

SEMESTER/EXPLORATORY GRANT APPLICATION
Cover Sheet

Amount Requested: \$993.84 _____

Project Information


Friedel, Kelton

Student Participant (Last, First)

The role of metalloproteases in retinal regeneration in zebrafish _____
Project Title (10 words or less)

Sandquist, Elizabeth _____ 2505 _____
Faculty Mentor Name (last, first) Mail Code

Science _____ Zoology _____



Faculty Mentor Department Chair

4-1-19

Date

Please check if attended Research Proposal Workshop:

Date Workshop attended 3-13-2019
(Please fill in the date of attendance)

Kelton Friedel

Student Signature

Student Signature

Student Signature

4/1/2019

Date

Date

Date

Please make additional copies of this form for additional students.

SEMESTER/EXPLORATORY GRANT APPLICATION
Budget Worksheet

BUDGET ITEM	Department or College Funds	Outside Agency Funds	Personal Funds	Undergrad. Research Funds	GRAND TOTAL
Materials			\$2,100.00	\$993.84	\$3093.83
Equipment					
Mileage to gather Data (.38 per mile)					
GRAND TOTAL			\$2,100.00	\$993.84	\$3093.84

NOTES:

- Maximum request not to exceed \$1000 and may not include a Research Scholarship.

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(Suzuki et al., 2006). Early studies of MMP-9 have shown that it may play a crucial role in long term

14a has been shown to lead to developmental defects in the retinas of zebrafish (Janssens et al. 2013)

Once everything was set up, I began to work in the lab under Dr. Sandquist and began to feed our

zebrafish school. I still work with other students to take care of our zebrafish, but I am now advancing

to an independent research project.

I am currently pursuing a Bachelor's Degree of Science in Zoology with a Minor in Chemistry. I

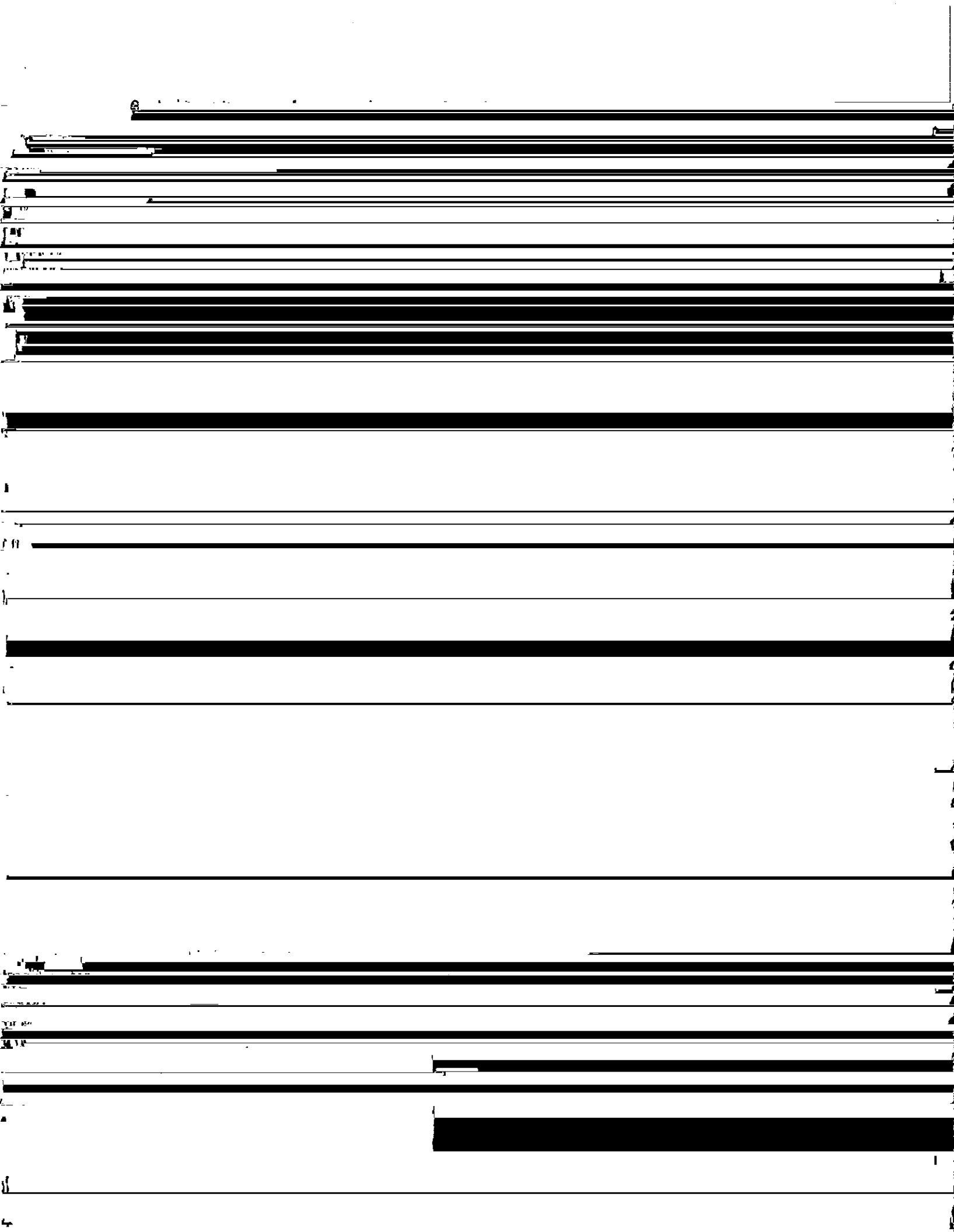
9, and MMP-14a will be used for *in situ* hybridization, as well as control tests with no probe. Zebrafish embryos used for *in situ* hybridization were obtained from the Sandquist lab at Weber State.

Immunohistochemistry will be performed on zebrafish grown in the Sandquist lab at Weber State.

Janssens, E., Gaublomme, D., De Groef L., Darras, V. M., Arckens, L., Delorme, N.,... Moons, L.

(2013). Matrix Metalloproteinase 14 in the Zebrafish: An Eye on Retinal and Retinotectal

Development, 140(10), 2015-2025



SEMESTER/EXPLORATORY GRANT APPLICATION
Faculty Recommendation Form

Student Name (last, first): Kelton Friedel

Project Title: The role of metalloproteases in retinal regeneration in zebrafish

Major/Department: AG

Kelton is majoring in Zoology, which encompasses animal and cell biology. This research will provide a critical foundation for the enhancement of stem cell therapies in the future. He is also a pre-med student with a fascination for research. During this project, will learn common cellular and molecular techniques, as well as research animal husbandry. This opportunity will provide him with a glimpse into the basic research behind the innovative medicine he may one day practice. His research will culminate in the presentation of a poster and contribution to a scientific paper, of which he will likely be an author. This research experience, as well as authorship of a publication, will place him in a competitive position for medical school.

4. Comment on the qualifications of the student to successfully complete this project, both in terms of the project's scope and its time frame.

Kelton has been volunteering 10 hours/week since Fall 2019 providing a good foundation in the technical

This project DOES DOES NOT require review by the WSU Institutional Review Board for Human Subjects or the WSU Animal Care and Use Committee.

IACUC pending (April review).

Elizabeth Sandquist
4/1/19

Project Mentor Signature

Date

2050

6139

Campus Mail Code

Phone Extension