# **RNA Society Newsletter**

September 2012

# **RNA Society**

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Brenda Peculis

#### Comments:

Please direct any Newsletter comments, suggestions, rebuttals and articles for submission to: Brenda Peculis peculisb@missouri.edu

# From the Desk of the President, Doug Black

One of the more enjoyable aspects of our profession as scientists is the large collection of colleagues who



become friends over our years as students and postdocs, and later as professional scientists. I was on my annual hike in the sierras last week with Manny Ares, who I first met when I was a graduate student longer ago than I will admit here. (Manny was a postdoc at the time and therefore is much older than me). We were packing up our camp on the first morning of our hike

when who should come hiking up the road but David Horowitz, another ribophile who has also spent his life pondering the intricacies of spliceosome assembly and who also has a long time attachment to the sierra wilderness. (Continued on p2)

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Besides escape from the office and lab, summer is also when we are thinking of what we learned at the annual meeting in June. This meeting has long served to reconnect us with our many dispersed friends and colleagues and to hear of their progress in answering questions about our favorite molecule and its functions.

RNA 2012 in Ann Arbor was by all measures a wonderful success. Over the course of an opening set of plenary talks, sixteen scientific sessions and three poster sessions, we were treated to the entire range of RNA chemistry, structure, informatics, and biology. Exciting new results were presented in everything from new single molecule assays of RNA reaction kinetics to the role of small molecule metabolites in RNA-mediated gene regulation. In addition to learning a great deal of new science, as president this year, I was also focused on the large number of people whose volunteer efforts make the RNA Society run. This starts with the organizers of the meeting itself. In spite of our affinity for other RNA scientists, these meetings are not systems capable of spontaneous self-assembly. A large amount of effort is required from the organizers to make them come together. This year, these essential assembly factors were Rachel Green, Nils Walter, Melissa Moore, and Gerhart Wagner. The meeting organizers determine the schedule, design the sessions, recruit the session chairs, read hundreds of abstracts to pick the talks, and take the blame for the abstracts that don't get chosen and any number of other small things that go wrong. This year there was very little to find that went wrong. The venue at the University of Michigan was new for the society and judged to work very well. The logistics, food, lodging, and other practical issues were handled by Mary McCann and Kristin Scheyer of Simple **Meetings**. This is the 3<sup>rd</sup> time that Mary and Kristin have helped us with the meeting and we are very grateful for their efforts in always making it successful.

The annual meeting has a number of special and traditional events. The Junior Scientist Committee serves as a voice for our younger members and organizes a variety of events and get-togethers (see pp 10-12). This year the committee organized a very successful pre-conference tour, a junior scientist

social, and a career development workshop. We would like to thank graduate student reps Eric Anderson and Peter Watson, as well as postdoc reps Marc-David Reupp, and Rita Strack, for their efforts in organizing these valuable and productive events, and for their other efforts in improving the society's development of its young scientists. We note that Eric and Peter will be stepping down from the Junior Scientist Committee this year. We thank them for their service and we welcome graduate student reps Callie Wigington and Mike Meers who will be replacing them (see p 11). The Junior Scientist Committee was advised for a number of years by Marty Fedor, who is stepping down this year, and is being replaced by advisors **Katrin** Karbstein and Beth Tran (see p 12). We are grateful to Beth and Katrin for taking this on, and to Marty for her long and dedicated efforts.

A unique event at the RNA meeting, at least in my experience at scientific conferences, is the RNA and Society Dinner. This dinner was conceived and continues to be organized by past RNA Society President Lynne Maquat. Starting with Joan Steitz as the first speaker, the dinner initially served to highlight the role of women in science and to encourage their involvement in our society. In recent years, the conception of the dinner has broadened to examine other aspects of science and society. This year we were host to Laurie Zoloth, a noted bioethicist, who discussed the perception of science and scientists by non-scientists, and the ethical implications of synthetic biology (see p 9). This was a very illuminating talk that generated a lot of interesting discussion among the attendees.

Much of the business of the Society is also conducted at the annual meeting. The meetings committee is charged with planning future annual meetings and assessing new possible venues (see p 13). Chaired by **David Lilley**, this committee took us to Japan last year, the first RNA Society Meeting in Asia. Next year the meeting will be in Davos, Switzerland and is being organized by **Frédéric Allain**, **Witold Filipowicz**, **Adrian Krainer**, **Osamu Nureki**, and **Sarah Woodson**. A number of calculations go into planning for these meetings beyond the suitability of the facilities. Going to new locations is important in broadening the base of our



international society and allowing more students and postdocs on other continents to attend. However, overseas meetings are more expensive for the society than many of our US venues and more expensive for North Americans to attend. Thus, we are always balancing these different needs. Many attendees were pleased with the Ann Arbor venue, and if you have thoughts or preferences on where the meeting is most useful for you, please feel free to let us know. The Board of Directors meeting each year is when Jim McSwiggen, our CEO, reports on the financial state of the Society (healthy), and Tim Nilsen reports on the RNA journal (healthy and part of the reason we are financially healthy). We also discuss changes in our operations and personnel, and I would like to thank Jim for his many innovations in the functioning of our society. His job is much harder than mine and he is the person who really keeps us in operation. This year the board consists of Kathleen Collins, V. Narry Kim, Scott Strobel, Brenton Graveley, Tracy Johnson, and Mikiko Siomi, who are joined by past president Manny Ares and secretary Mary O'Connell. Next year, Kathy, Narry and Scott will cycle off and be replaced by Jon Lorsch, Jonathan Staley, and Maria Carmo-Fonseca, who will join president elect Rachel Green on the board. We also have a number of long time members, past presidents and past board members whose attendance and contribution of helpful ideas at the board meeting are a testament to their strong allegiance to our society and are much appreciated by the board.

One of the more enjoyable events at the meeting is always the awards ceremony where poster prizes, the RNA Society Scaringe Awards, and the lifetime achievement awards in service and science are presented. The poster prizes are underwritten by several helpful organizations, including Nature Structural and Molecular Biology, Nature Reviews Molecular Cell Biology and ACS Chemical Biology. This year we had new sponsorship from the National Institute for General Medical Sciences in recognition of their 50<sup>th</sup> Anniversary. The poster prize winners this year were Samuel Rouleau, Sokol Lena, Qin Li, Arlie Rinaldi, Christian Roy, Prashanthi Natarajan, and Catherine Dominguez (see p 8). We would also like to thank the committee of poster judges who selected these winners. This is a guite

difficult job that was undertaken this year by Karin Musier-Forsyth (chair), Rebecca Alexander, Michael Bender, Guillaume Chanfreau, Jeff Coller, Boggy Hogg, Aaron Hoskins, Mike Ibba, Katrin Karbstein, Donny Licatalosi, Tao Pan, Amy Pasquinelli, John Perona, Lluis Ribas de Pouplana, Rick Russell, Susan Schroeder, and Martin Simard. The RNA Society Scaringe Awards are made possible by the support of the Scaringe Foundation. These are awarded to one or two postdocs and one or two graduate students each year for the most significant published discoveries of the previous year. This year the awards went to students Chenguang Gong and Tatjana Trček Pulisic, and to postdoctoral fellows Kotaro Nakanishi and **Dipali Sashital** (see p 8). The committee that chooses these awardees includes Tim Nilsen, Phil Bevilacqua, and Manny Ares.

The RNA Society Service Award this year was given to Brenda Peculis (see p 7). Brenda is someone whose work is familiar to many of us, but usually without knowing its source. For many years Brenda has been the principal conduit through which the Society has communicated with its members. First through pieces published in RNA and then by development of this newsletter, Brenda has made sure that we stay in touch with our members and that members are up to date on all RNA events. She serves as commissioner, reminder (for me anyway), copy editor, layout designer, and publisher for all items in the RNA Society Newsletter. I think if she hadn't become an RNA scientist that she might have been a journalist. This work has been a fantastic contribution to the society and we hope that she can continue these efforts in the future.

