



# NewsLetter

## The New Jersey Academy of Science

Kean University, Center for Science, Technology & Math Education  
1000 Morris Ave. T-117, Union, NJ 07083

Volume 39, Number 1

Winter Issue 2007

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### 52<sup>TH</sup> ANNUAL MEETING

**SATURDAY, APRIL 21, 2007**

#### **KEAN UNIVERSITY**

The 52<sup>st</sup> Annual Meeting of the New Jersey Academy of Science will be held on Saturday, April 21, 2007 on the campus of Kean University. Laura Lorentzen (Kean University) will be the Chairperson of the Science Program and the Local Coordinator. The Junior and Senior Academies will meet together, and as in the past, there will be both paper and poster presentations.

The pre-registration forms for both the Junior and Senior Academies are included in this NewsLetter and can also be found on our website at [www.njas.org](http://www.njas.org). Registration fees for the Senior Academy meeting are \$25.00 for members, and \$15.00 for graduate and undergraduate students. The abstract forms for both the Senior and Junior Academy presentations are included in this NewsLetter and are also on our website. All abstracts must be submitted in electronic form. The electronic submission should be sent as an attachment to [LLorentzen@hotmail.com](mailto:LLorentzen@hotmail.com). The paper submission should be sent directly to the NJAS at the address at the top of this NewsLetter. Senior Academy abstracts and the abstract fee of \$10 along with the registration fee must be received by March 19, 2007 to be included at the Annual Meeting.

Junior Academy (High School Students) can obtain pre-registration and abstract forms from their science teachers, in this NewsLetter, or on our website. Junior Academy registration and abstract fees are \$15.00 for members and \$5.00 for family and guests. All abstracts must be submitted in electronic form. Full instructions for abstract preparation are also on our website.

**All presenters must be academy members and must be pre-registered by the above date in order to present at the meeting.**

### **DARREN HALINIEWSKI**

**TO BE KEYNOTE SPEAKER AT**

#### **NJAS ANNUAL MEETING**

Our keynote speaker in 2007 will be Darren Haliniewski, DNA Analyst at the Armed Forces DNA Identification Laboratory (AFDIL). The title of Mr. Haliniewski's presentation will be " Bringing Them Home: The Armed Forces DNA Identification Laboratory "

AFDIL, located in Rockville, MD, was created in 1991 to assist in providing the fullest possible accounting for missing U.S. service members. AFDIL's role in this vital mission consists primarily of the use of DNA analysis for the identification of the recovered remains of American soldiers. AFDIL has become a global leader in the identification of human remains, processing approximately 800 degraded skeletal samples annually in addition to providing support to the Armed Forces Medical Examiner System in our current engagements. AFDIL's goal is to never have another American soldier buried as an unknown, and to return to their families the remains of those who have made the ultimate sacrifice for their country.

Darren Haliniewski grew up in Union, NJ and is a graduate of Union High School. He received his degree in Biology from the University of Miami in Coral Gables, FL before returning to NJ. As a research scientist at the Schering-Plough Research Institute, Darren contributed to research focused on the discovery of new drugs for the treatment of Hepatitis C. During this time, Darren also continued his education at Kean University and received a Masters degree in Biotechnology. This degree enabled Darren to pursue his ongoing interest in forensic science and accept a position as a DNA Technician at the Armed Forces DNA Identification Laboratory (AFDIL) in Rockville, MD. Currently a DNA Analyst at AFDIL

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Directions, including a map to Kean University, are available at: <http://www.kean.edu/directions.html>.

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## TO THE MEMBERSHIP,

I am writing to ask you to serve as a judge at the **New Jersey Academy of Science 52<sup>nd</sup> Annual Research Meeting, which will be held on Saturday, April 21, 2007 at Kean University in Union, NJ.** At this meeting, Senior Academy and Junior Academy of Science students will present both oral and poster presentations on their scientific research

I anticipate that over 100 students from all over New Jersey will participate. Meeting welcome/check-in begins at 8:00 a.m., and the student research presentations run from 8:30 a.m. until 11:30 a.m. Judges are present during the 10 minute oral presentations to critique the students' presentations and then engage in a 5 minute question-answer session with the student. After the student presentations, judges confer with one another to select the winning presentations in each specific scientific category. All judges are invited to attend a luncheon followed by the keynote speaker and awards ceremony for the student presentation winners.

