

OFFICE OF ACADEMIC AFFAIRS

Administration Building Room 200
1509 North Boulder Avenue
Russellville, AR 72801-2222

phone: 479-968-0319
fax: 479-968-0644

www.atu.edu

April 29, 2008

Dr. Tsunemi Yamashita
Arkansas Tech University
Russellville, AR 72801

Dear Dr. Yamashita:

Congratulations! Academic Affairs is pleased to announce that your application for the Faculty Professional Development Grant has been recommended by the Professional Development Committee. Based on this recommendation, Academic Affairs has approved the \$1705.00 for your proposal. Requisitions regarding the grant will be processed through your departmental budget and should be expended by June 30, 2008.

We wish you success with this endeavor.

Respectfully,

A handwritten signature in black ink, which appears to read "Jack Hamm". The signature is fluid and cursive.

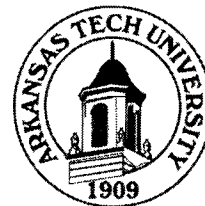
Jack R. Hamm
Vice President for Academic Affairs

JRH:sr

cc: Cohoon
Gagen
File

REQUIRED COVER PAGE

APPLICATION FOR PROFESSIONAL DEVELOPMENT GRANT



****All questions must be completed to be considered for grant award.**

Choose one: <input type="checkbox"/> Creative Activity <input type="checkbox"/> Research Activity <input checked="" type="checkbox"/> Professional Enhancement Activity	Application Deadline Date: <u>April 15, 2008</u> (i.e. October 1, February 1, or April 15) Date of Last PDG Award (Semester and Year awarded): <u>Spring 2007</u> Date of ATU Faculty Appointment (Semester and Year): <u>Fall 1998</u>
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1. Project Title: Development funds to attend the 2008 American Arachnology Society Meeting (AAS)
2. Name of Principal Investigator/Project Director: Tsunemi Yamashita
3. School (abbrev): PLS 4. Department: Biological Sciences 5. Campus Mail Address: MCE 10
6. PI/PD Campus Phone: 968-0327 7. Amount Requested: \$ 1705.00 8. Total Cost of Project: \$ 1705.00
9. Will total funds awarded be expended by June 30th of the current fiscal year: Yes _____ No X
10. If not, what is the total to be expended this fiscal year: \$ 100.00
11. What is the total to be carried over to the next fiscal year: \$ 1605.00 (if approved by the VPAA)
12. Project Completion Date: July 7, 2008 13. Travel Dates: June 25 - July 1, 2008
(if applicable)
14. Does this project involve:
- Yes No
- ☐ ☒ human subjects?
- ☐ ☒ animals/animal care facility?
- ☐ ☒ radioactive materials?
- ☐ ☒ hazardous materials?
- ☐ ☒ biological agents or toxins restricted by the USA Patriot Act?
- ☐ ☒ copyright or patent potential?
- ☐ ☒ utilization of space **not** currently available to the PI/PD?
- ☐ ☒ the purchase of equipment/instrumentation/software currently **available** to the PI/PD?

NOTE: If the answer is "yes" to any of the above questions, the investigator must attach appropriate documentation of approval or justification for use/purchase.

SIGNATURES

Department Contribution (if applicable): \$ NA

Account Number: _____

School Contribution (if applicable): \$ NA

Account Number: _____

Charles Day 4/15/08
Chairperson Date

Mark Mahoon 4/15/08
Dean Date

This Section to be completed by the Office of Academic Affairs

Previous PDG Award final report received: Yes ☒ No _____

PDC Committee Award Recommendation: Yes _____ No _____

PDC Committee Proposal Rank: _____ of _____ Total Proposals.