The highlight of the Awards ceremony is always the honoring of a member for lifetime achievement in RNA science (see p 6). This year the honoree was **Olke Uhlenbeck** – a household name, at least for RNA-centric households. Olke's contributions to our understanding of the folding, molecular recognition, enzymology, and catalysis of RNA are too numerous to mention. It was also a particular pleasure to honor him because he has served as a formal and informal mentor to so many in our field, who turned out in force at the meeting. In his talk, Olke honored his own mentors, Paul Doty and Ignacio Tinoco, and



spoke about his own scientific journey, what he has learned about the practice of science, and his enjoyment of his many colleagues over the years. It was particularly fitting to have his award this year, because Olke grew up in Ann Arbor, and attended the University of Michigan where his father was a physics professor. Thus, Olke had lived for many years within a short distance from the award ceremony. If you didn't get a chance to see Olke's talk, you can see the slides and can catch a recording of it here.

The final banquet of the annual meeting was one of the most memorable we have had. The organizers arranged to hold this party at the Henry Ford Museum, a remarkable venue where one could stroll around the exhibits examining antique cars and airplanes and artifacts from the Titanic. A particularly helpful innovation this year in my opinion was the arrangement of the banquet in a buffet style, where one moved between different food and drink stations rather than being served at a table. This enforced more mixing of the attendees during the dinner. Although others may feel that the introduction of martinis to the offered refreshments was a more important innovation.

In any case, the 2012 Meeting will long be remembered by its attendees both for its scientific and its social significance. Important new ideas were developed, new friends made, and new collaborations initiated. I will look forward to seeing everyone in Davos in 2013, where the science and socializing will be equally good, but the hiking will be even better.

Cheers - Doug





# **RNA Society Volunteer Positions Available**

#### **Chief Financial Officer (CFO)**

The RNA Society is seeking a part-time Chief Financial Officer to help set budgetary priorities and to supervise our business activities. The ideal candidate will be a detail-oriented, numbers driven person with an interest in finding new ways to improve the Society's financial health. Previous budgetary experience is preferred. The position also requires Society membership. For more details contact Jim McSwiggen, CEO, at <a href="mailto:mcswigj@comcast.net">mcswigj@comcast.net</a> or <a href="mailto:mcswiggen.com">mcswiggen.com</a>.

**Time commitment**: 5-15 hours per month.

**Term**: 3 years, with the possibility for extension.

**Remuneration**: This is an unpaid volunteer position; however, the Society does provide a small honorarium of \$3000/year in gratitude for your service.

**Travel**: The position will require approximately three trips per year, at Society expense, to attend the annual publisher's meeting, the Society's annual conference, and a site visit to a future conference venue.

### **Chair of Business Development**

The RNA Society is seeking a Chair of Business Development to lead efforts to generate more corporate involvement in Society conferences and activities. The ideal candidate will have an outgoing personality, contacts in the business world, and an interest in obtaining more business contacts. Previous business development experience is **not** required—only an interest in learning on the job. The position does not require Society membership. For more details contact Jim McSwiggen, CEO, at <a href="mcswigj@comcast.net">mcswigj@comcast.net</a> or <a href="mcs@mcswiggen.com">jmcs@mcswiggen.com</a>.

**Time commitment**: 5-15 hours per month.

**Term**: 3 years, with the possibility for extension.

**Remuneration**: This is an unpaid volunteer position; however, the Society does provide a small honorarium of \$3000/year in gratitude for your service.

**Travel**: The position will require attendance at the Society's annual conference, at Society expense, and possibly one or two other trips per year.



# **RNA 2012 Meeting Review**

# The 17th Annual Meeting of the RNA Society

University of Michigan Campus, Ann Arbor, Michigan

# The 2012 RNA Society Lifetime Achievement Award for Research : Olke Uhlenbeck

The RNA Society Lifetime Achievement Award for Research acknowledges the impact of an outstanding

RNA scientist on the general scientific community. At RNA 2012 the award was presented to Olke Uhlenbeck.

The 2012 RNA Society meeting in Ann Arbor MI was a great homecoming for this year's Lifetime achievement in Science awardee, Olke Uhlenbeck. Olke started his awardee presentation by showing a map of part of Ann Arbor and indicated that he grew up, went to grade school, high school and college all within a few miles of the auditorium that we were sitting in. He joked that it was an indication that as a child he didn't get around very much, but clearly the local Ann Arbor environment served him very well.



Olke earned his undergraduate degree in Biophysics at University of Michigan at Ann Arbor. From there he decided he wanted to do graduate studies working on RNA. The three reasons he wanted to work on RNA (in 1963) were that 1) it sounded sophisticated, 2) that RNA was less popular than DNA and that 3) RNA was simpler than DNA because it had only one strand. Clearly, the young Uhlenbeck had a lot to learn.

# "RNA was simpler than DNA..."

Olke went to Harvard and obtained his PhD in Biophysics working with Paul Doty. Olke pointed out

that while the name Paul Doty meant little to most in the audience, Dr. Doty was a famous polymer chemist who was among the first to work on biopolymers. Olke reminded us that the Doty lab was the first to demonstrate that when DNA strands that melted at high temperature they could specifically and accurately re-anneal into the double helix. The lab also used optical methods to demonstrate that RNA folded back on itself to make helical secondary structures. This prompted Olke to remind us that "fame is fleeting but ideas endure". He quipped "most of you now don't remember what Paul Doty did --- 30 years from now no one will remember what I did; 30 years after that no one will remember what YOU did". We laughed – we knew he was right.

When Olke completed his graduate work he hopped to the other coast and went to Berkeley to work with Nacho Tinoco (remember what HE did?). There Olke worked on determining the base pair rules and understanding how RNA folds.

Fame is fleeting...
but ideas endure

Olke started his independent position as a professor at University of Illinois, Champaign-Urbana. He divided his years as an RNA scientist into two phases. In 1971 he started what he referred to as Phase 1: Making RNA. Olke

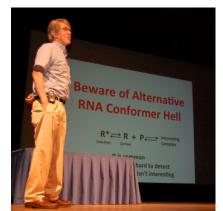


nicely summarized a lot of work over the next ~18 years or so with one slide indicating his forays into the chemical and enzymatic synthesis of RNA. He worked on both polynucleotide phosphorylase and T4 RNA ligase and demonstrated how they could be used to make RNAs as long as 20 residues. He then helped develop in vitro transcription with T7 RNA polymerase that permitted making LOTS of RNA, enough to start studying what RNA did.... which he called Phase 2: Doing stuff with RNA

Phase 2 more-or-less correlated with the move to Boulder in 1986, and much later (2002) to Northwestern University in Chicago. "Stuff" was defined as structure-function experiments. To do structure-function experiments, Olke indicated there were 5 critical steps: 1. Identify and purify the components 2. Develop quantitative assays

- Keep it simple...
   but not too simple.
   Make sure it is interesting...
   but not too interesting.
- 3. Make and assay protein or RNA sequence variants 4. Relate the biochemical data with structural data 5. Try to make mechanistic conclusions. With that game plan, he only needed a model system...

Olke's rules to choosing a system: 1) Keep it simple – but not too simple. There has to be enough to study, but any system gets more complicated as you study it. 2) Be sure it is interesting to others, but not too interesting (because you don't want your field to be too crowded with other people). Over the years Olke adopted (and in some cases moved on from) six different model systems: the MS2 coat protein - operator hairpin RNA, PheRS-



tRNA Phe, the hammerhead ribozyme, EF-Tu-aa-tRNA, DbpA-rRNA and the one he started very early on and has not yet abandoned, the ribosome-tRNA system.

He summarized that among the important things he has learned from all of these studies was 1) that it is a lot more fun to do structure-function experiments (where the structure is known) than function-structure experiments (where it is not) and 2) that knowing a structure does not tell you how an RNA works--"you can't see  $\Delta G$ ".

Olke ended this tale with advice about the single most important thing he learned over the years: "Beware of alternative RNA conformer hell". The

phenomenon is common, can be hard to detect and is usually not very interesting. He first discussed the case of 'slow exchange' between the active and inactive conformers of RNA and explained why this can complicate interpretation of structure-function experiments. He then explained that 'fast exchange' between the two conformers can be an even worse scenario since it is so hard to detect. He hopes that the RNA community will remember his warning in the years to come.