If you would like to serve as a judge at our annual NJAS meeting, we would greatly welcome your effort and appreciate your time. **Please indicate your desired action on the response form included on page 9 this NewsLetter.** Please mail the form to:

*New Jersey Academy of Science  
c/o Kean University  
Center for Science, Tech & Math Educ  
1000 Morris Ave. T-117  
Union NJ 07083*

If you wish to contact me with any questions or comments, feel free to do so. Thank you for your consideration.

Sincerely, Laura Lorentzen, NJAS President-elect,  
[LLorentzen@hotmail.com](mailto:LLorentzen@hotmail.com)

## NORTH JERSEY REGIONAL SCIENCE FAIR

The 2006 North Jersey Regional Science fair will be held on March 16-17, 2007 at the College Avenue Campus. NJRSF is a great opportunity to promote science education and encourage scientific literacy in New Jersey. In order for the fair to be a success, help is needed in the judging process. Please consider helping out this year as a judge on Friday evening and/or Saturday morning. This year, we expect to have the highest level of participation in the history of the Fair. **YOUR HELP IS REALLY NEEDED!!!** As always, the first judging round on Friday night (6:30-9:30 pm) will center on category judging, with a team assigned to each category. The judging on Saturday morning will be special awards (8:30 am - 12 noon) and the selection of the finalists for the ISEF trips. Saturday afternoon the finalists will present their work at the ISEF Finalist Symposium, and then the team captains from each category will select the winners of the trip awards. Judges are needed for all categories on either day - or, join us for both days! We need all the judges we can get! New judges will set up a password as they register at <http://njrsf.org/njrsf.html>. Please consider participating in the 2006 NJRSF as a judge. If you have specific questions, please direct them to Lenore Neigeborn at: <[neigebor@rci.rutgers.edu](mailto:neigebor@rci.rutgers.edu)>

## 2007 GIA WINNERS

The following students were selected to receive Grants In Aid Research Program awards for 2007:

**Laura Toth**, JFK, Title: The Effect of the Pathogen *A. faecalis* on the Lifespan of Insulin-like Signaling Pathway Mutants of *C. elegans*

**Manalika Ringshia**, JFK Title: The Role of *Ocimum sanctum* Extract as a Natural Preservative

**Yinuo Wang**, High Technology HS Title: The Effect of *Aglaonema pictum* on the Level of Ammonia Gas in Sealed Indoor Air

**Katy Dynarski**, High Technology HS Title: The Effect of Number of Tank Companions on the Schooling Behavior of Zebrafish (*Danio rerio*)

**Charmi Shah**, JFK Title: The Effect of Green Tea Extract on *Agrobacterium tumefaciens* induced in Sunflowers

**Aisha Hasan**, JFK Title: Stress Tolerance Levels of Plants Treated with Acetylsalicylic Acid (Aspirin)

**Maya Jenkins**, MATES Title: The Detection and Effects of Chloride in Soil

**Nadav Nahumi**, Ocean Township High School Title: The effects of music on a cricket's (*Acheta domestica*) chirp

**Aakruti Bhalja**, JFK Title: Iron Fertilization in Freshwater

**Kruti Sanghavi**, JFK Title: The Effect of Bitter Melon on the Leptin Pathway

**James Murphy**, Science Academy Morristown Title: Determining and Comparing the Fuel Efficiency of Biodiesel, Biodiesel B20, and Petroleum Diesel

**Katelyn Zimmerman**, Ocean Township High School Title: Effects of Caffeine on House Crickets (*Acheta domestica*)

**Josephine Chu**, High Technology HS Title: The Effect of Light on Bacterial Growth

**Akriti Kapoor**, JFK Title: Concentration of Juglone Toxin for Allelopathetic Use in Tomato Plants

Through the cooperation of the New Jersey Academy of Science, the American Association for the Advancement of Science, regional industrial and academic scientists and the Junior Academy of Science, grants are awarded to students in grades 9-12 who plan to complete a science (any discipline) or mathematics research project during the school year. The awards, up to \$150.00, are granted on a competitive basis and are to be used for the purchase of needed equipment and supplies for research projects carried out by an individual or by a team of students. We encourage you to participate in this program to obtain funding and recognition for your research efforts. Details of the program are available at the NJAS website ([www.NJAS.org](http://www.NJAS.org))

## SCIENCE LABORATORY WORKSHOPS FOR 6<sup>TH</sup>-12<sup>TH</sup> GRADE TEACHERS

During the 2005-06 academic year the NJAS, together with the American Physiological Society, the Physiology & Biophysics Department of UMDNJ-RWJMS and the NJ Center for Science Technology & Mathematics Education at Kean University, sponsored a team of NJAS members and other educators and high school teachers to give two all day workshops on the "Physiology of Fitness". Fifty middle and high school teachers attended the workshops at RWJMS. This program was designed and partially funded by the American Physiology Society and involved a Local Outreach Team of educators, led by Dr. Nancy R. Stevenson, to help 6<sup>th</sup>-12<sup>th</sup> grade science teachers improve and expand their teaching activities.

