

Rochester Academy of Science
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Rochester Academy of Science
BULLETIN

"An organization of people in the Natural Sciences"
February, 2009 - Vol. 63, #2

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ABOUT THE **ACADEMY** - The Rochester Academy Of Science, Inc. is an organization which has been promoting interest in the natural sciences since 1881, with special focus on the western New York state region. Membership is open to anyone with an interest in science. Dues are minimal for the Academy, and are listed in the membership application. Each Section also sets dues to cover Section-related publications and mailings.



For applications and/or more information contact membership chairman Stephen Busschaert, 54 Keswick Rd., Rochester, NY 14609; by telephone 288-5683; or by e-mail <sbusschaert@msn.com>.

The *Academy* Internet web page is <http://www.rasny.org>

The *Astronomy Section* Information phone number is (585) 987-5330. The *Astronomy Section* Internet web page is <http://rochesterastronomy.org>

This "**BULLETIN**" is produced monthly, *except July and September*, by the *Astronomy Section, Rochester Academy of Science*. The editor is Frank Bov, 16 Gladbrook Rd., Pittsford, NY 14534 Phone (585) 422-9910 (days) and (585) 385-1518 (evenings), e-mail <editor@rasny.org>

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Jutta Dudley	Publications	385-2368		
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Frank Bov	Director '09	385-1518	422-9910	

The Academy Postal address is P.O. Box 92642, Rochester, NY 14692

LIFE SCIENCES VIDEO AND DISCUSSION SERIES

Life Sciences Section will participate in a newly-developed, year-long series called *Creating the Future*, a bi-weekly video presentation and discussion. We won't know in advance where shows will be held, because the series developers are looking for free meeting rooms. If you are interested in any of the following, please contact Elizabeth Pixley at 334-0977 or Karen Wolf at 670-9709 for more information.

Tuesday, February 3
Ken Illingsworth / **FUTURE BY DESIGN** (2006) shares the life and far-reaching vision of Jacque Fresco. Can a self-taught futurist who is a prolific inventor, engineer and designer, and who is considered by many to be a modern day Da Vinci, describe in detail a sustainable future for us when our political leaders seem so lost?

Thursday, February 19
Elizabeth Pixley / **RENEWAL** (2008) is the first feature-length documentary to capture the breadth and vitality of America's religious-environmental movement. The documentary includes Evangelical, mainline Protestant, Jewish, Buddhist, Muslim, Catholic, southern Baptist and Native American in eight separate stories connecting environmental and justice issues with faith and spirituality.

REPORT FROM THE GRANTS COMMITTEE JANUARY 2009

Requests for proposals for the Rochester Academy of Science Undergraduate Student Science Research Grants went out to all area colleges schools in September, 2008. Eleven proposals were received. The purpose of these grants is to pay for consumable supplies and basic research expenses.

The following awards were made:

1. The top award of \$50 unrestricted went to Laura Shum at SUNY College at Brockport for her proposal "Elucidating the MCH signaling pathway & actin function in 3T3-Li pre-adipocytes." The Biology Department at SUNY Brockport also received a grant of \$500 sent to her advisor Dr. Laurie Cook.

IMPORTANT RAS HERBARIUM QUESTION

Are you interested in helping with the Rochester Academy of Science Herbarium, but are not available on weekdays? If so, would you be available on a Saturday morning? Please send replies to this question to Elizabeth Pixley, Herbarium curator, at epixley@rochester.rr.com, or send a note to 131 Parkmeadow Drive, Pittsford, NY 14534.

Laura expects her research to help facilitate understanding of MCH signaling in non-neuronal tissues.

2. Paolo Grenga, a student at Niagara University was awarded partial support for his proposal, "Reductive animation: comparison of SiCNBH and NaCNBH₃ as reductive animation agents." The Chemistry Department at Niagara University received a grant of \$200 sent to his advisor Dr. Ronny Priefer. Paolo's objective is to compare the effectiveness of SiCNBH and NaCNBH₃ in the reductive animation reaction.