Recommendation of VPAA: Yes _____ No _____ Recommendation of President: Yes _____ No _____

Award Date: _____



REQUIRED Cover Page

APPLICATION FOR PROFESSIONAL DEVELOPMENT GRANT

**All applicants please complete this cover page.

Choose one: <input type="checkbox"/> Creative activity <input type="checkbox"/> Research activity <input checked="" type="checkbox"/> Professional Enhancement activity	Date of Last PDG Award (Semester and Year awarded): <u>May 2007</u> Date of ATU Faculty Appointment (Semester and Year): <u>Fall 1998</u>
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1. Project Title: Development funds to attend the 2008 American Arachnology Society Meeting (AAS)

2. Name of Principal Investigator/Project Director: Tsunemi Yamashita

3. School (abbrev): PLS 4. Department: BIOLOGY

5. Campus Mail Address: McE 10 6. PI/PD Campus Phone: 968-0327

7. Amount Requested: \$ 1705.00 8. Total Cost of Project: \$ 1705.00

9. Does this project involve: 10. Duration of Project: one month

Yes No

- ☐ ☒ human subjects?
- ☐ ☒ animals/animal care facility?
- ☐ ☒ radioactive materials?
- ☐ ☒ hazardous materials?
- ☐ ☒ biological agents or toxins restricted by the USA Patriot Act?
- ☐ ☒ copyright or patent potential?
- ☐ ☒ utilization of space **not** currently available to the PI/PD?
- ☐ ☒ the purchase of equipment/instrumentation/software currently **available** to the PI/PD?

NOTE: If the answer is "yes" to any of the above questions, the investigator must attach appropriate documentation of approval or justification for use/purchase.

SIGNATURES

Tsunemi Yamashita 4/11/08
Department Head Date

Shahoon 4-11-08
Dean Date

REQUIRED COVER PAGE



This Section to be completed by the Office of Academic Affairs

PDC Committee Award Recommendation: Yes _____ No _____
PDC Committee Proposal Rank: _____ of _____ Total Proposals.
Recommendation of VPAA: Yes _____ No _____
Recommendation of President: Yes _____ No _____
Award Date: _____

PROPOSED BUDGET

FACULTY RESEARCH GRANT

(include budget categories as appropriate)

1. Graduate assistant stipend \$ _____
 Fringe benefits @ .4% (4/10 percent) of graduate assistant stipend _____

2. Non-work study stipend _____
 Fringe benefits @ .4% (4/10 percent) of non-work study stipend _____

3. *Supplies (please list items to be purchased and estimated price per item including taxes and shipping, if appropriate):

Item No. 1 (e.g., software)	Estimated Price	_____
Item No. 2 (e.g., copying costs)	Estimated Price	_____
Item No. 3	Estimated Price	_____
(additional lines as needed)		

Total estimated supplies _____

4. Travel (please list travel expenditures by date and estimated costs):

Travel No. 1	Estimated Price	Airfare	\$700.00
Travel No. 2	Estimated Price	Lodging	\$420.00
Travel No. 3	Estimated Price	Registration	\$85.00
Travel No. 4	Estimated Price	Meals	\$300.00
Travel No. 5	Estimated Price	Local Transport	\$200.00

(additional lines as needed)

Total estimated travel \$1705.00

5. *Capital Outlay (please list items to be purchased and estimated price per item including taxes and shipping, if appropriate):

Item No. 1	Estimated Price	_____
Item No. 2	Estimated Price	_____
Item No. 3	Estimated Price	_____
(additional lines as needed)		

Total estimated capital outlay _____

TOTAL PROPOSED BUDGET \$ 1705.00

Professional Development Grant

Project Title: Development funds to attend the 2008 American Arachnology Society Meeting (AAS).

B. Abstract:

These funds will allow Dr Yamashita to attend the June 2008 AAS meeting in Berkeley, CA (June 25th to June 30th). At this meeting Dr. Yamashita will present the results of scorpion population genetics research funded through a 2007 PDG. In addition, a presentation will be made to encourage the Arachnology society members to attend the 2009 meeting at ATU's Lake Point Conference center.

