



# FALL FEST 2011

**November 2  
2 - 4 p.m.**

**Goddard Library,  
Academic Commons  
&**

**2nd Floor**



**Faculty Coordinator:** Professor James Córdova,  
Psychology Department, x7268

**Staff Coordinator:** Karen Wilber, Psychology, x7538

*Sponsored by  
The Frances L. Hiatt School of Psychology &  
Dean of the College*





## **FALL FEST**

*Please join us as our own Clark students showcase the fruits of their labor.*

*From 2:00 - 4:00 p.m. students will display their research findings through posters and electronic media (PowerPoint) presentations.*

*This event celebrates the research and creative work Clark Undergraduate students produce under the support and mentoring of the University's distinguished faculty.*

*The presentations are found on both the 1st and 2nd floors of the Goddard Library.*

*Please enjoy some light refreshments found upstairs on the 2nd floor and thank you for coming!*



## Biochemistry and Molecular Biology

1. *Selective point mutations of a chimeric protein, consisting of Arabidopsis Mitochondrial Helicase and Gene 4 product of Bacteriophage T7, to investigate its unusual enzymatic behavior.* **Tatenda Kadungure '12** (in collaboration with: Jamie Towle-Weicksel, graduate student; sponsor: Professor David Thurlow)

2. *The Effect of Reduced KIFAP3 Expression on Transgenic SOD Mice: an ALS Mouse Model.* **Jenni Adams '12** (in collaboration with Matt Stigliano, graduate student; sponsors: Professor John Landers and Professor David Thurlow)

3. *Inhibition of the Self-Assembly of the Arctic Form of the Amyloid  $\beta$ -Protein Associated with Early-Onset Alzheimer's Disease.* **Brianna Anthony '12** (sponsor: Professor Noel Lazo)

4. *SPATA 2 Mediation of CYLD DUB Activity in Programmed Necrosis.* **Sarah Schneider '12** (in collaboration with David Moquin, graduate student; sponsors: Professor David Thurlow (Clark) and Professor Francis Chan (UMass))

5. *Inhibition of Amyloid Formation by Rifamycin SV: Preliminary Studies.* **Jennifer Gaines '12** (sponsor: Professor Noel Lazo)

6. *Lysyl Oxidase Expression in Mammalian Cells.* **Valeria Maldonado '13** (sponsor: Professor Fred Greenaway)

7. *Preliminary Study of Insulin Secondary Structure in Membranes.* **Lindsay Johnson '12** (sponsor: Professor Noel Lazo)

## Biology

8. *How soil moisture affects the physical and chemical properties of soil.* **Daniel Rabinowicz '12** (in collaboration with: Natasha Tchamitchian; graduate student; sponsor: Professor Philip J. Bergmann)

9. *Cloning and Characterization of the NADH-Nitrate Reductase 3'-UTR.* **Marifel Ullola '13** (in collaboration with: Jessica Alexander, Sohini Ghoshroy and Minoli Perera, graduate students; sponsor: Professor Deborah Robertson)

10. *Secondary Analysis of Genetic Interactions with Tumor Suppressor Gene: p53.* **Marc Benoit '12** (sponsor: Professor Denis Larochelle)

11. *The Effects of Nitrate Fertilization on the Physiology of a Common Salt Marsh Plant Species, Spartina alterniflora.* **Katherine Friedman '12** (sponsor: Professor Deborah Robertson)

## Theater Arts

56. *Kennedy Center Playwrighting Intensive, July 2011.* **Michelle Houle '13** (sponsor: Professor Gino Dilorio)

## Theodore Barth Foundation Internship Award

*Thanks to the generosity of the Theodore Barth Foundation, Career Services is able to offer Clark undergraduate students a \$2500 stipend (6 total awards) to support unpaid, summer internships in the nonprofit sector.*

*This funded internship opportunity is open to Clark undergraduate first years, sophomores and juniors who plan to complete an unpaid summer internship within a non-profit organization.*

57. *Jefferson Library.* **Elizabeth Huff '12** (sponsor: Career Services)

58. *Barth Scholar: Learning from bullying, Moving for Peace.* **Natalia Jaramillo '12** (sponsors: Career Services and Enrique Chau)

59. *Summer Internship at The Welcome Project.* **Nina Eichner '12** (sponsor: Career Services)

60. *Targeted Antifungal Delivery to Macrophages Using Glucan Particles Enhances Killing of Candida albicans in vitro.* **Melanie Rasmus '12** (sponsors: Career Services & UMASS Medical School) - **Poster presented on 1st Floor.**