3. Danielle Raymond, a student at Niagara University was awarded partial support for her proposal, "Synthesis of phenol based polymers." The Chemistry Department at Niagara University received a grant of \$100 sent to her advisor Dr. Ronny Priefer. Danielle will synthesize a library of polymers with different electronegative components and determine their effectiveness as anti-microbial agents.

4. Brittany Sumbler, a student at Niagara University was awarded partial support for her proposal, "Development of PTB1B inhibitors for the treatment of type II diabetes." The Chemistry Department at Niagara University received a grant of \$100 sent to her advisor Dr. Ronny Priefer.

Brittany plans to develop an inhibitor to slow the dephosphorylation process by screening compounds for their inhibition of PTB1B (people with type II diabetes have overactive PTB1B which prevents insulin binding and transport of glucose into cells).

5. Michelle Ingalsbe, a student at Niagara University was awarded partial support for her proposal, "Synthesis of a novel cubane-based chiral ligand and its application in asymmetric reactions." The Chemistry Department at Niagara University received a grant of \$100 sent to her advisor Dr. Ronny Priefer. Michelle will synthesize a ligand to understand how chirality can affect the biological action of a drug such as thalidomide.

6. Justin Griffiths, a student at Niagara University was awarded partial support for his proposal, "Synthesis of BF₂ chelated azadipyromethene dye derivatives." The Chemistry Department at Niagara University received a grant of \$100 sent to his advisor Dr. Ronny Priefer. Justin will study a fluorescent dye that may have potential applications in photochemical therapy which is used for treatment of cancer.

7. Kyle Biegasiewicz, a student at Niagara University was awarded partial support for his proposal, "Work towards a library of isoflavone derivatives." The Chemistry Department at Niagara University received a grant of \$50 sent to his advisor Dr. Ronny Priefer. Kyle plans to will synthesize isoflavone derivatives including the antioxidants found in soybeans.

8. Megan McGahan, a student at Niagara University was awarded partial support for her proposal, "Phenomena of hormesis on the growth of *Escherichia coli* and *Staphylococcus epidermis*." The Chemistry Department at Niagara University received a grant of \$50 sent to her advisor Dr. Ronny Priefer. Megan's research will examine the effect of hormesis on the growth of two bacteria which may help reveal the effect of antimicrobial agents currently being discharged into our water.

9. Victoria Assimon, a student at Nazareth College was awarded partial support for her proposal, "Resin bound iron as a Lewis Acid catalyst for fatty acid esterification." The Chemistry Department at Nazareth College received a grant of \$50 sent to her advisor Dr. Richard Hartmann. Victoria's project will investigate a mechanism to catalyze the conversion of vegetable oil into biodiesel.

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LECTURES IN APPLIED ANTHROPOLOGY

Monkey Business: Anthropological Reflections on the Medical Melding of Human and Animal Bodies in Organ Transplantation

Lesley Sharp
Professor and Chair, Anthropology
Department Barnard College

Thursday, February 26, 7:30 PM
Basil Hall Auditorium,
St. John Fisher College

Professor Sharp has been engaged in research on organ transplantation, procurement, and donation in the United States for over a decade. Key foci include medical ideologies, body

commodification, and the transformative properties of organ transplants specifically in reference to the social construction of the self. Her current research explores the nature of the scientific imagination specifically in reference to highly experimental efforts to develop organs of non-human origin, ranging from those culled from genetically altered simians and swine to mechanical prototypes (especially those that assist or replace the heart)..

Admission is free; the public is welcomed

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RMSC DISTINGUISHED SCHOLAR LECTURE

Fuel Cells and the Future Hydrogen Economy

Daniel O'Connell
Gary Stottler
GM Fuel Cell Activities Center

Wednesday, February 4, 7:30 PM
Eisenhart Auditorium

Discover the latest advances in GM's Fuel Cell Technology, including the "Project Driveway" vehicle introduction. Learn about hydrogen's impact on emissions and global warming, the challenges of creating hydrogen infrastructure, and current successes.