Olke concluded with an impressive slide listing the 96 grad students, post docs and technicians who have worked with him over the years and contributed to forays into new systems, great discoveries and no doubt, more than a few run-ins with conformer hell.

## The 2010 RNA Society Award for Service: Brenda Peculis

I was as surprised as I was honored. This really has been a labor of love. Despite Doug's confidence (see p. 3) that I would have been a journalist if not a scientist, I think migrant farm worker, professional bee keeper and / or sous chef are probably more likely. Many thanks again... now back to work...



## The RNA Society awards and/or poster prizes presented at RNA2010

Nature Structural Molecular Biology Poster Prizes:

In Mol. Biol. & Biochemistry: Sokol Lena (poster #262) "Successive tailing and trimming of RISC-loaded miRNA by the 3' UTR-binding protein HuR"

In Genetics & Development: Qin Li (poster #553) "Mammalian Neuronal development and maturation require the splicing regulator PTBP2"

In Biophysics & Struct. Biology: Arlie Rinaldi (poster #520) "Differential conformational selection and induced fit of structurally similar single transcriptional riboswitches"

Nature Reviews Mol. Cell Biology Poster Prize For 'Innovation and Interdisciplinary Research' Christian Roy (poster # 192) "SeqZip - A versatile methodology for analyzing long RNAs"

ACS Chemical Biology Poster Prize For 'Innovative use of chemical biology applied to the study of RNA' Samuel Rouleau (poster #521) Programming the highly structured HDV ribozyme into complex allotery with RNA oligonucleotides

The NIGMS  $50^{th}$  Anniversary Poster Awards Two prizes for research that will increase the understanding of life processes and lay the foundation for advances in disease diagnosis, treatment and prevention.

Prashanthi Natarajan, (poster #244) "Argonaute-interacting GW protein directs transposon silencing in pathogenic fungus, *Cryptococcus neoformans*"

and

Catherine Dominguez (poster #544) "Modifiers of SMN splicing in Spinal Muscular Atrophy"

The RNA Society/Scaringe Young Scientist Award was established to recognize the achievement of young scientists engaged in RNA research and to encourage them to pursue a career in the field of RNA. Open to all junior scientists (graduate students and post-docs) worldwide who have made a significant research contribution to the broad area of RNA. This year's winners are:

RNA Society/Scaringe Award Graduate Student awards: Chenguang Gong (Maquat lab) lncRNAs transactivate STAU1-mediated mRNA decay by duplexing with 3' UTRs via Alu elements

Tatjana Trček Pulisic (Singer lab) Regulation of mRNA turnover during mitotic division

RNA Society/Scaringe Award Postdoctoral awards: Kotato Nakanishi (D.Patel lab) Structure of Eukaryotic AGO in complex with guide RNA

Dipali Sashital (Doudna lab) Investigations of CRISPR RNA and piRNA biogenesis







## Third RNA & Society Dinner

Lynne E. Maquat & Kim Dittmar

During our busy days at the laboratory bench, we as scientists do not often consider our motivation for doing



science and the larger aims and implications of scientific research. In addition to all the great science at RNA 2012, we were treated to a thought-provoking presentation that addressed these fundamental issues entitled, "Making Good: The Ethical Issues in Basic Research" by **Laurie Zoloth**, PhD, Professor of Medical Humanities & Bioethics and Religion, and Director of Center for Bioethics, Science and Society at Northwestern University. Laurie has worked with prominent biologists, including our own **Manny Ares** and **Tom Cech**, to study the impact of bioethics on the scientific community and on society as a whole. As Laurie acknowledged, scientists mean to make good and all science begins with noble ideas, but there are many ethical issues that impact our work. She pointed out that RNA research is in "an interesting neighborhood" with associations to hotly debated scientific areas including disease research, stem cell research, GMO foods, and synthetic biology. Public perception of science is limited, Laurie

contends, and the way that scientists talk about science matters.

Laurie framed her discussion of bioethics around the topic of synthetic biology, an area that aims to devise creative solutions to very difficult problems. Despite laudable aims such as curing disease, there arise many questions related to how to regulate this kind of research. For example, ethical issues have been a part of research involving recombinant DNA since the 1972 Asilomar Conference on Recombinant DNA drew up voluntary guidelines for safe practice. However, the more recent shift from altering existing DNA to making new DNA has created new and complicated challenges and opposition from a number of individuals and organizations. Laurie claimed that opposition to synthetic biology research has been rooted in two opposite views of the technology: (1) that the technology will be a terrifying disaster or (2) that the technology will be very good but will not benefit ordinary people enough.

The final part of Laurie's presentation focused on suggestions for the role of scientists in establishing policy that relates to their research. Laurie proposed that science policy needs to adapt to the world of constantly changing technologies and a growing set of serious problems in need of solutions. In legislating science, it is impossible to predict all of the future uses and implications of any given technology. She described a "metatrophic synecdoche for modernity" whereby emerging research and technologies are simultaneously the subject of our fantasies about

a trajectory towards perfection and the subject of moral panic over the loss of existing securities. Despite these fears, Laurie contends that research freedom and creativity must be preserved. Scientists should act as moral agents with the duties of regulating themselves and educating the public. She suggests that the central dogma should be making good, and that all scientists should act with integrity to do good.

After Laurie's talk, the dining room was buzzing with conversation as we discussed the many intriguing issues and questions raised by her presentation. The RNA & Society Dinner was a great addition to RNA 2012, allowing us to think about the impact of our work on society. Please contact either one of us should you have a speaker



and/or topic you would like considered for a future RNA & Society Dinner (<u>kimberly.dittmar@gmail.com</u>; <u>lynne\_maquat@urmc.rochester.edu</u>)



#### **GradStudent / Postdoc Corner: RNA Junior Scientists**

The goal of the RNA Society Junior Scientist Committee is to represent the interests of the RNA Society's younger researchers. We hope we accomplished this goal at this year's meeting in Ann Arbor, MI. Since RNA 2008 in Berlin, the committee's responsibilities have included planning some pre-conference activities. This year, we organized a dinner at a local brewpub, lunch in Kerrytown, and a walking and art museum tour. These provided an opportunity for young attendees to meet and mingle while experiencing some of Ann Arbor's lovely attractions.

Ann Arbor is well known for its brewing culture. The city is home to four downtown microbreweries that produce several delicious and award-winning local beers. To experience this aspect of local culture, we gathered for dinner at the Jolly Pumpkin Cafe & Brewery on Monday evening. We then moved on to the Arbor brewing company to taste more of the local beer specialties and to continue socializing over drinks while playing darts and table shuffleboard.

On Tuesday we visited Kerrytown, the historical shopping district where the oldest building dates to 1874. Kerrytown is home to several small boutiques and a famous farmer's market on Wednesdays and Saturdays. After a delicious lunch at Zingerman's Delicatessen we visited the University of Michigan Museum of Art.



We would like to thank **Mario Blanco** and **John Androsavich** from **Nils Walter's lab** (University of Michigan) for their hard work in helping to plan these pre-meeting activities and acting as hosts, sharing their knowledge of Ann Arbor with us.

On Wednesday we had an informal Junior Scientists Social event that offered another opportunity for young attendees to meet and network while enjoying snacks and beverages. Held in a central courtyard, this provided an opportunity to socialize and rest up prior to the poster session.

On Friday we held our career development workshop. This year we decided the workshop would focus on finding postdoctoral, junior faculty, and industry positions. We invited a diverse panel of participants at various stages of their careers to offer multiple perspectives on pursuing an academic career or a career in industry. The panel consisted of (from left to right) **Jeffrey Pleiss** (Cornell University), **Erik Sontheimer** (Northwestern University), **Scott Blanchard** (Weill Cornell Medical College), **Anton McCaffrey** (Trilink Biotechnologies) and **Melissa Jurica** (University of California at Santa Cruz).

