

Maegan M. Weltzin, Ph.D.

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EDUCATION

1. PhD: Biochemistry

University of Alaska Fairbanks (UAF)

Dissertation Title:

(2-hydroxyethyl)-1-piperazineethanesulfonic acid (HEPES) Interactions on Nicotinic Acetylcholine Receptors

Dissertation Advisor: Dr. Marvin K. Schulte

Defense: June 9, 2011- Passed

Graduation: August 2011

GPA: 4.00

2. Bachelor of Science: Chemistry Emphasis in Biochemistry

University of Alaska Fairbanks May 2006

GPA: 3.5

EMPLOYMENT

08/17-present	University of Alaska, Fairbanks, Fairbanks, AK, Assistant Professor (tenure-track)
07/17-08/17	University of Alaska, Fairbanks, Fairbanks, AK, Adjunct Faculty
05/17-08/17	Alaska State Public Health Virology Laboratory, Fairbanks, AK, Research Technician I
08/16-05/17	American Lung Association, Fairbanks, AK, Manager
03/12-07/16	Postdoctoral Fellow
01/07-8/11	University of Alaska, Fairbanks, Institute of Arctic Biology, Fairbanks, AK, Graduate Research Assistant
01/05-12/06	University of Alaska, Fairbanks, Institute of Arctic Biology, Fairbanks, AK, Undergraduate Student Assistant
08/05-12/05	University of Alaska, Fairbanks, Department of Civil and Environmental Engineering, Fairbanks, AK, Environmental Chemistry Assistant
08/02-6/04	University of Alaska, Fairbanks, Institute of Arctic Biology, Fairbanks, AK, Undergraduate Student Assistant

SKILLS AND TECHNIQUES

Experience in: experimental design, execution, data analysis, manuscript preparation, public presentations, mentorship, collaborative writing, grantsmanship and classroom teaching.

FELLOWSHIPS AND GRANTS

Submitted

1. **National Institutes of Health.** "Visinin-like protein-1 modulation of nicotinic receptors **Status:**

scored, under review. Role: PI (\$500,000, 4 years, direct cost)

2. **National Institutes of Health.**

Status: under review. (\$100,000; 2 years, direct costs). Role: PI

Current Funding

1. **Alaska IDeA Network of Biomedical Research Excellence (INBRE) Pilot Research Project**

Award: Developing nicotinic acetylcholine receptor subtype selective peptides derived from the rabies virus. **Status: Funded**, Aug 2021 - Aug 2023. (\$150,000). Role: PI

2. **New faculty startup funds** (\$130,000, Aug 2017 - current). Role: PI

Completed

1. **Alaska IDeA Network of Biomedical Research Excellence (INBRE) Pilot Research Project**

Award: Pharmacology and function of nicotinic receptors altered by an epilepsy model. **Status: Funded**, Aug 2019 - Aug 2021 (\$75,300, 19 year with carryforward). Role: PI

- 4. AY2019-20. Biomedical Learning and Student Training (BLaST)**
 - Shelly Thao (Undergraduate, Chemistry) \$ 26,597
 - Shane Bennett (Undergraduate, Biology) \$26,597
 - James McKay (Undergraduate, Biology and Physics) \$5,000
- 5. AY2018-19. Praxis internship program, Smith College**
 - Helen Danielson (Undergraduate, Bioengineering) \$3,000 (Summer 2019)
- 6. AY2018-19. Biomedical Learning and Student Training (BLaST)**
 - Shelly Thao (Undergraduate, Chemistry) \$5,000 (AY18-19)
 - James McKay (Undergraduate, Biology and Physics) \$5,000 (AY18-19)
- 7. Su 2019. Alaska IDeA Network of Biomedical Research Excellence (INBRE)**
 - James McKay (Undergraduate, Biology and Physics) \$9,000 (Summer 2019)
 - Shelly Thao (Undergraduate, Chemistry) \$9,000 (Summer 2019)
- 8. AY2017-18. Biomedical Learning and Student Training (BLaST)**

- of the alpha7 nicotinic acetylcholine receptor. Society for Neuroscience 2021. Virtual. November 2021.
5. **Weltzin MM***, Danielson H***, Suarez S**. Sleep-related Hypermotor Epilepsy-Associated Mutation Disrupts Native Modulator VILIP-1. Society for Neuroscience 2021. Virtual. November 2021. ACS Northwest Regional Meeting. Virtual. May 2021.
 6. Suarez S**, Danielson H***, **Weltzin MM***. Epilepsy Associated Mutation Disrupts VILIP-1 Modulation of Nicotine Receptors. American Association for the Advancement of Science (AAAS) Annual Meeting. Virtual. February 2021.
 7. Thao S***, Spain C***, Hueffer K and **Weltzin MM***. Rabies viral glycoprotein inhibition of neuronal nicotinic acetylcholine receptor subtypes. Society for Neuroscience 2019. Chicago, IL. October 2019.
 8. McKay J***, Smith T**, and **Weltzin MM***. An Examination of Nocturnal Frontal Lobe Epilepsy Associated Mutations in Subtypes of Neuronal Nicotinic Acetylcholine Receptors. Society for Neuroscience 2019. Chicago, IL. October 2019.
 9. Hueffer K, Thao S***, Spain C*** and **Weltzin MM***. Inhibition by rabies glycoprotein neurotoxin like peptide differs between nicotinic acetylcholine receptor subtypes. 30th Annual Rabies in the Americas. Chicago, IL. October 2019.
 10. **Weltzin MM**, George AA, Lukas RJ and Whiteaker P. Occupation of the alpha4(+)/alpha4(-) subunit interface enhances function of the low sensitivity alpha4beta2nicotinic acetylcholine

Associated Mutation in Subtypes of Neuronal Cholinergic Receptors. Neuroscience 2019.
Chicago, IL. October 2019.