61. *Summer at the Worcester Youth Center.* **Daniel Pologe '12** (sponsors: Career Services & Professor Laurie Ross) - **Presentation on 1st Floor.**

## Urban Development and Social Change

62. *The Lois and Robert Green UDSC Summer 2011 Internship; Worcester's Receivership Initiative: Neighborhood Stabilization through Code Enforcement.* **Jarrold Brennet '12** (sponsor: Professor Sharon Krefetz)

### Physics - (continued)

44. *Fluid mechanics of the rotating cilium.* **Darija Cosic '12 & Fouad Abdulameer '13** (sponsor: Professor Arshad Kudrolli)

45. *Song Gao's compound family: Molecular magnetism in 2D crystals.* **Camilo Cela Lopez '14** (sponsor: Professor Christopher Landee)

46. *Resistance Measurements Using Leads on High Temperature Superconductors.* **Christopher Conroy '13** (sponsor: Professor Charles Agosta)

47. *Application of Information Theory to DNA Sequence Analysis.* **Patrick Tucker '12** (sponsor: Professor Ranjan Mukhopadhyay)

48. *Measuring Wind Data to Study Wind Turbine Feasibility.* **Ben Gardner '12** (sponsor: Professor Charles Agosta)

### Political Science

49. *Congress on Your Corner.* **Rian Watt '14** (sponsors: Professor Mark Miller and the Theodore H. Barth Foundation)

50. *Serbian Objections to European Union Integration.* **Nikoleta Sremac '13** (sponsor: Professor Michael Butler)

### Psychology

51. *Literacy Intervention 2011.* **Alisa Zeliger '13** (in collaboration with: Theresa Jackson, graduate student; sponsor: Professor Marianne Wiser)

### Steinbrecher Fellowship Program

52. *World Bank Urban Upgrading Project in Vietnam* **Minnie Bui '13** (sponsors: Professor Sharon Krefetz and Professor John Brown)

### Studio Art

53. *The Practicing Artist (a series of paintings done over the summer with the Steinbrecher Fellowship).* **Jared Packard-Winkler '12** (sponsor: Professor Elli Crocker) - **Presentation on 1st Floor.**

### Study Abroad Office

54. *Project Playground: Student Engagement Abroad.* **Katy Cleminson '12** (sponsor: Adriane van Gils-Pierce, Director of Study Abroad)

55. *African Street Kids Orphanage Foundation: Broadening Horizons for Ghanaian Youth.* **Kelsey Spratt '12** (sponsor: Professor David Bell)

### Biology (Continued)

12. *Confirmation of Arsenate Reductase Activity by Denitrovibrio acetiphilus Protein YP\_003504839 Using Cross-Species Complementation.* **Lina Sanchez '13** (sponsor: Professor Heather Wiatrowski)

13. *Container Breeding Mosquitoes: Distribution and Interactions.* **Matthew Warndorf '12** (in collaboration with John Soghigian, graduate student; sponsor: Professor Todd Livdahl)

14. *Investigation of DdKifl by RNAi and gene knockout approaches.* **Lauren Beaudin '12** (sponsor: Professor Denis Larochelle)

### Carlson School of Chemistry and Biochemistry

15. *Synthesis and Structure of Substituted Pyrazine Copper Halide Ladders and Bi Bridged Chains.* **Stephanie Korunow '12** (sponsor: Professor Mark Turnbull)

16. *Synthesis and Analysis of Nanometer Scaled Niobium and Copper Oxides.* **Aaron Dewberry '12** (sponsor: Professor Luis Smith)

17. *Investigations of 5-SAP Copper Bromide/Chloride Magnets.* **Alexander Gale '12** (sponsor: Professor Mark Turnbull)

18. *Ligand-Detected NMR Studies of Thioflavin T in the Presence of Insulin Fibrils.* **Veli Selmani '12** (in collaboration with Kevin J. Robins & Gai Liu, graduate students; sponsor: Professor Noel Lazo)

19. *Gene delivery via functionalized Poly(ethylene imine)-DNA polyplexes.* **Abhijit Srungavarapu '12** (in collaboration with Robert P. Doyle, graduate student; sponsor: Professor Sergio Granados-Focil)

20. *Synthesis of proton conducting triazole functionalized polymethylacrylates via Atom Transfer Radical Polymerization.* **Derek Luong '13** (in collaboration with Sean Chen, graduate student; sponsor: Professor Sergio Granados-Focil)

21. *Polymer-based carbonate selective electrodes.* **Rachel Rockwell '12** (in collaboration with Will Wei, graduate student; sponsor: Professor Christina McGraw)