Addressing a large audience of over 150 members, the panel discussed their experiences and offered advice on choosing an appropriate postdoctoral position, strategies for finding junior faculty positions, and transitioning into industry positions. This discussion was followed by an audience question session in which questions regarding the job search and tenure process were addressed, in addition to several other topics. The event concluded with the panel's consensus advice to young scientists to think critically about their goals regarding academia versus industry and to tailor their postdoctoral choices based on their long-term goals. In addition, the importance of networking was stressed. We would like to thank our panel members and audience for making this year's event a great success.





Our two graduate student representatives, Eric and Peter, are retiring from the committee with our heartfelt thanks for their enthusiasm, hard work, and dedication during their 2011-2012 term on the Junior RNA Scientist Committee. They will both remain active in the Society in the future. We are happy to be joined by **Callie Wigington** and **Michael Meers** for the next two years! (see below)

We are already thinking of prospective Junior Scientist Committee members to step in for us (Rita Strack and Mark-David Ruepp) when our terms end. If you would like to get involved or share any ideas concerning the RNA Society please contact us and/or join our Facebook group ("RNA Society Junior Scientist Members"). We are looking forward to next year's meeting in beautiful Davos, Switzerland and hope to see you there!

(from left to right)
Rita Strack
Eric Anderson
Marc-David Ruepp
Peter Watson

ris2016@med.cornell.edu Eric.Anderson@umassmed.edu marc.ruepp@dcb.unibe.ch watsonp@scripps.edu



# **New Jr Scientist Reps**

Hello! I'm Mike Meers, a third year graduate student in Greg Matera's lab at the University of North Carolina



at Chapel Hill. I aim to continue the strong tradition of RNA research in the Matera lab by developing a genetic model system to study global regulation of alternative splicing in the context of histone post-translational modifications. I have a keen interest in the integration of myriad complex factors that serve to regulate splicing in metazoans, and I am excited to be diving into the world of RNA with both feet! I am equally excited to begin my tenure as a Graduate Student Representative to the Society. Coming from a robust RNA community in the Research Triangle, I hope to serve the needs and communicate the issues of young RNA

scientists on a Society-wide scale to the best of my ability. I look forward to strengthening the bonds of the RNA community in Switzerland next summer, and I'll do my best to contribute to what promises to be a fantastic program there. See you all in June! <a href="mpmeers@email.unc.edu">mpmeers@email.unc.edu</a>

Hello RNA world! I am Callie Wigington, a fourth year graduate student in Anita Corbett's lab at Emory University. The Corbett lab has published extensively on the budding yeast poly(A)-binding protein, Nab2, and continues to pursue many questions exploiting the yeast model to understand basic mechanisms of RNA processing. More recently, we have expanded our horizons to incorporate work on fly, mouse and human RNA binding proteins, particularly those linked to human disease. My work focuses on elucidating the function of the human ortholog of Nab2, ZC3H14, in RNA processing and investigating an intriguing link to breast cancer. As a junior scientist representative, I am very excited to communicate the needs and ideas of the junior scientists to the RNA society. I look forward to getting to know all of you in Davos this June! callie.wigington@gmail.com





# New RNA Society Junior Scientist Faculty Co-Advisors Beth Tran and Katrin Karbstein

A major key to success in science is fostering growth and independence at early stages in scientific training. The



RNA Society has a long history of supporting its graduate students and postdocs, recognizing that the future of science lies within the quality, integrity and professionalism encompassed in the next generation. To address these needs, the RNA Society has appointed a group of graduate students and postdocs to communicate the interests and concerns of young scientists to the RNA Society Board. From 2006-2008, I served as one of the first two junior representatives to the RNA Society, helping to establish some of the student and postdoc events at the annual meeting, which are now essential parts of the program. In 2009, I accepted a position as Assistant Professor of Biochemistry at Purdue University, where I study

post-transcriptional gene regulatory mechanisms with a focus on DEAD-box RNA helicases. As I look back on my scientific training, I realize the importance of mapping a career trajectory early and the critical nature of having and maintaining connections with other scientists in the field. I am both excited and honored that I will now be returning to a service role in the RNA society as faculty co-chair of the Junior RNA Society Representatives beginning in January 2013.

I am also excited to have Katrin Karbstein, Associate Professor at Scripps-Florida, as an enthusiastic co-chair. Katrin's laboratory studies ribosome biogenesis in eukaryotes, one of the most intricate RNP assembly processing pathways in a cell. We have a great group of representatives this year who are already brainstorming new ideas for the next annual meeting in Davos, Switzerland. We look forward to a fantastic meeting in 2013 with a lot of exciting discoveries in RNA biology and events specifically geared to the needs of our students and postdocs. See you in Davos!









# Chairman of the Meetings Committee David M.J. Lilley

As ever it is my job to be thinking some way ahead,



and at the Meetings Committee meeting in Ann Arbor we were looking forward up to four years.

Next year we

go back to Europe for the first time since the excellent 2008 meeting in Berlin. The conference is being organized in Davos, Switzerland between 11-15 June by Frédéric Allain (lead organizer), Witek Filipowicz, Sarah Woodson, Adrian Krainer and Osamu Nureki. Davos is up in the mountains south-east of Zürich, and we will be in the conference center that is used for the World Economic Forum meetings.

We return to North America in 2014, to the beautiful town of **Québec**; this marks the first return to Canada since the Banff meeting in 2005.
Unfortunately we have rather outgrown the Banff site, but the conference center in Québec is excellent. The walled city has a spectacular location, and a long history. **Benoît Chabot** has been appointed lead organizer, and the local organizer is **Martin Simard**.

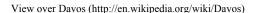
The rest of the organizing team is currently under discussion.

In my previous message I wrote that we would probably return to Asia in 2015. For a variety of reasons we have decided to postpone that by one year, and meet in the US instead. By then the renovations will be complete in Madison, so **Madison** is the likely to be the venue for the **RNA2015** conference.

The twelve-month postponement notwithstanding, the decision was taken in Ann Arbor to take the **RNA2016 meeting** back to **Japan**, despite a very strong bid from Australia. I think everyone has very good memories of the meeting in Kyoto. The everincreasing strength of RNA science in the eastern Asian countries is entirely to be encouraged, and the Japanese RNA Society have demonstrated that they are wonderful hosts who can organize a spectacular conference. A number of Japanese venues have been suggested, but a final decision of that has not yet been made. I shall update everyone in due course through these columns.

As ever, if anyone has any comments on meeting venues, or wishes to propose a venue for 2017 and beyond, please email me.

David Lilley d.m.j.lilley@dundee.ac.uk







# From the Desk of the CEO Jim McSwiggen

It's hard to believe that the summer has gone by so fast! It's already two months since the close of the hugely successful RNA 2012 conference in Ann Arbor. It was really great to meet many of you there, and I hope I will see you again at RNA 2013 in Davos, Switzerland. The 2013 conference organizers are already deep into

planning for that conference, and I have every expectation that it too will be highly successful

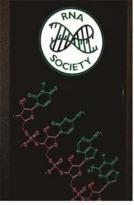


The RNA 2012 conference was successful both scientifically and financially. We have not yet closed the books on the conference, but the preliminary numbers suggest that the Society will make a modest profit on this event. The responses from the annual survey also indicate that attendees were generally pleased with the conference. A little over 50% of attendees filled out the survey, and they rated most aspects of the conference to be above average. You can view the responses to the survey by clicking here.

Our June membership numbers have rebounded from a low of 1095 in 2011 to an all-time high of 1364 this year; they will probably top 1400 by the end of the year. This is likely due to an improving economy, but also may reflect some positive effect from the member initiatives that we started in the second half of 2011. We have been working to make it easier to become a member and less expensive to stay a member (with early renewal discounts; 2 year, 3 year, and lifetime memberships). Other planned initiatives include rolling memberships (rather than just by calendar year) and additional discounts or awards for longevity in the Society. We also will continue to reach out to you for more ideas on how to make the RNA Society a place where all RNA scientists want to join and remain members. More members would mean a more vibrant community, more affordable conferences, and more opportunities to help young scientists in their research.

