

# Matthew B. Dacanay

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## **PROFESSIONAL EXPERIENCE**

### **UWMC Department of Obstetrics and Gynecology**

March 2016-Present

#### **Research Scientist III – Adams Waldorf Laboratory**

September 2021 – Present

- Managing the efforts of a dynamic group of volunteers that is constantly in flux
  - Training new scientists in microbiological assays, safety methods, and scientific understanding of our projects.
  - Coordinating efforts across multiple projects to ensure each is moving forward
- Preparing samples for and analyzing data from LC-MS for an IL-1B inhibiting peptide RYTVELA
  - Includes spiking experiments to generate standard curves and interpreting animal experiment data for concentration of target over a time course of samples.
- Maintaining the projects and responsibilities associated for my previous role in the laboratory

#### **Research Scientist I – Adams Waldorf Laboratory**

November 2019 – September 2021

- Scheduling, performing sample processing, and carrying out assays for non-human primate experimental protocols for ZIKV, Group B Streptococcus, Influenza A Virus, and pharmacokinetic studies
  - Includes preparations for collecting over 300 samples/experiment, isolation of PBMC's, viral titer via plaque assay, bacterial titer via culture, and qRT-PCR.
- Managing the microbiological testing and gene sequencing of one of the largest biobanks of clinical isolates of Group B Streptococcus(n=284)
  - Includes testing/sequencing for B-Hemolysis, CAMP Factor, pigmentation, covR/S, abx1, stk1, and stp1 gene expression
- Performing in vitro placental cell line infections with SARS-CoV-2 followed by RNA isolation and qPCR
  - Includes growing and titrating viral stock
  - Developing experimental protocol and identifying key time points to assess changes in gene expression
- Processing various blood samples for plasma and PBMCs for future assays
- Associated administrative tasks to ensure grant funding and purchasing compliance.

#### **Research Division Coordinator**

April 2019 – November 2019

- Managed the logistics and operations for Research Faculty and staff in order to make laboratories more productive, efficient, and focused on studies.
  - Assisted in the recruitment and onboarding of key laboratory personnel and faculty.
  - Assisted in the pre and post award grant process by contributing to grant applications, updating budget projections, and balancing personnel FTE as faculty funding fluctuates.
- Participated in quality improvement efforts on behalf of the department to solve issues pertaining to central file sharing and research staff onboarding.

#### **Program Coordinator**

June 2018-April 2019

- Maintained previous duties while additionally supporting the Maternal Fetal Medicine division in faculty scheduling and patient safety and quality improvement meetings.
- During the staff transition within the Residency Program, I managed the scheduling of the program, proactively contributed to call schedules and materials for the second half of the academic year, and helped onboard the new Program Administrators

#### **Student Intern**

March 2016-June 2018

- Supported the residency program through assisting grand rounds evaluation tracking, M&M, and contributing to the creation of the bi-annual resident evaluations

### **Student Public Health Association (SPHA)**

October 2017-October 2018

#### **President**

- Organizing the SPHA board towards events and outreach to support students in studying, career development, and community building
- Acting as the official representative for the SPHA at meetings with the School of Public Health's Executive Committee and Dean's Advisory Council for Students
- Discovering and advocating for the wants and needs of students from the 5 graduate departments, 5 interdisciplinary programs, undergraduate majors, and minors

## **University of Washington Medical Center**

Emergency Department Volunteer

May 2017-Dec 2018

- Frequently checking in with patients to ensure comfort and knowledge of care plan
- Assisting in stocking, cleaning of rooms, and patient transport to allow medical assistants to do more work out of the scope of my volunteer abilities

## **Advisory Search Committee on the Deanship of the School of Public Health**

Student Representative

July 2017- July 2018

- Participated in discussions that lead to an accurate depiction of the challenges and opportunities that a new dean would face when employed by the University of Washington
- Regularly attending meetings, evaluating Curriculum Vitae and cover letters of candidates, and speaking to best represent the student voice in finding a new dean

## **Dream Project**

September 2016-June 2017

Mentor

- Collaborated with a team of other mentors and with underprivileged Seattle schools to help high school students learn about and apply for college, other post-secondary options, and financial support
- Dedicated time to assist high school students accurately convey meaningful messages in their essays

## **Puget Sound Christian Clinic**

March 2017-October 2017

Haller Lake Site Coordinator Volunteer

- Acted as the bridge between clinic staff and volunteers while coordinating the volunteers in patient reception, scheduling, and other tasks that worked towards effective treatment of the clinic's patients

