamo WC, Ceribelli A, Dominguez Y, Satoh M, and Chan EKL. Antibodies to Rods and Rings. In *Autoantibodies* (Shoenfeld Y, Gershwin ME, Meroni PL, Eds.), pp. 161-168. Elsevier Science, Third Edition, 2014.

5. Carcamo WC*, **Calise SJ***, von Mühlen CA, Satoh M, and Chan EKL. Molecular cell biology and immunobiology of mammalian rod/ring structures. *Int Rev Cell Mol Biol.* 2014; 308:35-74. *co-first author

6. **Calise SJ**, Carcamo WC, and Chan EKL. Clinical implications of anti-rods and rings autoantibodies in hepatitis C patients treated with interferon/ribavirin therapy. In *Infection, Tumors and Autoimmunity – Report on the 11th Dresden Symposium on Autoantibodies* (Conrad K, Chan EKL, Fritzler MJ, Humbel RL, Meroni PL, Steiner G, Shoenfeld Y, Eds.), Pabst Science Publishers, Lengerich, Germany, 2013.

NATIONAL AND INTERNATIONAL MEETING PRESENTATIONS (REVERSE CHRONOLOGICAL ORDER)

1. **Calise SJ**, Nguyen T, and Chan EKL. A novel component of autoantigenic 'rod and ring' intracellular structures. The 13th International Workshop on Autoantibodies and Autoimmunity, Kyoto, Japan; Oct 11-13, 2016. Poster presentation.

2. **Calise SJ**, Nguyen T, Saleem DA, Krueger C, Yin JD, Purich DL, and Chan EKL. Blockage of folate metabolism activates polymerization of rod/ring structures in mammalian cells. American Society for Cell Biology Annual Meeting, San Diego, CA; Dec 12-16, 2015. Poster presentation.

3. **Calise SJ**, Krueger C, Yin JD, Saleem DA, Nguyen T, and Chan EKL. Assembly of autoantigenic rods/rings induced by serine deprivation is further promoted by glycine supplementation. The 12th International Workshop on Autoantibodies and Autoimmunity, São Paulo, Brazil; Aug 28-30, 2014. Oral and poster presentation.

4. **Calise SJ**, Carcamo WC, Krueger C, Purich DL, and Chan EKL. Effects of intracellular glutamine levels on the reversible assembly of cytoplasmic rod and ring autoantigenic structures. The 11th Dresden Symposium on Autoantibodies, Dresden, Germany; Sept 1-4, 2013. Oral and poster presentation.

LOCAL MEETING PRESENTATIONS (REVERSE CHRONOLOGICAL ORDER)

1. **Calise SJ**, Nguyen T, Saleem DA, Krueger C, Yin JD, Purich DL, and Chan EKL. Blockage of folate metabolism activates polymerization of rod/ring structures in mammalian cells. UF College of Dentistry Spring Synergy: Celebration of Science, Gainesville, FL; Apr 1, 2016. Poster presentation.

2. **Calise SJ**, Krueger C, Yin JD, Saleem DA, Nguyen T, and Chan EKL. Assembly of autoantigenic rods/rings induced by serine deprivation is further promoted by glycine supplementation. UF College of Dentistry Spring Synergy: Celebration of Science, Gainesville, FL; Apr 10, 2015. Poster presentation.

3. **Calise SJ**, Carcamo WC, Krueger C, Yin JD, Purich DL, and Chan EKL. Glutamine deprivation initiates reversible assembly of mammalian rods and rings. UF College of Medicine Celebration of Research, Gainesville, FL; Mar 31, 2014. Poster presentation.

4. **Calise SJ**, Krueger C, Carcamo WC, Yin JD, Purich DL, and Chan EKL. Factors affecting the formation of cytoplasmic rods and rings in cultured cells. UF College of Dentistry Spring Synergy: Celebration of Science, Gainesville, FL; Apr 5, 2013. Poster presentation.

PUBLISHED ABSTRACTS CO-AUTHORED (REVERSE CHRONOLOGICAL ORDER)

1. Tanaka S, **Calise SJ**, Satoh Y, Tanaka Y, Vazquez-Del Mercado M, Medrano-Ramirez G, Sobel ES, Reeves WH, Chan EKL, and Satoh M. Cohesin Complex is a New Myositis Autoantigen. *Arthritis Rheumatol*. 2015 Oct 1; 67.

2. Chukkapalli S, Rivera-Kweh M, Velsko I, Bhattacharyya I, **Calise SJ**, Chan EKL, Satoh M, and Kesavalu L. Active Invasion of Periodontal Bacteria into Synovial Joint Exacerbates Collagen-Induced Arthritis in Disease-Prone B10 RIII Mice. *Arthritis Rheumatol*. 2014 Oct 1; 66:S416.

3. Satoh M, Vera-Lastra O, Martinez C, Sepulveda-Delgado J, Jara LJ, Vargas-Ramirez R, Martin-Marquez BT, **Calise SJ**, Chan EKL, and Vazquez-Del Mercado M. Specificity Of Autoantibodies In Patients With Rheumatologic Inflammatory Syndrome Following Mineral Oil Injections Is Similar To Those In Mice With Adjuvant Mineral Oil-Induced Autoimmunity. *Arthritis Rheum.* 2013 Oct 1; 65:S11.

4. Vazquez-Del Mercado M, Daneri-Navarro A, Martin-Marquez BT, Vargas-Ramirez R, Velasco-Sanchez D, Chan JYF, **Calise SJ**, Chan EKL, and Satoh M. Autoantibodies Associated With Inflammatory Myopathy and Other Systemic Autoimmune Rheumatic Diseases In Sera From Breast Cancer Patients. *Arthritis Rheum.* 2013 Oct 1; 65:S881-S882.

5. Chauffe AD, Sobel ES, Bubb MR, Reeves WH, Mahler M, Gascon C, Chan JYF, **Calise SJ**, Chan EKL, and Satoh M. Anti-Th/To Antibodies In Various Systemic Rheumatic Diseases Screened By Anti-Rpp25 ELISA. *Arthritis Rheum.* 2013 Oct 1; 65:S287-S288.

RESEARCH TECHNIQUES

- **Microscopy:** extensive experience working with a Zeiss Axiovert 200M inverted widefield fluorescence microscope, equipped with dual Zeiss AxioCam MRm and MRc5 cameras for imaging cells
- **Clinical Samples:** Isolation of peripheral blood mononuclear cells (PBMCs) from whole blood; antinuclear antibody indirect immunofluorescence (ANA-IIF) screening of patient sera
- **Cell Culture:** Experience handling a variety (>15) different adherent or suspension mammalian cell lines; lipid-based transfection of siRNA
- **Nucleic Acids:** RNA isolation from cell lysate; TaqMan quantitative real-time PCR for mRNA and microRNA
- **Protein:** Immunohistochemistry on mouse tissue; indirect immunofluorescence on mouse tissue and mammalian cells; western blotting; bicinchoninic acid (BCA) assay; sandwich ELISA
- **Software:** Adobe Photoshop CS5 for fluorescent image editing; ImageJ for densitometric analysis of western blots; GraphPad Prism 5.0 for statistical analyses; Zeiss AxioVision for fluorescence microscopy