C. Purpose/Objectives

The 2007 summer PDG allowed the expansion of a research project that focused on the population genetics and the genetic association of populations across the Striped Scorpion's geographic range. Several new populations were sampled and individuals added to several existing population samples. These additions have allowed better discrimination of population differences in the southern and western portions of the scorpion's geographic range. This additional sampling was important as this region of the scorpion's range shows marked genetic differences due to long temporal separation periods. In the poster presented at the Berkeley meeting, results such as phylogenetic trees that illustrates the genetic similarity among populations and a table that presents divergence times between population pairs will be presented.

In the last session of the 2008 conference, a presentation will be shown that provides background about the facilities and meeting site highlights for the next meeting. In this presentation, site facilities at the Point Place Conference center, session schedules, features of the local host's area, and field trips are discussed. The 2009 meeting will be a milestone for Tech as it will host faculty and scientists from many prestigious universities and museums from across the country as well as abroad.

D. Significance/Need

This PDG is needed as the Berkeley conference costs exceed the funds available to the Tech Department of Biological Sciences. These funds will pay for airline costs to and from Berkeley, CA, conference registration costs, housing and meals, as well as other incidental costs.

E. Process for attainment of objectives/Goals

In order to create a poster for the 2008 AAS meeting, several current analyses will need to be completed. These analyses include the divergence time table and a table of genetic statistics for each population and regional populations. Other analyses such as the phylogenetic trees have already been created. The 2009 presentation will contain images of Russellville and the River Valley, the Point Place Conference Center, and natural areas in the Ozarks and Ouachitas that are suitable for arachnid (spider, scorpion, and opiliones) collection.

F. Dissemination of Results

As stated above, the funds for this PDG will provide the means necessary to present and disseminate faculty research and encourage individuals to attend a conference hosted by Tech.

G. Repeated Requests

This project is a first request.

H. Budget Justification

Supplies N/A

Travel \$1705.00

This budget is projected for a six night conference beginning June 25th and ending June 30th.

Airfare \$700.00

This sum is requested to cover any sudden increases in ticket costs as airfare costs have risen recently.

Local Transport \$200.00

Registration \$ 85.00

Lodging \$420.00

This is the current costs for on campus housing at the Univ. CA-Berkeley

Dining/meals \$300.00

This cost is above the current ATU allotment but is needed as the San Francisco area exhibits a much higher meal costs than those in Arkansas.

Budget Total: \$1705.00

I. Bibliography

N/A

CURRICULUM VITAE

PERSONAL INFORMATION

Tsunemi Yamashita

Department of Biological Sciences
Arkansas Tech University
Russellville, AR 72801

(501) 968-0327 office
(501) 968-4964 home
email: tyamashita@atu.edu

PROFESSIONAL INFORMATION

Academic Degrees:

1993 Ph.D.

Department of Biology,
Vanderbilt University, Nashville, TN 37235

1985 B.A.

Hendrix College, Conway, AR 72032

Professional experience:

2003-Present

Associate Professor
Department of Biological Sciences
Arkansas Tech University

1998-2003

Assistant Professor
Department of Biological Sciences
Arkansas Tech University

1998

Adjunct Assistant Professor
Department of Biology
Northeast Louisiana University

1994-1998

Assistant Professor (Graduate Faculty)
Department of Biology
Northeast Louisiana University

1992-1994

Post-doctorate, Division of Hematology
Vanderbilt University Medical School

1986-1991

Teaching Assistant Vanderbilt University

Grant Awards:

- 2008 (T Yamashita) Developing a protein expression system for scorpion β toxins. AR InBre award. \$18,126.31
- 2007 (T Yamashita, Phillip Choi, and Sandra Ryther) The Population Genetics of Stargazing Darter in Arkansas II: Surveying populations. ATU Undergraduate Research Office. \$3,300.00
- 2007 (T Yamashita). Population genetics of the striped scorpion (*Centruroides vittatus*): Expanding previous studies and identifying new genetic markers. ATU Professional Development Grant. \$7050.00
- 2006 (T Yamashita, K McArthur, and R Snead) The Population Genetics of Stargazing Darter in Arkansas. ATU Undergraduate Research Office. \$2,700.00
- 2006 (J Stoeckel and T Yamashita) Status and genetics of the stargazing darter in Arkansas. Arkansas Game and Fish Commission. \$25,000.00
- 2005 (T Yamashita) Molecular biology of the striped scorpion (*Centruroides vittatus*): toxin gene analysis. ATU Sponsored Programs. \$3,300.00
- 2004 (T Yamashita) Molecular biology of the striped scorpion (*Centruroides vittatus*): population genetic structure and toxin gene analysis. ATU Sponsored Programs. \$1,600.00
- 2004 (T Yamashita) Molecular biology of the striped scorpion (*Centruroides vittatus*): population genetic structure and toxin gene analysis. ATU Undergraduate Research Office. \$2,800.00
- 2004 (T Yamashita and DR Rhoads) Identification and characterization of microsatellite loci, SNPs, and toxin genes for genetic analysis of a medically important scorpion species. Arkansas BRIN. \$16,985.00
- 2003 (T Yamashita) BRIN Equipment Supplement to Summer BRIN award. Arkansas BRIN. \$25,350.00
- 2003 (T Yamashita and DR Rhoads) Identification and characterization of microsatellite loci for genetic analysis of a medically important scorpion species. Arkansas BRIN. \$15,590.00
- 2001 (T Yamashita and Joe Stoeckel) Employing genetic markers to reveal taxa in a morphologically similar mussel complex.
Arkansas Tech University Undergraduate Research Office \$3750.00
- 1999 (T Yamashita) An evaluation for investigation of genetic markers for population analysis.
Center for Energy, Natural resources and Environmental Studies. \$7,732.00
- 1998 (R Buchholz and T Yamashita) Investigation of the parasitological and genetic mechanisms shaping sexually selected characters in the wild turkey in Louisiana. Louisiana Education Quality Support Fund (LeQSF). \$70,000.00

- 1998 (A Findley, S Hecht, T Yamashita, and M Taylor) Teaching Molecular Biology in the Laboratory. NLU developmental Grants Program. \$10,000.00
- 1996 (T Yamashita) Improving the undergraduate genetics laboratory. NLU Teaching and Learning Resource Center Grant Award. \$2,855.00
- 1995 (T Yamashita and K Tolson) PCR detection of Mycobacterium leprae in armadillo lymphatic tissue. NLU Faculty Research Award. \$3,510.00
- 1994 (T Yamashita) Population genetics analysis of cottonmouth populations in the upper Saline River. NLU Faculty Research Award. \$3,000.00
- 1988 California Academy of Sciences: Exline-Frizzell Fund for Arachnological Research. \$500.00
- 1987 Sigma Xi, The Scientific Research Society \$300.00
- 1987-1990 Vanderbilt University: Graduate Travel and Research Grants \$2,000.00

Publications:

Yamashita, T and D Rhoads. Striped scorpion, *Centruroides vittatus*, (Scorpiones: Buthidae) phylogeography indicates rapid and recent expansion into Ozark and Ouachita Interior Highlands. Submitted for publication in Molecular Ecology.

Yamashita, T. 2004. Surface activity, biomass, and phenology of the striped scorpion, *Centruroides vittatus* in Arkansas. *Euscorpius -Occasional Publications in Scorpiology* 17: 25-33.

J Lewter, T Yamashita, and AL Szalanski. 2003. DNA sequence analysis of the freshwater mussel, *Lampsilis hydia* (Bivalvia: Unionidae), in select Ozark and Ouachita mountain streams of Arkansas. *J. of the Arkansas Academy of Science* 57: 216-220.

Yamashita, T. and V. Fet 2000 Molecular approaches to Biogeography. In G. Polis and P. Brownell (Eds) Scorpion Biology. Oxford University Press, NY.

Bondurant, M.C., T. Yamashita, K. Muta, S.B. Krantz, and M.J. Koury. 1996. c-myc expression affects proliferation but not terminal differentiation or survival of explanted erythroid progenitor cells. *Journal of Cellular Physiology* 168: 255-263.