Alaska Fairbanks, November 2016.

Neuroscience Guest Lecturer, Department of Biomedical Sciences, Midwestern University, March - April 2014.

Neuroscience Guest Lecturer, Department of Biomedical Sciences, Midwestern University, April 2013.

Biochemistry Guest Lecturer, Department of Chemistry, University of Alaska Fairbanks, May 2013.

Substitute Teacher, Fairbanks North Star Borough School District, September - December 2011. Taught students in K-12 grades.

Graduate Teaching Assistant, UAF Department of Chemistry, January - May 2007
Taught undergraduate Chem 105 chemistry laboratory courses. Responsibilities included preparing the laboratory, lecture, one-on-one student help and grading.

Student Advising

Student	Date	Current Position or Degree Earned
<i>Graduate Students</i>		
Lahra Weber	Aug 2021 - current	Graduate Student (MS)
	Aug 2020 - current	Graduate Student (PhD)
Sarah Suarez	Aug 2019 - current	Graduate Student (PhD)
Tyler Smith	Aug 2018 - 2022	MS
Viktorija Podlutskaya	Dec 2020 Aug 2022	MS
<i>Undergraduate Students</i>		
Aggy Boldt	March 2023- current	Undergraduate Student
Gabriel Miller	March 2023- current	Undergraduate Student
Racheal Ware	May - August 2022	Undergraduate Student
Joey Harun-Delong		

Graduate Student Committees

2023 - current	Thesis Committee, Committee member, Vy Nguyen, Biochemistry and Molecular Biology, UAF (MS)
2023 - current	Thesis Committee, Committee member, Leilani Megliola, Biochemistry and Molecular Biology, UAF (MS)
2022 - 2023	Thesis Committee, Committee member, Zixuan Yan, Pharmaceutical Sciences with specialization in Pharmacology, Northeastern University (MS)
2021 - current	Thesis Committee, Chair , Lahra Weber, Biochemistry and Molecular Biology, UAF (MS)
2020 - 2022	Thesis Committee, Chair , Viktorija Podlutskaya, Biochemistry and Molecular Biology, UAF (MS)
2020 - current	Thesis Committee, Chair Biology, UAF (Ph.D)
2019 - current	Thesis Committee, Chair , Sarah Suarez, Biochemistry and Molecular Biology, UAF (Ph.D)
2018 - 2022	Thesis Committee, Chair , Tyler Smith, Biochemistry and Molecular Biology, UAF (M.S.)
2019 - current	Thesis Committee, Committee member, Moriah Hunstiger, Biochemistry and Molecular Biology, UAF (Ph.D)
2018 - 2020	Thesis Committee, Committee member, Viktorija Podlutskaya, Biochemistry and Molecular Biology, UAF (M.S.)
2018 - current	Thesis Committee, Committee member, Bernard Laughlin, Biochemistry and Molecular Biology, UAF (Ph.D)
2017 - 2022	Thesis Committee, Committee member, Jishnu Krishnan, Biochemistry and Molecular Biology, UAF (Ph.D)

PROFESSIONAL DEVELOPMENT

NCURA webinar on NSF and NIH C&P/Other Support updates, virtual, April 2023
UAF Promotion, Tenure, and Career Success Workshop, UAF, April 2023
UAF Proposal Development Workshop, UAF, April 2022
ACS invited talk, May 2021
UAF Proposal Development Workshop, UAF, April 2021
NSF CAREER Panel Webinar/Workshop, UAF, March 2021
NSF CAREER Panel with UAF Awardees, UAF, March 2021
Clinical Trial Training Seminar Series, UAF, February 2021
UAF 16th Annual Promotion, Tenure, and Career Success Workshop, UAF, April 2021
Pa

2018

Dealing with difficult students workshop, UAF, October 2017

Received training in single channel patch clamp analysis software QuB in Dr. Anthony
- 11, 2013

HONORS

UNAC travel award, January 2023

Alaska INBRE travel award, August 2022

BLaST Scientist of the Month, October 2020

Nominated for the Robert Piacenza Excellence in Teaching Award, Spring 2020

Alaska INBRE travel award, October 2019

Alaska BLaST travel award, July 2019

Alaska INBRE developmental resear

Reviewed Graduate student INBRE research fellowship applications. UAF, Sp 2019

Guest lecture for CHEM 105. UAF Fa 2017

Grand Judge volunteer at the Intel International Science and Engineering Fair, Phoenix, AZ, May 8 - 13, 2016

Volunteer showcasing the laboratory research and techniques to high school students, Phoenix, AZ, November 2015

PUBLIC SERVICE

Fairbanks North Star Borough Air Pollution Control Commissioner, Fairbanks, AK 2017 - current

PROFESSIONAL MEMBERSHIPS

Biophysical Society, 2022 - current

Society for Neuroscience, 2008 - current