The workshop activities involved general cardiac physiology and the effect of exercise on cardiac and other physiological parameters. The teachers were the "students" in the active, inquiry-based learning activities that included 1) the use of the internet for information gathering, 2) discussion of teaching strategies and how to incorporate more inquiry-based activities into a standard "follow the directions" laboratory, and finally 3) hands-on lab activities. The content of the workshops was in line with the National Science Standards so the teachers were able to obtain continuing education credit for participating in the workshops. There were two lab activities. One was to measure the effect of exercise on blood pressure, heart and respiration rate. The other was to design experiments to evaluate the effect of tube diameter, length, and fluid viscosity on fluid flow rates.

Exit evaluations of the team members and the teachers indicated that everyone thought the workshops went well and were positive learning experiences. The team members continue to be available to help teachers transfer their learning experiences to their classroom teaching. Follow up evaluations, 6 to 12 months after the workshops, indicate that a number of the teachers are incorporating aspects of the workshop into their teaching activities.

This academic year, the Local Outreach Team has decided to do another set of two workshops. This year the topic will be Neural Networks. We are in the process of setting up the first workshop for December 4 and looking forward to some fun working with reflexes and reactions.

## MAGIC RULES FOR GIVING AN ILLUSTRATED TALK

By David Pearson, Ph.D., Biology Department, California State University at Los Angeles

It should not be very difficult to organize yourself to communicate effectively if you have the following...

1. A good idea of how your work fits into the "big picture" of a major scientific research program. In other words,
  - o Why is it important?
  - o A definition of what you were attempting to investigate.
  - o Define your project.
2. Knowledge of the methods you used and why you used them.
3. A clear description of your findings, even if (as is often the case) the work is incomplete.

### PUTTING IT TOGETHER

1. Start planning early.
2. Gather your references, lab book, other data, scratch paper, and writing tool. Sit in a quiet place with a large surface so you can spread your materials.
3. Make a rough outline with a few words or statements under each heading. At each point, make a note of the visuals you might want to use. You might want to include quick sketches of the visuals. Introduction and, background- Here you include the "big picture" information and define your project.
4. Methods- how did you proceed? Conclusions: What does the above mean? Why is it important? What will happen next?
5. Acknowledgments: It is always better to give too much credit to those who helped you than not enough.
6. Take the outline to your mentor and let her/him critique it. Come to an agreement on what should be included.
7. When you have decided what to present, refine the outline. Do not write the talk out word for word: the best talks usually come from the briefest outlines.
8. Prepare your visuals.
9. Practice, practice, practice:
  - o Go into a room alone with your outline and your visuals.
  - o Stand.
  - o Decide on an opening sentence or two and memorize them.

- o Speak aloud even though no one can hear you.
- o Stop and start over as often as necessary to make it sound right. Practice using your visuals as you talk.
- o Use a pointer to direct attention precisely.
- o If necessary, decide what to eliminate to pare your talk down to the required length.
- o Practice the talk until you are comfortable with it.
- o Finally, work with audiences such as science classes, science club, teachers, mentors, and family who will listen and give you feedback on your presentation.

### A FEW SPECIAL THINGS TO REMEMBER:

1. *Voice*: Do not shout, but do speak up and project.
2. *Eye contact*: Try to establish individual eye contact with as many people as possible.
3. *Body language*: Stand straight; smile; move around a little; have a good time.
4. *Pointer*: Remember to use it effectively.
5. *Audience questions*: It is great if you know the answer; if you do not, do not fake it. Just say, "I don't know."
6. *Visuals*: Place 2 x 2 slides correctly into your carousel so they do not project upside down! Transparencies should have simple diagrams/outlines.