Yamashita, T and G.A. Polis. 1995. A Geographic Analysis of Scorpion Populations on Habitat Islands. *Heredity* 75 (5): 495-505.

Yamashita, T. and G.A. Polis. 1995. A test of the central-marginal model using sand scorpion populations (Paruroctonus mesaensis, Vaejovidae). *Journal of Arachnology* 23: 60-64.

Polis, G.A. and T. Yamashita 1990. The ecological importance of predaceous arthropods in desert communities. In G. Polis (Ed) The Ecology of Desert Communities. Univ. of Arizona Press, Tucson, AZ

Abstracts:

Tsunemi Yamashita, Katherine McArthur, and Ryan Snead. A survey of Population Genetic Markers to Discriminate population differentiation in the Stargazing darter, *Percina uranidea*. Arkansas Academy of Sciences, April 2007.

Tsunemi Yamashita, Bryan Stobaugh, and Phillip Choi. Sodium channel peptide toxin genomics in the striped scorpion. American Arachnological Society Meeting, June 2006.

T Yamashita, Maria Longing, and Nick Pridgin, Phylogeography of the striped scorpion, *Centruroides vittatus* in the southwestern United States. American Arachnological Society Meeting, June 2005.

T Yamashita, Maria Longing, and Nick Pridgin, Phylogeography of the striped scorpion, *Centruroides vittatus* in the southwestern United States. Arkansas Academy of Sciences, April 2005.

T Yamashita and DR Rhoads. Identification and characterization of microsatellite loci , SNP's, and toxin genes for genetic analysis of a medically important scorpion species, *Centruroides vittatus*. Arkansas BRIN Research Mentoring Program-Research Day. July 2004

T Yamashita. Surface activity, biomass, and phenology of the striped scorpion, *Centruroides vittatus* in Arkansas. American Arachnological Society Meeting, June 2004.

T Yamashita. Life history characteristics, biomass, and phenology of the striped scorpion, *Centruroides vittatus* in Arkansas. Arkansas Academy of Sciences. April 2004

T Yamashita and DR Rhoads. Microsatellite identification in a medically important scorpion species, *Centruroides vittatus*. Arkansas BRIN Research Mentoring Program-Research Day. July 2003

T Yamashita. Phylogeography of the striped scorpion, *Centruroides vittatus*. Arkansas Academy of Science, April 2003

J Lewter, T Yamashita, and AL Szalanski. DNA sequence analysis of the freshwater mussel, *Lampsilis hydia* (Bivalvia: Unionidae), in select Ozark and Ouachita mountain streams of Arkansas. Arkansas Academy of Science, April 2003

Yamashita, T and D. Hodgson. A screening of two scorpion populations, *Centruroides vittatus* (Say) for random amplified polymorphic DNA markers. American Arachnological Society Meeting, July 2000.

Yamashita, T and J. Qin PCR detection of *Mycobacterium leprae* in the armadillo, *Dasypus novemcinctus*. Association of Southeastern Biologists meeting, April 1998.

Williams, R and T Yamashita. Population genetics of an introduced ladybird beetle (*Harmonia axyridis*) Louisiana Academy of Sciences meeting, February 1998.

Bondurant, M., K. Muta, T. Yamashita, L. Kelley, S.B. Krantz, and M. Koury. Erythropoietin stimulates expression of c-myc without stimulating cell division in explanted mouse and human erythroblasts. Abstract submitted for the American Society of Hematology meeting, December 1993.

Invited Lectures:

Striped scorpion, *Centruroides vittatus*, (Scorpiones: Buthidae) phylogeography indicates rapid and recent expansion into Ozark and Ouachita Interior Highlands. Graduate seminar, Entomology Department, UA-F, March 2007.

Ecology and population biology of the Striped Scorpion, *Centruroides vittatus*. Thirty-seventh Arkansas Junior Science and Humanities Symposium, April 2003