Finally, as I previously announced at RNA 2012, we have two openings for new volunteers within the Society. We are looking for a new Chief Financial Officer to replace outgoing CFO, Jim Bruzik, and we are seeking to fill the newly created role of Chair of Business Development. These are volunteer positions so there is no salary, although a small honorarium is provided. If you think you might be interested, please check out the job postings within this newsletter (see p.5). If you have questions about these positions, or any other Society business, feel free to contact me at <a href="mailto:mcswigj@comcast.net">mcswigj@comcast.net</a>.









### Thank You, Volunteers

The RNA Society both survives and thrives because of the efforts of many volunteers. Even though we hire out some of our activities (to FASEB, Cold Spring Harbor Press, and others), the key creative and decision-making activities are done entirely by Society volunteers. In this article, the RNA Society Board would like to acknowledge those efforts for the past year. Please accept our sincere apologies if we've left anyone out.

#### **Committees and Committee Chairs**

A variety of committees help the Society carry out its essential functions.

- **Jim Bruzik** has been <u>Finance Committee Chair and Chief Financial Officer</u> for the Society since 2005. He acts as the interface with our business office at FASEB, seeks out corporate sponsors for our annual meetings, requests and approves payments for Society expenses, and generally ensures that we stay on track financially. Jim is stepping down this year and we're going to miss his contributions.
- **David Lilley** has been the <u>Meetings Committee Chair</u> since 2005. He leads the effort to find the next interesting place to hold our annual meeting, while ensuring that the venue will be both workable and affordable.
- **Kimberly Dittmar** is the Chair of our <u>Membership Committee</u>. She is working to find more and better ways to serve our membership and to encourage more people to join.
- The <u>Nominating Committee</u> is appointed by the president each year to search for the best candidates to run for our elected offices of President, Secretary, and Board Member. Most importantly, after identifying such candidates they have to convince them to agree to run for office. This year the job was handled by: **Erik Sontheimer, Joan Steitz, and Juan Valcarcel**. An excellent field of candidates was identified and persuaded to run for office.

#### **Conference Organizers**

Our annual meetings just keep getting better, in large part due to the tremendous efforts of the volunteers who agree to organize the events. This year's meeting in Ann Arbor was a great success. The RNA 2013 organizers are now hard at work preparing for next year's conference, while the 2014 organizers are just getting started.

RNA 2012 Organizers: Rachel Green, Melissa Moore, Gerhart Wagner, Nils

Walter

RNA 2013 Organizers: Frédéric Allain, Witold Filipowicz, Adrian Krainer, Osamu

Nureki, Sarah Woodson

RNA 2014 Organizers: Benoit Chabot, Martin Simard

#### **Conference Volunteers**

Other volunteers also help with specific projects at the annual meeting.

- Since 2005, **Lynne Maquat** has organized the <u>RNA & Society Dinner</u> (formerly the Women in Science dinner), which gives conference participants insight into an aspect of science that they might not otherwise encounter at a science conference. Lynne is stepping down from this role after this year and her contributions will be missed
- Each year the Society awards prizes for the best posters in various categories. Judges constitute an appointed <a href="Poster Prize Committee">Poster Prize Committee</a>. This year the task of choosing the winning posters was accomplished by: Karin Musier-Forsyth (chair), Rebecca Alexander, Michael Bender, Guillaume Chanfreu, Jeff Coller, Boggy Hogg, Aaron Hoskins, Mike Ibba, Katrin Karbstein, Donny Licatalosi, Tao Pan, Amy Pasquinelli, John Perona, Lluís Ribas de Pouplana, Rick Russell, Susan Schroeder, Martin Simard.



#### **Junior Scientist Reps & Advisors**

The Junior Scientist Reps are graduate students and post-docs who are working diligently to gain a greater voice for junior scientists in the Society. They do all the planning and heavy lifting for junior scientist events at each of the annual meetings, among other things.

Grad Reps Eric Anderson & Peter Watson (2010-2012);

**Callie Preast Wigington & Michael Meers (2012-present)** 

Post-doc Reps Marc-David Reupp & Rita Strack (2011-present)

Faculty Advisors Marty Fedor (2009-2012);

Katrin Karbstein & Beth Tran (2013-present)

Marty Fedor is retiring from the role of Junior Scientist Faculty Advisor at the end of this year and her contributions will be greatly missed. Fortunately the group has found two new faculty advisors to take over: Katrin Karbstein & Beth Tran.

#### **Newsletter Editor**

**Brenda Peculis** has been the <u>Newsletter Editor</u> since 2005. Twice a year she sends out reminders for articles to be added to the newsletter, then gently pesters the contributors until they complete their tasks. Finally, she formats the whole thing, adds pictures and quotes, and then sends it out for the rest of us to read.

#### **Web Master**

**Chad Philips** of New Vibe Web Design has been our web master since 2011. He's done a great job with the web site redesign and making it easier to access the site.

#### RNA Journal Editors, Board and Reviewers

What can we say? You all know what editors do, and you also know that it can be a lot of work. Contributors' decisions to submit top-quality manuscripts to *RNA*, and the editors' efforts to ensure that accepted manuscripts maintain the highest quality, has resulted in *RNA* having an <u>ISI Impact Factor of 6.015</u> for 2010. It has also made *RNA* a good, consistent source of revenue for the Society.

Last year there was a reorganization of the editorial staff, with almost a dozen new volunteers accepting the post of Editor.

Editor-in-Chief: **Timothy W. Nilsen** 

Editor: Javier F. Caceres, Kathleen Collins, Elena Conti, Adrian R.

Ferré-D'Amaré, Erik Sontheimer, Brenton R. Graveley, Rachel Green, Elisa Izaurralde, Daniel Kolakofsky, Rob Singer, Eric

Westhof

Reviews Editor: Thomas R. Cech

Editorial Board: John N. Abelson, Sidney Altman, Manuel Ares, David P. Bartel,

Brenda L. Bass, Philip C. Bevilacqua, Douglas L. Black, Thomas

Blumenthal, Ronald R. Breaker, Chris Burge, James E.

Dahlberg, David R. Engelke, Martha J. Fedor, Witold Filipowicz,

Mariano A. Garcia-Blanco, Christine Guthrie, Matthias W.

Hentze, Daniel Herschlag, Allan Jacobson, Walter Keller, Adrian R. Krainer, Alan M. Lambowitz, David M.J. Lilley, Reinhard Lührmann, Thomas Maniatis, James Manley, Lynne E. Maquat, Iain W. Mattaj, William McClain, Andrew Newman, Harry F.

Noller, Norman R. Pace, Richard A. Padgett, Roy Parker, Marina V. Rodnina, Michael Rosbash, Phillip A. Sharp, Joan A.

Steitz, Scott Strobel, David Tollervey, Thomas Tuschl, Olke C.



# Uhlenbeck, Juan Valcárcel, Alan M. Weiner, Marvin Wickens, James R. Williamson, Sandra L. Wolin, Sarah A. Woodson, Robert Zimmermann

We also thank the roughly 600 scientists who agree to review manuscripts for RNA each year. Their work is essential to maintaining the high quality of published papers in *RNA*.

To all of these volunteers—and to any that we might have missed—we offer our sincere thanks for all that you've done and continue to do for the RNA Society.

Sincerely,

The RNA Society Board of Directors.

James McSwiggen, CEO; Douglas Black, President; Manny Ares, Past President; Rachel Green, President Elect; Mary O'Connell, Secretary; Board Members Kathleen Collins, Narry Kim, Scott Strobel, Brenton Graveley, Tracy Johnson, and Mikiko Siomi

# Contribute to RNA, our Society journal!

Have you published in The *RNA* journal (<a href="http://rnajournal.cshlp.org/">http://rnajournal.cshlp.org/</a>) lately? As a reminder, members received reduced publication and open access fees.