### PRESENTING IT:

1. Establish yourself as a person with your audience before you have the lights turned off and start showing slides.
2. Neither write out your talk word for word nor memorize it.
3. Use effective graphics.
4. Do not try to impress anyone with how much you know by using scientific jargon or many technical terms, especially if you have not clearly defined them.
5. **DO NOT PANIC!** Look out at the audience; take one more slow, deep breath and **SMILE** before you say a word.

"EVERYTHING ELSE WILL TAKE CARE OF ITSELF." D. Pearson

**Application For NJ Academy of Science (NIAS) Membership**

**NOTE: if you have already paid your 2007 NIAS membership dues, proceed directly to Annual Meeting Registration & Abstract Submission Form.**

**Dr., Miss, Ms., Mrs., Mr. (Please Circle One)**

**Last Name:** \_\_\_\_\_ **First Name:** \_\_\_\_\_

**Organization/Ed. Unit:** \_\_\_\_\_

**Mailing Address:** \_\_\_\_\_  
\_\_\_\_\_

**Phone:** \_\_\_\_\_ **Fax:** \_\_\_\_\_

**E-mail:** \_\_\_\_\_

**Professional Field(s):** \_\_\_\_\_

**Signature:** \_\_\_\_\_ **Date** \_\_\_\_\_

**Please check type of annual membership:**

**Regular Member**                      **\$40.00**

Post doc

Ph.D/M.S. in Academia

Ph.D./M.S. not in Academia

High School Teacher

Other science or math professional [Please indicate \_\_\_\_\_]

**Student Member**                      **\$15.00**

High School

Bachelors

Masters

Doctoral

**Life Member (1 payment)** **\$250.00**

**Retired/Emeritus**

**\$15.00**

**Corporate Member**                      **\$500.00**

**Corporate Sponsor**

**\$1000.00**

**Corporate Benefactor**                      **\$2500.00**

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Send the application and fee to:  
Make check payable to NJAS

NJAS c/o Kean University  
Center for Science, Tech & Math Educ.  
1000 Morris Ave. T-117  
Union NJ 07083

**2007 Annual NJAS Meeting Registration & Abstract Submission Form**  
**Must Be Received By March 19, 2007**

**PART I: YOUR CONTACT INFO**

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Organization/Ed. Unit: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

**PART II: REGISTRATION FOR ATTENDING THE ANNUAL MEETING**

**If you will be attending the meeting you must register in advance (there is no on-site registration)**

**Indicate your type of registration:**

____NJAS Member	\$25	____Non NJAS Member	\$35
____Graduate Student Member	\$15	____Undergraduate Student Member	\$15
____High School Teacher Member	\$15	____High School Student Member	\$15
____Family member of high school student presenting at the meeting	\$5		

Lunch will be provided if you indicate below and send payment. Otherwise, you will likely need to DRIVE off campus to purchase lunch elsewhere.

\_\_\_\_Lunch \$10 (Indicate if special request like vegetarian, etc. \_\_\_\_\_)

If you are not presenting at the meeting, then proceed to PART IV.

**PART III: ABSTRACT SUBMISSION FOR PRESENTATION AT ANNUAL MEETING**

**If you wish to present, you must be a NJAS member & submit an abstract**

There is a standard \$10 fee for each abstract submission. Abstracts are published in the *NJAS Bulletin*, with the exception of high school students whose abstracts are printed in NJAS Newsletter. Please see the end of this form for full details regarding format guidelines for abstracts.

### **PART III: ABSTRACT SUBMISSION FOR PRESENTATION (continued)**

Whether you are a high school/college/master's student presenting an oral talk, or a doctoral student or science/math professional presenting a poster, please indicate your 1st & 2nd choice of subject category for your abstract. In order to keep the program balanced, some reassignment of abstracts may be necessary.

<input type="checkbox"/> Biology I: botany/ecology/environmental science	<input type="checkbox"/> Archaeology/Anthropology
<input type="checkbox"/> Biology II: health/medicine/cell or molecular	<input type="checkbox"/> Microbiology
<input type="checkbox"/> Chemistry/Biochemistry/physics	<input type="checkbox"/> Marine Science/Atmospheric Science
<input type="checkbox"/> Math/Engineering	<input type="checkbox"/> Geology/Geography
<input type="checkbox"/> Computer Science	<input type="checkbox"/> Science or Math Education
<input type="checkbox"/> Psychology/Animal behavior	<input type="checkbox"/> Other _____

### **Doctoral students, or Science or Math or Education professionals may only present posters** **Indicate your category of poster presentation:**

<input type="checkbox"/> High School Teacher	\$10	<input type="checkbox"/> Post doc	\$10
<input type="checkbox"/> Ph.D. student	\$10	<input type="checkbox"/> Ph.D. or equivalent	\$10

For posters, 6' long tables will be provided. Posters will be placed in a general meeting area for display. All *posters must be self-supporting aka self-standing* on the tabletop. Posters are displayed during the entire day.