22. *Ion-selective electrodes for marine in-situ applications.* **Katherine Minnix '12** (sponsor: Professor Christina McGraw)

23. *Synthesis of quaternized 4,4'-dibromobiphenyl 2,2'-bisamine derivatives as monomers for copper catalyzed polymerization.* **Phillip Boglisch '12** (sponsor: Professor Sergio Granados-Focil)

### Carlson School of Chemistry and Biochemistry (continued)

24. *Synthesis of ammonium functionalized polyphenylenes as anion exchange membranes.* **Christopher Legacy '12** (sponsor: Professor Sergio Granados-Focil)

25. *Synthesis of new monomers to produce face-segregated ion-conducting polymers.* **Hunter Gray '12** (sponsor: Professor Sergio Granados-Focil)

26. *Effect of backbone polarity on the proton conducting ability of proton conducting polysiloxanes.* **Kelli Stockmal '14** (sponsor: Professor Sergio Granados-Focil)

### English

27. *Luxembourg American Cultural Society Archival Research, Sponsored by the Henry J. Leir Luxembourg Program.* **Melissa Patnode '12** (sponsor: Professor SunHee Kim Gertz)

### Geography

28. *Farming in Brooklyn and how we can do the same.* **Harrison Bass '13** (sponsor: Professor Mark Davidson)

29. *Determinants of Coarse Woody Debris Decay: Comparison in Disturbed and Natural Forests.* **Marcus Pasay '12** (in collaboration with: Melanie Vanderhoof, graduate student; sponsor: Professor Christopher Williams)

30. *Where's the Beef? Tracing back Boston's beef supply.* **Holly Jones '12** (sponsor: Professor Jody Emel)

### Germanic Studies (Self-Design Major)

31. *Chernobyl: Expeditions to a Lost Land—Art Museum Research Assistantship.* **Hannah Schachter '12** (sponsor: Professor Robert Tobin)

### Graduate School of Management

32. *Worcester Biotechnology Cluster Chronology.* **Lisa Kwiatkowski '11** (sponsors: Professor Mary-Ellen Boyle, Professor Jing Zhang and Professor Jennie Stephens)

### Human -Environment Regional Observatory (HERO)

33. *Exploring Water Usage in Suburban Boston.* **Joe Krahe '12** (in collaboration with Dan Runfola and Nick Giner, graduate students; sponsors: Professor Jacqueline Geoghegan and Professor Colin Polsky)

### Human -Environment Regional Observatory (HERO)

#### (continued)

34. *The Massachusetts Forest Monitoring Program: Creating a Time Series of Land Cover Maps for the State of Massachusetts (1976-2009).* **Andrew Shatz '12, Matthew Manley '13, Lauren Ziemer '13, Ariel Walcutt '13 and Phillip Sparks '13** (sponsor: Professor John Rogan)

35. *Urban Ecology and Place-Making: A Neighborhood Approach.* **Martha Ziemer '13** (in collaboration with Katherine Foo, graduate student; sponsors: Professor Colin Polsky and Professor Deborah Martin)

### Holocaust and Genocide Studies

36. *Summer Internships in Holocaust and Genocide Studies.* **Rachel Gore '13, Emma Craig '13 & Morgan Sandler '13** (sponsor: Professor Shelly Tenenbaum)

### International Development and Social Change (IDSC)

37. *Defining Dignity in Haiti.* **Rachel Sorenson '13** (sponsors: Professor Marianne Sarkis and the Theodore H. Barth Foundation)

38. *Youth in El Salvador.* **Nathalia Vega Dalton '12** (sponsor: Professor Ellen Foley)

### Mathematics and Computer Science

39. *Recognizing Tutor Adaptability to Student Behaviour for Future Improvements in Intelligent Tutoring Systems (ITSs).* **Magali Lemahieu '13** (sponsor: Professor Li Han)

40. *Finite Topological Spaces.* **Douglas Crellin '13** (sponsor: Professor Lee Rudolph)

41. *Investigating Convex Configurations of Planar Polygons.* **Jake Kramer '12 & Chris Pietras '12** (in collaboration with Dylan Glotzer '11 and Matthew Valko '11; sponsors: Professor Li Han & Professor Lee Rudolph)

### Physics

42. *Investigations of Extremely 2D Copper Pyrazine Antiferromagnets.* **Daniel Catanzano '12** (sponsor: Professor Christopher Landee)

43. *Comparison of Pyrazine and Pyrazine n-oxide as Bridging Ligands in Copper Molecular Magnets.* **Ben Solomon '14** (sponsor: Professor Christopher Landee)