

## **Dilara Batan**

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### **EDUCATION**

#### **University of Colorado, Boulder — August 2017- present**

Biochemistry Graduate program Advisor: Kristi Anseth

#### **University of Colorado, Boulder — August 2013- May 2016**

Bachelor of Arts in Biochemistry

Summa Cum Laude

GPA 3.702

**Honors Thesis:** *Application of the Split-GFP system to Listeria Monocytogenes in visualization of virulence factor InlC*

**Advisor:** Amy Palmer

### **RESEARCH EXPERIENCE**

#### **Graduate Researcher, Anseth Lab — May 2018-**

Investigation of the mechanotransduction role of calcium signaling in primary porcine valvular interstitial cells using dynamic hydrogel substrates.

#### **Professional Research Assistant, Palmer Lab — August 2016- August 2017**

- Developed novel tools for imaging host-pathogen interactions with a focus on *Listeria monocytogenes*.
- Applied cutting-edge imaging systems visualize to *Listeria monocytogenes* infections of HeLa cells.
- Independently optimized and implemented experiments to gain new insight into the biology of *Listeria*.
- Cooperated with other lab members to develop and organize new project for the lab.
- Regularly presented new data and insights in group meeting
- Participated in graduate level drug design class, wrote practice NIH grant and presented proposal to class.

### **LABORATORY EXPERIENCE**

Graduate Researcher, Anseth Lab — May 2017- present

Undergraduate Lab Assistant, Palmer Lab — May 2015- May 2016

- Researched primary literature, evolved new scientific questions, designed experiments, and from this work, managed and completed honors project

- Collaborated with other lab members to support the progress of their projects.
- Gained a variety of biochemistry and molecular biology techniques.

#### **Related Skills:**

- Molecular cloning, primer design, sequence analysis, critical assessment of plasmid design, restriction cloning, Mini, Midi and Maxi Preps for DNA
- Fluorescence microscopy, wide-field and confocal imaging of live and fixed mammalian and bacterial samples, optimized optical settings, critically assessed necessary controls
- Cell Culture: Cultured and managed stocks of HEK-293 T and HeLa cells, performed chemical transfections
- Bacterial transformations and infections including BSI 2 organisms
- Preparation of bacterial and mammalian growth media
- Collaborated with scientists at Pasteur Institut to establish study of Listeria in the Palmer Lab, optimized infection protocol for HeLa cells with Listeria, adapted protocol to study growth of Listeria when transformed with various plasmids
- Immunofluorescence: surveyed primary research to develop new protocol, systematically optimized each step of procedure
- Western blotting and protein staining for analysis of secreted *Listeria* proteins

## **PUBLICATIONS**

1. **Batan, D.\***, Braselmann, E.\*, Minson, M., Nguyen, DMT., Cossart, P., Palmer, AE., 2018, A Multicolor Split-Fluorescent Protein Approach to Visualize Listeria Protein Secretion in Infection. *Biophysical Journal*, 114: 1-12, 29653838.
2. Braselmann, E., Wierzba, AJ., Polaski, JT., Chrominski, M., Holmes, ZE., Hung, ST., **Batan, D.**, Wheeler, JR., Parker, R., Jimenes, R., Gryko, D., Batey, R., Palmer, AE. 2018. Riboglow: a multicolor riboswitch-based platform for live cell imaging of mRNA and small non-coding RNA in mammalian cells. *Accepted to Nature Chemical Biology*.

## **CONFERENCES**

61<sup>st</sup> Annual Wind River Conference on Prokaryotic Biology, Ester Park, CO. 2018. **Poster Presentation:** Development of a tool to visualize Listeria effector proteins. **Dilara Batan**, Esther Braselmann, Fabrizia Stavru, Pascale Cossart, Amy E Palmer.

## **AWARDS AND RECOGNITION**

AHA Predoctoral Fellowship Jan 2020 - present

## **TEACHING EXPERIENCE**

**CHEM 1021** Introductory Chemistry Teaching Assistant **Fall 2017**

**CHEM 4720/5720 Metabolic Pathways and Human Disease Teaching Assistant Spring 2018**

## **VOLUNTEERING EXPERIENCE**

**Science Fair Judge, Mountain Peak Elementary School— March 2017** Reviewed and assessed projects. Helped rank projects in each grade and determine an overall winner for the event.

**Expanding Your Horizons by Women in Science and Engineering— February 2017** Guided participants to the correct locations. Helped distribute food and drinks. Facilitated the smooth-running of the event.

## **STUDY ABROAD EXPERIENCE**

**National Taiwan Normal University – Summer 2013 and Summer 2014**

- Enrolled in Mandarin Training Center's Summer Intensive Mandarin Program
- Participated in language exchange program which partnered Taiwanese students learning English with English-speaking students learning Mandarin.
- Visited important historical and cultural sites both as a part of the program and for pleasure.
- Practiced traditional calligraphy and Chinese painting in Chinese Culture classes.
- Gave a 15-minute end of the year presentation in Chinese accompanying a written report.
- Continued to develop skill by taking Classical Chinese classes at CU Boulder.

## **FOREIGN LANGUAGE**

Turkish- Native

Chinese- Working proficiency -First place in the 2nd Annual Boulder Chinese Contest

Spanish- Limited working proficiency