### **High school, college or a master's degree students may only present 10 min talks in competition**

#### **Indicate your category of oral presentation:**

<input type="checkbox"/> Master's Student NJAS Member	\$10
<input type="checkbox"/> Undergraduate Student NJAS Member	\$10
<input type="checkbox"/> High School Student NJAS Member	\$ 0 (abstract fee is waived)
<input type="checkbox"/> High School Student NJAS Member who is a 2007 NJAS Grant-In-Aid Winner	\$0 (fee waived)

***NJAS Grant-In-Aid winners 2007 must submit an abstract & present.***

Talks are to be PowerPoint; bring slides on a USB flash drive, a CD, your own laptop, or email your slides to a web-based email account. Presentation rooms are wireless, with a computer and LCD projector. If you cannot do your talk as PowerPoint and require an overhead transparency, you must indicate that by checking here \_\_\_\_\_). Oral presentations should be 10 minutes in length, then 5 minutes allotted for question/answer.

### **PART IV: PAYMENT TALLY**

Please tally the selections you have indicated on this form regarding meeting registration, lunch if desired, and abstract fee if presenting. Make checks payable to: **NJAS**

**Send all paperwork for meeting registration and abstract submission and the fees by March 19 to:**

NJAS c/o Kean University  
Center for Science, Tech & Math Educ  
1000 Morris Ave. T-117  
Union NJ 07083

***The actual abstract for presentation is to be emailed by March 19th to LLoorentzen@hotmail.com***

## Abstract Format for Oral/Poster Presentations for NJAS Meeting 21 Apr 2007 at Kean University

Follow these instructions (improperly prepared abstracts/missing info may cause rejection of your abstract):

1. This year we will only accept abstracts that are submitted in electronic form. The preferred format is MSWord, Arial font, size 10, fully justified. RTF format is also acceptable. Abstracts should be sent via an attachment to an e-mail message to Dr. Laura Lorentzen at LLorentzen@hotmail.com
2. The abstract should be approximately 200 words long, excluding title, author and school or institution affiliation information.
3. Type the title in bold and all capitals, except for scientific names.
4. Start authors with the first author. Underline the name of the presenting author. The presenting author must be an active NJAS member. If the presenting author is a student, type (student) after the presenter's name. The presenting author must complete the information requested below the example of a typical abstract.
5. Leave a blank line before the text.
6. **All abstracts and abstract fees MUST be received by March 19, 2007 to be guaranteed a room assignment. In order to have the printed programs ready for the meeting, late submissions CANNOT be accepted for any reason.**
7. You will be notified by e-mail after the abstract has been received and accepted, and again after the presentation time is established

*Example of typical abstract:*

### **SYNTHESIS AND IDENTIFICATION OF TERPENYL ETHERS - A COOPERATIVE COLLEGIATE-INDUSTRY PRODUCT**

Joe Smith (student), Jane Doe, Chemistry Department, Kean University, Union NJ 07083

A series of terpenyl ethers was synthesized and analyzed for purity and structure. The ethers were submitted for aroma quality evaluation...

**The Presenting Author must complete the information below & must be a 2007 dues paying NJAS member.**

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Project Title: \_\_\_\_\_  
\_\_\_\_\_

School/Institution Name \_\_\_\_\_

School/Institution Address \_\_\_\_\_

Street City State Zip Code

Scientist/Teacher Advisor's Name \_\_\_\_\_

Last Name First Name Title

Scientist/Teacher Advisor's E-mail \_\_\_\_\_

Scientist/Teacher Advisor's Phone \_\_\_\_\_

**RESPONSE FORM FOR JUDGES FOR THE 2007 NJAS ANNUAL MEETING**

**If you are a science or math professional (hold at least a master's degree in science or math), please consider serving as a judge for the NJ Academy of Science's annual meeting and student competition on April 21, 2007 at Kean University (Union, NJ) from 8:00am to 2:00pm. Judges arrive by 8:30am. Lunch is provided to judges free of charge & their meeting registration is waived.**

Please complete and return this form to: NJAS c/o Kean University  
Center for Science, Tech & Math Educ  
1000 Morris Ave. T-117  
Union NJ 07083

\_\_\_\_\_ Yes, I am willing to judge oral 10 minute research presentations at the **NJAS 52nd Annual Research Meeting** to be held on Saturday, April 21, 2006 at Kean University in Union NJ.