In the coming year, the journal and CSHP would like to publish more short (5-8 pages) reviews in the journal. These reviews will educate the community about a particular area of RNA and discuss common themes in the numerous RNA processes. If you are interested in writing a review, send a brief outline and cover letter to Tim Nilsen.







## **RNA Society-supported meetings**

#### **Reports from Recent Meetings Cupported by the Society:**

#### RiboWest 2012 June 10 – 13, 2012

From June 10-13<sup>th</sup> 2012, the University of Lethbridge and the Alberta RNA Research and Training Institute hosted the 8<sup>th</sup> annual RiboWest Conference 2012, taking place in southern Alberta every second year. This year the RiboWest Conference again attracted more than 100 RNA researchers from Canada and the northwest of the USA, who attend the Meeting to "share (their) work with the RNA community, to receive feedback and connect with like-minded individuals".

The keynote speaker at the meeting this year was Dr. Marina Rodnina from the Max-Planck Institute in Göttingen, Germany, talking in a well-attended public presentation about her work on ribosome-dependent protein synthesis. In addition, Dr. Raymund Wellinger (Université de Sherbrooke, Quebec) and Dr. Wolfgang Wintermeyer (Max-Planck Institute Göttingen, Germany) participated as invited speakers. Dr. Raymund Wellinger represented the RiboClub in Sherbrooke, Quebec continuing the tradition of strengthening the inner-Canadian network of RNA investigators. The participants of the RiboWest Conference 2012 shared their RNA research through more oral and poster presentations than ever before: 28 oral presentations held mostly by graduate and even some undergraduate students as well as more than 40 posters. But not only was the number of presentations impressive this year, but with the words of one participant: "The oral presentations were of extremely high quality this year; all talks were very interesting."

It is the specific aim of the RiboWest Conference to facilitate student participation in order to support their training in RNA research. With the help of funding from CIHR (Canadian Institute of Health Research) and the international RNA Society, students participating in RiboWest benefited from reduced registration fees, had the opportunity to give oral presentations, won numerous awards for presentations or posters (see below) and participated in a career workshop. The students very much appreciated this approach as the RiboWest Conference 2012 was for many the first scientific conference. For example, one student commented "The career workshop was very interesting and helpful, I got answers to many questions that I had about science careers." On Tuesday June 12<sup>th</sup>, the conference concluded with a dinner at the historic Galt Museum in Lethbridge and the award ceremony. This year, not only the keynote and invited speakers as well as the principal investigators selected prize winners, but also the students had formed a judging committee which recognized both oral presentation as well as numerous "fun poster prizes". Again, all participants highly enjoyed this event: "Having dinner at the Galt museum is always a treat. It provides a nice relaxing atmosphere and the opportunity to meet other conference attendees." As always, everybody is looking forward to the next RiboWest Conference 2013 in Prince George, BC. Participants of the 8<sup>th</sup> Annual RiboWest Conference taking place at the University of Lethbridge in Alberta, Canada from June 10 – 13<sup>th</sup> 2012.

#### **RiboWest Travel Fellowships**



**Angela Fung**, Fahlman lab, University of Alberta, "The Characterization of tRNA Substrate Recognition by L/F transferase"

Albert Rosana, Owttrim lab, University of Alberta, "Cyanobacterial DEAD-box RNA Helicase: Autoregulation, RNA maturation and sRNA metabolism"

Melissa Hargreaves, Scott lab, University of Montana, "Novel Ribosome Biogenesis in the Lyme Disease Bacterium Borrelia burgdorferi"



#### Sarstedt Undergraduate Travel Fellowship

Howard Ryan, McKenna lab, University of Manitoba, "Identification and characterization of regulatory G-Quadruplexes in the human transcriptome"

#### Oral Presentation Award (selected by keynote & invited speaker)

Bonnie McNeill, Zimmerly lab, University of Calgary, "Alternative Splicing of a Group II Intron in Clostridium tetani" **Oral Presentation Awards (selected by student committee)** 

Ashley Moore, Russell lab, University of Lethbridge, "Utilizing small nucleolar RNA interference (snoRNAi) to elucidate snoRNA function in Euglena gracilis"

Evan Mercier, Wieden lab, University of Lethbridge, "GTPase activation of EF-Tu on the ribosome: connecting long distance calls through an intra-protein communication network"

#### Poster Awards (selected by principal investigators)

Cassandra Fayowski & Anthony Daniele, Rader lab, University of Northern British Columbia, "Spliceosome characterization and U1 snRNA candidate identification in Cyanidioschyzon merolae"

**Ashley Jarding**, Zimmerly lab, University of Calgary, "5' Exon Recognition of a Group II Intron: A Novel Interaction with 5S rRNA"

Lucy Swift, Golsteyn lab, University of Lethbridge, "Analysis of the relationship between mitosis and cell death in human cancer cells treated with genotoxic agents"

Jenna Friedt, Kothe lab, University of Lethbridge, "Monitoring Binding and Folding of tRNA by Modification Enzymes in vitro and in silico"

#### **FASEB Nucleic Acid Enzymes Conference** June 10 – 15, 2012

The enzymatic processing of DNA and RNA is of central importance to life and accordingly there is a significant worldwide effort towards understanding the mechanisms underlying these processes. They encompass a wide range of biological systems such as replication enzymes; recombination enzymes; restriction enzymes; DNA repair enzymes; topoisomerases; ribozymes and RNA catalysis; RNA splicing enzymes; ribosomes, and many more. The FASEB Nucleic Acid Enzymes meeting is an established biennial series bringing together researchers working at the cutting edge of these topics. The 2012 meeting was held in Snowmass, CO on June 10-15. At the last session of the meeting. Elizabeth Tran presented Meghan Griffin from Scott Strobel's lab and Inga **Jarmoskaite** from Rick Russell's lab with RNA Society poster prizes to recognize these outstanding junior scientists.

#### **ESF-EMBO Symposium**

# Anti-viral RNA: From Molecular Biology Towards Applications

June 11 - 16, 2012

The ESF-EMBO Research Conference "Antiviral RNAI: From Molecular Biology Towards Applications" was held in June in Pultusk, Poland. Thanks to the RNA Society, several young scientists were awarded travel fellowships to attend the conference. They presented short talks and posters and actively participated in the scientific discussion, which made the conference a great success.





# 2012 AS-SIG on Integrative RNA Analysis and Disease July 13-14, 2012

The 8th Special Interest Group meeting on Alternative Splicing (AS-SIG) was held from July 13-14, 2012 in Long Beach, California. The annual meeting is designed to bring together world experts in RNA processing, non-

coding RNAs, and computation to discuss recent advances in the integrated view of RNA biology and its relation to human disease. It aims to



bridge the gap between the different research fields to foster new research ideas for deciphering the regulation of RNA processing.

Recep Colak from the University of Toronto (Kim Lab, "Intrinsically disordered regions serve as hotspots for tissue specific splicing and regulation"), Hagen Tilgner from Stanford University (Guigo Lab "Deep sequencing of subcellular RNA fractions shows splicing to be predominantly co-transcriptional in the human genome but inefficient for lncRNAs"), and Paolo Convertini from the University of Kentucky (Stamm Lab "Molecular characterization of Sudemycins: New class of drugs as a therapeutic avenue for cancer") received an RNA Society sponsored travel fellowship to cover their registration costs. The RNA Society sponsored poster price of \$100 was awarded to Aurélie Kamoun from the Institut Curie, Paris who presented a poster on her work "Integrative analysis of transcriptomic and epigenomic microarray data highlights a methylation dependent use of alternative promoters in a subgroup of bladder tumors". The organizers thank the RNA Society for their generous support of AS-SIG 2012.