## **OTHER LEADERSHIP EXPERIENCE**

### **Boy Scouts of America**

September 2003-June 2014

- Eagle Scout Award, Conejo District, Ventura County Council, 2012

## **EDUCATION**

### **University of Washington, Seattle**

Bachelor of Science in Public Health; Minor in Chemistry

- Cumulative GPA of 3.58; Purple and Gold Award

## **PUBLICATIONS**

### **PUBLISHED MANUSCRIPTS**

1. Coleman M, Orvis A, Wu TY, **Dacanay M**, Merillat S, Ogle J, Baldessari A, Kretzer NM, Munson J, Boros-Rausch AJ, Shynlova O, Lye S, Rajagopal L, Adams Waldorf KM. A Broad Spectrum Chemokine Inhibitor Prevents Preterm Labor but Not Microbial Invasion of the Amniotic Cavity or Neonatal Morbidity in a Non-human Primate Model. *Front Immunol.* 2020 Apr 30;11:770. doi: 10.3389/fimmu.2020.00770. PMID: 32425945; PMCID: PMC7203489.
2. Coleman M, Armistead B, Orvis A, Quach P, Brokaw A, Gendrin C, Sharma K, Ogle J, Merillat S, **Dacanay M**, Wu TY, Munson J, Baldessari A, Vornhagen J, Furuta A, Nguyen S, Adams Waldorf KM, Rajagopal L. Hyaluronidase Impairs Neutrophil Function and Promotes Group B Streptococcus Invasion and Preterm Labor in Nonhuman Primates. *mBio.* 2021 Jan 5;12(1):e03115-20. doi: 10.1128/mBio.03115-20. PMID: 33402537.
3. Brokaw A, Furuta A, Dacanay M, Rajagopal L, Adams Waldorf KM. Bacterial and Host Determinants of Group B Streptococcal Vaginal Colonization and Ascending Infection in Pregnancy. *Front Cell Infect Microbiol.* 2021 Sep 3;11:720789. doi: 10.3389/fcimb.2021.720789. PMID: 34540718; PMCID: PMC8446444.

## PENDING MANUSCRIPTS

1. Huebner EM, Gudjonsdottir MJ, **Dacanay M**, Nguyen S, Brokaw A, Sharma K, Elfvin A, Hentz E, Rivera YR, Burd N, Shivakumar M, Coler BS, Li M, Li A, Munson J, Orvis A, Coleman M, Jacobsson B, Rajagopal L, Adams Waldorf KM. Virulence, Phenotype and Genotype Characteristics of Invasive Group B Streptococcus Isolates Obtained from Swedish Pregnant Women and Neonates. Submitted 26 Nov 2021. Frontiers in Microbiology. Manuscript ID 822595.

## ABSTRACTS

1. Go JT, Stokes C, Newhouse D, Voss K, Smith E, Baldessari A, Coleman M, Orvis A, Ogle J, Germond A, English C, **Dacanay M**, Parker E, Johnson BW, Snyder JM, Rajagopal L, Kapur RP, Adams Waldorf K, Gale M. Zika virus infection is associated with alterations in myelination during prenatal development. Cytokines 2020, oral presentation.
2. **Dacanay M**, Li M, Huang H, Wu T-Y, Hsiang T-Y, Gale M. Adams Waldorf K. Progesterone suppresses SARS-CoV-2 viral load, cytotoxicity and inflammatory response in a lung cell line. 2021 Society for Reproductive Investigation, E-poster.
3. Kretzer NM, Wu T-Y, Newhouse D, **Dacanay M**, Li M, Orvis A, Coleman M, Gale M, Rajagopal L, Adams Waldorf KM. Severe Intrauterine Infection Induces an Epithelial-to-Mesenchymal Transition Within the Chorionic Villous Tree. Submitted to 2021 Infectious Disease Society of Obstetrics & Gynecology, oral presentation.
4. Huebner EM\*, Gudjonsdottir M\*, **Dacanay M\***, Nguyen S, Brokaw A, Sharma K, Elfvin A, Hentz E, Rivera YR, Burd N, Coler BS, Li M, Li A, Munson J, Orvis A, Coleman M, Jacobsson B, Rajagopal L, Adams Waldorf KM. Virulence Factors Expressed by Invasive Group B Streptococcus Isolates Obtained from Pregnant Women and Neonates. Submitted to 2021 Infectious Disease Society of Obstetrics & Gynecology, oral presentation. \*shared contribution.
5. Coler BS, Wu T-Y, Burd N, **Dacanay M**, Munson J, Carlson L, Esplin S, Kapur R, Feltovich H, Adams Waldorf KM. A Sustained Antiviral Innate Immune Response in Placental Tissues from Pregnant Patients with COVID-19. Submitted to 2021 Infectious Disease Society of Obstetrics & Gynecology, oral presentation.