**My Judging Preference is:**     **Junior Academy (high school student presentations)**  
   **Senior Academy (college or master's student presentations)**  
   **Either / Place me where needed**

\_\_\_\_\_ No, I am not able to judge presentations at the **NJAS 52nd Annual Research Meeting** but please keep me on the mailing list.

**NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

**CITY/STATE/ZIP:** \_\_\_\_\_

**DAYTIME PHONE NUMBER:** \_\_\_\_\_ **EVENING PHONE NUMBER:** \_\_\_\_\_

**EMAIL(S):** \_\_\_\_\_

**ACADEMIC INSTITUTION OR CORPORATION:** \_\_\_\_\_

**POSITION HELD:** \_\_\_\_\_

**DEGREES:** \_\_\_\_\_

**PLEASE DESCRIBE YOUR AREA OF EXPERTISE:** \_\_\_\_\_

**CHECK THE DISCIPLINE(S) YOU WOULD LIKE TO JUDGE:**

- |  |   |
|--|---|
| <input type="checkbox"/> Biology I: botany/ecology/environmental science | <input type="checkbox"/> Archaeology/Anthropology           |
| <input type="checkbox"/> Biology II: health/medicine/cell or molecular   | <input type="checkbox"/> Microbiology                       |
| <input type="checkbox"/> Chemistry/Biochemistry/physics                  | <input type="checkbox"/> Marine Science/Atmospheric Science |
| <input type="checkbox"/> Math/Engineering                                | <input type="checkbox"/> Geology/Geography                  |
| <input type="checkbox"/> Computer Science                                | <input type="checkbox"/> Science or Math Education          |
| <input type="checkbox"/> Psychology/Animal behavior                      | <input type="checkbox"/> Other _____                        |

**Would you consider hosting a Breakfast with Scientists at your place of employment? Yes No**  
This involves providing breakfast for up to 20 high school students who will be accompanied by chaperones. It takes place on any weekday or weekend morning of your choice. Registration and advertisement are handled by NJAS.

**Would you consider sharing your expertise by attending a Breakfast with Scientists? Yes No**

### ***THE BULLETIN: CALL FOR MANUSCRIPTS***

Individuals seeking publication of their work are urged to consider submitting their manuscripts to *The Bulletin*, The peer-reviewed journal of the New Jersey Academy of Science. We are currently on a twice-yearly publication schedule, which consists of a spring and a fall issue.

Original papers and reviews in any field of science are considered for publication. Manuscripts should be submitted to Dr. Michael Kennish, Editor, Institute for Marine & Coastal Sciences, Rutgers University, 71 Dudley Rd. New Brunswick, NJ 08901. Instructions for contributors are printed on the inside back cover of each issue of *The Bulletin* and are now available on the NJAS website ([www.NJAS.org](http://www.NJAS.org)), in the Bulletin section. Anyone having questions about the review and/or publication process should contact the editor at (732) 932-6555, ext. 240 or [kennish@imcs.rutgers.edu](mailto:kennish@imcs.rutgers.edu).

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### **NEEDED: NJAS EXECUTIVE SECRETARY**

NJAS is recruiting a new Executive Secretary. For responsibilities of the position contact Dr. Alan D. Antoine, NJAS Executive Secretary at [antoine@AESOP.Rutgers.edu](mailto:antoine@AESOP.Rutgers.edu)

If interested in the position, contact the NJAS at: 732-463-0511 or [njacadsc@rci.rutgers.edu](mailto:njacadsc@rci.rutgers.edu)

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### **NEEDED: SCIENCE FOR BREAKFAST COORDINATOR**

NJAS is recruiting a new coordinator for the Science For Breakfast Program. For responsibilities of the position contact Gail Carter, NJAS President, [gcartographer@yahoo.com](mailto:gcartographer@yahoo.com)

If interested in the position, contact the NJAS at: 732-463-0511 or [njacadsc@rci.rutgers.edu](mailto:njacadsc@rci.rutgers.edu)

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NJAS, Kean University  
CSTME, Townsend Hall, T117  
1000 Morris Ave.  
Union, NJ 07083