# GRC on The Biology of Post-Transcriptional Gene Regulation July $15-20,\,2012$

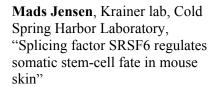
The Gordon Research Conference on The Biology of Post-Transcriptional Gene Regulation was held from July 15-20, 2012 at Salve Regina University in Newport, RI. RNA Society support was used to provide four travel/registration fellowships to the following junior scientists:



**Sergio Barberan-Soler**, Valcarcel lab, Centro de Regulacion Genomica CRG, "Spermatogenesis-specific natural antisense transcripts and splicing regulation of *C.elegans* TOR"



**Kate Meyer**, Jaffrey lab, Weill Medical College, Cornell University, "Transcriptome-wide Analysis of the m6A Landscape Reveals Pervasive Adenosine Methylation in 3' UTRs and near Stop Codons"





Jason Somarelli, Garcia-Blanco lab, Duke University, "Fluorescence-based alternative splicing reporters for the study of epithelial plasticity *in vivo*"





#### **Upcoming Meetings of Interest:**

#### **International Conference on Riboregulation**

September 10 - 12, 2012 Shanghai, China http://riboregulation.org/

We shall hold a three-day conference in September 2012. The meeting will cover the areas of riboswitches, catalytic RNA and regulatory RNA (miRNA, CRISPR RNA), predominantly from a mechanistic and structural perspective. We hope that around 200-300 people will attend the three-day conference.

The following have already agreed to present plenary lectures during the meeting:

Jennifer Doudna UC Berkeley, USA Hong Li Florida State University, USA Scott Strobel Yale University, USA Eric Westhof Strasbourg, France Keqiong Ye, NIBS, Beijing, China Narry Kim SNU Seoul, Korea Dinshaw Patel Sloan-Kettering New York, USA Jamie Cate UC Berkeley, USA Adrian Ferré D'Amaré, NIH, USA

Further invitations will follow. In addition, we plan to invite a number of younger faculty to present shorter talks,

and to chose contributed talks from submitted abstracts.

We want to keep registration costs for attendees quite low, particularly for local participants. Part of our goal with this meeting is to give an opportunity to young Chinese scientists to get exposure to international RNA research, so we want to make the meeting as accessible for them as possible.



The medical campus of Fudan University is located in a very nice area close to the French Concession, and well connected to the rest of the city by several new subway lines. There is good hotel accommodation a five-minute walk from the Institute for Biomedical Sciences, where the meeting will be held.

Organizers: David Lilley, Alastair Murchie

#### 2012 RiboClub

New frontiers of RNA biology, diagnostics and therapeutics September 24 – 26, 2012 In partnership with UMass Medical School Mont Orford, Quebec, Canada http://www.riboclub.org/cgi-bin/OpeningSession/index.pl?pas

http://www.riboclub.org/cgi-bin/OpeningSession/index.pl?page=opening\_session&year=2012

The RiboClub Annual Meeting is a yearly meeting of RNA scientists from Canada and the Eastern USA. The meeting covers different topics related to the chemistry, structure and biology of RNA. The meeting format is designed to encourage collaborations between the different labs in the area and to stimulate the interest of young scientists in this research area. The meeting size and the location give ample opportunity for discussions and interactions, so bring your thinking hat. The registration fees are subsidized to allow all students to participate. Please ensure that all the members of your lab participate to give them the opportunity to present their work in poster format and listen to leading scientists as they present their research programs and future directions.



#### The Rustbelt RNA Meeting 2012 (RRM2012)

Crowne Plaza in Dayton, OH October 19-20, 2012. http://rustbeltrna.org/2012/

As always, the meeting is focused on presentations by student and postdoctoral trainees (PI talks are by invitation) and draws and welcomes RNA-centered researchers across the midwest and beyond. Registration for the meeting is open now until Sept 26th.

#### XXIV tRNA Conference

December 2 - 6, 2012 Olmue, Chile http://www.trna2012.cl/index.html

The 24<sup>th</sup> tRNA Conference (formerly tRNA Workshop) will be held in Olmue, Chile in December 2012. We cordially invite all members of the international tRNA community to attend this meeting, which will bring together a wide range of scientists from all over the world whose work touches on protein synthesis and translation, providing an exciting and stimulating forum for discussion. This is the first tRNA conference to be held in a Latin American country, and we particularly encourage local scientists and researchers from the rest of Latin America to participate and share their findings with tRNA experts from around the world.

Organizers: Michael Ibba and Omar Orellana

### Positions available

If you would like to have your employment opportunity listed on this page, please download the <u>E-Jobs form</u>, and return the completed form via email to <u>rna@faseb.org</u>. If you are interested in applying for a position, please contact the person listed in the advertisement.

Sign up for our jobs feed and receive email notification when we post to this page.

Faculty position Center for RNA Biology University of Rochester, Medical Center



The Center for RNA Biology, directed by Lynne E. Maquat, PhD, and codirected by David H. Mathews, MD, PhD, is soliciting applications from outstanding individuals holding a PhD degree and/or an MD degree and at least two years of post-doctoral training for a position at the ASSISTANT, ASSOCIATE or FULL PROFESSOR level. Emphasis is being placed on wet-bench and/or computational studies having disease relevance, including but not limited to the study of RNA metabolism or the use of RNA as a therapeutic tool or target. Successful applicants are expected to develop independent, externally funded research programs and to contribute toward graduate- and medical-school teaching. The University of Rochester Medical Center and the adjacent undergraduate College of Arts & Sciences offer an outstanding research environment with established strengths in RNA Biology and excellent opportunities to collaborate with basic scientists and clinicians. The University of Rochester is ranked among the top 25 Best Places to Work in Academia (The Scientist).



Applicants should send a complete C.V., descriptions of research accomplishments and future research plans, and letters from three references to Sharon\_Kubiak@urmc.rochester.edu.

The University of Rochester is an Equal Opportunity Employer, and qualified female and minority candidates are encouraged to apply.

#### Postdoctoral Positions in RNA Nanotechnology

Posted on <u>August 6, 2012</u> Postdoctoral Positions in RNA Nanotechnology University of Kentucky, College of Pharmacy

Funded postdoctoral positions in RNA nanotechnology are available in the laboratory of Peixuan Guo in the Department of Pharmaceutical Sciences at the University of Kentucky to investigate RNA nanoparticle assembly and their medical applications. Some recent publications from the lab include:

Shu D, et al. Nature Nanotechnology. 6(10):658-67. Guo P (2010). T. Nature Nanotechnology. 5(12), 833-42. Wendell, D., et al. Nature Nanotechnology. 4(11):765-72.

For further information about our lab, research projects and a complete list of publications please visit our web site at <a href="http://nanobio.uky.edu/Guo/peixuanguo.html">http://nanobio.uky.edu/Guo/peixuanguo.html</a>.

Recent Ph.D. graduates with a strong background in nucleic acid chemistry, RNA biochemistry, RNA structure and function, RNA computation, or siRNA delivery are preferred. Qualified individuals are invited to send a cover letter with a description of your research experience and interests, a curriculum vita, and the names of three referees (including their contact information) to Peixuan Guo, Ph.D. at peixuan.guo @uky.edu.

#### <u>Postdoctoral Positions in the Belfort lab</u>

Posted on August 6, 2012

Postdoctoral positions are available in the Belfort lab to study both self-splicing introns and inteins. The group investigates both the dynamics of retrotransposon-like group II introns and their evolutionary relationship to spliceosomal introns and the structure, function, evolution and application of the protein-splicing inteins. The successful applicants will use genetic, biochemical, structural and high-throughput genomic techniques in bacteria and yeast. We will build on our discoveries [Coros et al. Mol Cell (2009) 34, 250-256; Chalamcharla, et al. Genes Dev. (2010) 24, 827-836; Huang et al Nucleic Acids Res 2011, 39 2845-2854; Callahan et al, Nature Struc. and Mol Biol. (2011) 18, 630-633] to explore the lifestyle, host interdependence and evolution of these self-splicing, RNA and protein elements.

Candidates should have a Ph.D in Molecular Biology, Biochemistry or related fields, and publications in peer-reviewed journals. Experience with bacterial and yeast genetics, structure and computation are preferred

The laboratory is in an interdisciplinary Life Sciences Research Building and is affiliated with the RNA Institute. UAlbany is located in Albany, NY, which has a vibrant scientific and cultural community, situated close to New York City, Boston and Montreal. Surrounded by rivers, lakes and mountains, Albany is an ideal location for outdoor activities year round.