Daniel O'Connell is Director—Global Fuel Cell Service, Support and Hydrogen Infrastructure. Gary Stottler is Manager—Fuel Cell Electric Vehicle Service and Support.

Tickets are \$15 for non-RMSC members, \$8 for students through grade 12 or college students with ID. Call (585)697-1942 for more information and reservations.

EVENTS for FEBRUARY 2009

(For updates to events, check the Academy web site, <http://www.rasny.org>, or appropriate Section web site.)

Tue 03 FOSSIL MEETING

7:30 p.m., Community Meeting Room, Brighton Town Hall, 2300 Elmwood Ave. John Handley, RAS Fossil Section President will give a presentation about the Colorado Plateau. Visitors welcome. Please contact Anne-Roth Blizzard at <annethefossil@aol.com> or John Handley at (585) 802-8567 for more information.

Tue 03 LIFE SCIENCES DISCUSSION SERIES

Ken Illingsworth / FUTURE BY DESIGN (2006) shares the life and far-reaching vision of Jacque Fresco. Please contact Elizabeth Pixley at 334-0977 or Karen Wolf at 670-9709 for more information.

Wed 04 DISTINGUISHED SCHOLAR LECTURE

7:30 PM in Eisenhart Auditorium. Daniel O'Connell and Gary Stottler from the GM Fuel Cell Activities Center will speak on: *Fuel Cells and the Future Hydrogen Economy*. Tickets are \$15 for non-RMSC members, \$8 for students. Call (585)697-1942 for more information and reservations.

Fri 06 ASTRONOMY GENERAL MEETING

7:30 PM at RIT, Gosnell Hall, room A300. Steve Fentress, Director of Strassenburgh Planetarium will speak on: "Sound Waves in the Early Universe". We'll also have a short talk by members as well. Visitors

are always welcome. Come early for snacks and conversation. For more information, contact Carol Latta at 230-9548 or <cosmos@rochester.rr.com>.

Sun 15 RAS BULLETIN

Deadline for event notices and articles for the March issue.

Tue 17 MINERAL MEETING

7:30 p.m. at the Brighton Town Hall at 2300 Elmwood Avenue, in the Upstairs Auditorium. Paul Dudley will give a talk on Meteorites. Door prizes and refreshments; visitors welcome. For more information, e-mail <mineral@rasny.org>, or check the Mineral Section Web page for any updates.

Wed 18 RAS BOARD MEETING

7:00 PM Brighton Town Hall, 2300 Elmwood Ave., in the Stage Conference Room. Everyone welcomed.

Wed 18 LIFE SCIENCES HERBARIUM WORKSHOP

10:00 AM to 2:00 PM. The RAS Herbarium is located in the basement of the Rochester Museum and Science Center (RMSC). No experience needed! Plan to come and help with this valuable historic plant collection. If you plan to attend, please send an RSVP to Elizabeth Pixley. Then, at RMSC, go to the front desk and ask staff person there to

call ext. 368, the phone in the Herbarium. You can either bring a lunch or purchase food at the RMSC café. For more information, contact Elizabeth Pixley, herbarium curator (334-0977 or epixley@rochester.rr.com).

Thur 19 LIFE SCIENCES DISCUSSION SERIES

Elizabeth Pixley / RENEWAL (2008) is the first feature-length documentary to capture the breadth and vitality of America's religious-environmental movement. Please contact Elizabeth Pixley at 334-0977 or Karen Wolf at 670-9709 for more information.

Thur 26 ANTHROPOLOGY LECTURE

7:30 PM in Basil Hall Auditorium, St. John Fisher College. Lesley Sharp will speak on "Monkey Business: Anthropological Reflections on the Medical Melding of Human and Animal Bodies in Organ Transplantation." Professor Sharp is Professor and Chair of the Anthropology Department at Barnard College. This lecture is free and open to the public. Refreshments will be served afterward.