To apply, submit a CV, a statement of research interests and career goals, and the names of 3 references to Rebecca McCarthy <<u>rmccarthy3@albany.edu</u>>. These are NIH-funded positions administered by the Research Foundation. an Affirmative Action/Equal Opportunity Employer.



#### <u>Postdoctoral fellow in molecular biology/biochemistry of bacterial RNAs, in Poznań, Poland</u> Posted on August 4, 2012

The Institute of Molecular Biology and Biotechnology, Adam Mickiewicz University in Poznań, Poland, is looking for talented individuals to join a group interested in the molecular biology and biochemistry of bacterial RNAs involved in the regulation of translation. The 3-year project is funded by the TEAM program of the Foundation for Polish Science. The preferred starting date is October 1st, 2012.

The focus of this project are the RNA-dependent molecular mechanisms that control translation in pathogenic bacteria. Bacteria use a wide spectrum of noncoding RNAs for the regulation of cellular metabolism, adaptation to the environment, virulence, and the defense against bacteriophages or mobile genetic elements. Our research interests are focused on the essential RNA-protein interactions, and include the in vivo studies of translation regulation.

The candidates should have research experience, supported by publications, in molecular biology, biochemistry or related fields, preferably concerning RNA-protein interactions. Only the candidates who have received their PhD degree no earlier than January 1, 2008 are eligible to apply.

Salary. The postdoctoral salary is 6 000 PLN (approx. 2.000 USD) monthly (net). Applications written in English should be sent to Dr. Mikołaj Olejniczak at mol@amu.edu.pl by August 31st and should include a cover letter and a professional CV, including a list of publications. Two names and contact information of potential referees should be provided. Selected candidates will be invited for an interview, which may be in person or by Skype.

For additional information contact Dr. Mikołaj Olejniczak at mol@amu.edu.pl or Ph. +48 61 829 5906. Webpage <a href="http://ibmib.amu.edu.pl/index.php/en/news/156-team-olejniczak">http://ibmib.amu.edu.pl/index.php/en/news/156-team-olejniczak</a>.

#### <u>Postdoc Position – Laboratory of Elizabeth J. Tran, Department of Biochemistry, Purdue University</u> Posted on <u>July 12, 2012</u>

Postdoc Position Laboratory of Elizabeth J. Tran Department of Biochemistry, Purdue University

An NIH-funded postdoctoral position is available to study mRNP assembly and the role of RNA helicases in this process. Recent work from our laboratory has implicated DEAD-box RNA helicases as co-transcriptional RNA chaperones, which function in proper assembly of mRNPs in the eukaryotic nucleus (Cloutier et al., Jour. Biol. Chem 2012). We are now interested in the mechanism of action with a special focus on the role of RNA structure. We are also interested in the mechanism(s) of long non-coding RNA-mediated transcriptional control. Our research combines genetics, biochemistry and cell biology using the budding yeast *Saccharomyces cerevisiae* as a model system. A unifying theme of our research is utilization of multidisciplinary approaches to tackle fundamental problems in RNA biology.

Interested individuals should e-mail a cover letter describing your current research and future research interests along with an attached CV to the address listed below. Previous experience in fluorescent microscopy, RNA: protein biochemistry and/or yeast genetics is preferred.

Dr. Elizabeth Tran
Purdue University
Department of Biochemistry
ejtran@purdue.edu



#### PhD student position in Molecular Cardiology

Posted on June 22, 2012

Experimental Cardiology Unit Department of Medicine, University of Lausanne Medical School Switzerland

Long non-coding RNAs in cardiac differentiation

A position is available for a project focusing on the molecular mechanisms of cardiac differentiation. We are using integrated approaches (RNA-Seq, ChIP-Seq) to identify long non-coding RNAs that could play a role in cardiac specification, differentiation and regeneration. Our research takes advantage of different cellular models that recapitulate cardiac lineage specification and differentiation events (embryonic and cardiac stem cells), pathophysiological models in genetically engineered mice, and state-of-the-art molecular (RNA and ChIP-sequencing) and cellular biology techniques.

We are seeking a highly motivated individual with a Master degree in molecular and cellular biology, and a strong interest in the molecular basis of cardiac differentiation. Previous experience in relevant techniques would be an advantage (Chromatin immunoprecipitation assays, embryonic stem cells) but is not required to apply. Good communication and interpersonal skills, and ability to work independently are expected.

A salary is available for three years. Candidates are encouraged to send a curriculum vitae, a statement of research interests, and names and E-mail addresses of three referees to: Dr Thierry Pedrazzini by E-mail at: thierry.pedrazzini@chuv.ch

Dr Samir Ounzain by E-mail at: <a href="mailto:samir.ounzain@chuv.ch">samir.ounzain@chuv.ch</a>

# The Goss lab in the Department of Chemistry, Hunter College, City University of New York Posted on June 18, 2012

The Goss lab in the Department of Chemistry, Hunter College, City University of New York is currently seeking to hire one outstanding post-doctoral scientist in the fields of RNA biochemistry and biophysics. This position is funded by an NSF grant and interested scientists looking for a position starting in Aug 2012 or later are encouraged to apply.

Research in the lab focuses on using chemical and physical methods to study the mechanisms of viral RNA translation. Specifically assembly and kinetics of barley yellow dwarf virus initiation complexes. To study these interactions we use chemical probing, stopped-flow kinetics, CD spectroscopy and fluorescence methods. For further information see:

- 1. Ma J, et al . Proc Natl Acad Sci U S A. 2012 May 14.
- 2: Khan MA, et al. Biochemistry. 2012 Feb 21;51(7):1388-95.
- 3. Khan MA, et al J Biol Chem. 2008 Jan 18;283(3):1340-9.

Enthusiastic and highly-motivated candidates should have a strong background either in RNA biochemistry or biophysics or protein-RNA interactions. Candidates will be expected to contribute to an enthusiastic research team that spans a wide range of interests.

Applicants should sned their C.V., a 1-page statement of research interests and experience, and the names/contact information for 3 references to <a href="mailto:dgoss@hunter.cuny.edu">dgoss@hunter.cuny.edu</a>.

#### **Postdoctoral Position in RNA Biology**

Posted on June 1, 2012

A postdoctoral position is available to study the human RNA degradome on a global scale. Our NIH-funded project (<a href="http://projectreporter.nih.gov/project\_info\_description.cfm?aid=8017241">http://projectreporter.nih.gov/project\_info\_description.cfm?aid=8017241</a>) investigates RNA decay intermediates genome-wide (German et al., Nature Biotech., 2008 & Nature Methods, 2009; Rymarquis et al., RNA, 2011) in different cells, tissues, and knockdown lines to better understand RNA decay mechanisms and regulation. Elucidating the RNA



degradome also has the potential to identify disease associations and enhance the interpretation of existing gene expression data that do not separate degraded and intact RNA.

Our laboratory is located in the Delaware Biotechnology Institute, a state-of-the art interdisciplinary research unit of the University of Delaware (UD). Centrally located in the eastern corridor, UD enjoys a happy college town atmosphere with many cultural and outdoor activities, and easy access to major cities, waterways, and the biotechnology industry.

Applicants should have demonstrated accomplishments in RNA biology in a mammalian system, be highly motivated, and have less than five years of postdoctoral experience. A Ph.D. and strong technical and communication skills are required. Individuals with good computing skills are particularly encouraged to apply. Please send a letter of interest, CV, and the names and contact information for three references to Pam Green, green@dbi.udel.edu

# eJobs with the RNA Society



The RNA Society is pleased to provide this job posting webpage to the RNA community. Postings are free to members of the RNA Society. All advertisements are posted within two weeks of receipt and remain on this page for a three-month period. In addition, positions listed on this page are also published in our society newsletter as a free service and on a one-time basis.

- ➤ Please complete this form using Microsoft Word by typing your text into the gray boxes, which will expand as you write.
- Name the completed form as LastName eJobs.doc (for example, Jabri eJobs.doc)
- Return the saved file via email to rna@faseb.org.

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