

## RNA Society

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## From the Desk of the President, Rachel Green



Whether we are taking classes, teaching classes, or just living our lives under the umbrella of the academic cycle, summer marks the time for sharing what we have learned during those long dark winter months. For the RNA Society, this summer was no exception where many of us attended the 18<sup>th</sup> annual RNA Society meeting in the heart of the

Alps in Davos, Switzerland to share our new data and ideas. (Continued on p2)

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The meeting organizers this year included two Swiss natives, **Frederic Allain** and **Witold Filipowicz**, as well as **Adrian Krainer** (RNA Society president elect!), **Osamu Nureki** and **Sarah Woodson**. In addition to their excellent guidance, the organizers were helped at the organizational level by Simple Meetings (including Kristin Scheyer and Mary McCann) who over the years have really figured out our needs. Though the meeting may have seemed a bit remote, the affordable housing options and appealing program drew a big crowd with 944 attendees. What was especially exciting about this number was the geographical breakdown with more than 50% of the attendees hailing from around Europe and more than 10% from Asia. With meetings held in diverse locations, we can continue to serve the broad RNA community.



While the setting on paper certainly sounded appealing, it wasn't until you arrived that you realized just how nice a spot it is. The site was conveniently located proximal to plenty of housing options (with abundant yogurt and muesli for breakfast), and a short walk down the main drag was a cable car that could transport you high enough up for some breath-taking views and a vigorous hike. And the organizers seemed to have thought of everything – including several evenings in a beer garden with magical sounding big wind instruments (perhaps in the same genre as yodeling) and an afternoon off with perfect weather to encourage hiking.



As for the scientific programme, the organizers made some excellent choices (based on the ever evolving desires of the RNA community and their own intuitions) and planned just a few keynote addresses, with the focus of the meeting being almost entirely on short talks by early career scientists. On

the opening evening of the meeting a full session of science was planned, headed off by **Venki Ramakrishnan** who gave a beautiful talk bringing together biochemical and structural perspectives on the process of decoding during protein synthesis. As we have come to expect, Venki's clarity on a complex problem was reassuring and exciting.



A few days later we heard perspectives on career from one of our favorite RNA scientists, **Tom Cech**, who shared with us in broad strokes his own career path and some of his passions and interests. In addition to these keynotes, each session at the meeting was introduced by a chair that gave a broad overview of the field, a feature that has been strongly endorsed by young scientists that are new to the meeting. This worked especially well in Davos. The main attraction of the meeting was, as usual, the 12



minute talks, mostly by post-docs and graduate students. I think most of the older attendees at the meeting look back fondly on our first big talk at the RNA meeting, and recognize the formative moment that it is in one's career.

In Davos, the scientific sessions were well attended and the discussions were thought provoking. What struck me as interesting is how difficult it is to predict which sessions will need the largest venues. This strikes me as a positive in that the RNA field is moving and evolving. For example, I suspect that "High-throughput approaches" will need an



increasingly big venue over the next few years as we all figure out the power of these approaches for our own scientific questions. Last, but not least, the poster sessions were another scientific highlight where the excellent venue nicely facilitated plenty of scientific discussion.

In addition to the scientific aspects of the meeting, a number of events took place during the week to bring together new and more seasoned scientists to share their experiences. The mentor-mentee lunch was very well organized by **Sarah Woodson** and **Beth Tran**; it provided a nice opportunity to think about career steps and paths. There are lots of right answers is the main theme that emerges from such discussions.

The junior scientist committee planned a number of activities for graduate student and postdoc attendees including a pre-conference hike, a social hour, and a career development workshop. These events are described in detail later in the newsletter (see p 4). The RNA board of directors met several times in Davos to discuss the “state of the society”, to evaluate successes and issues at the current meeting, to plan future meetings (under the guiding hand of **David Lilley**, thank you David), and to discuss issues related to the direction of the RNA journal. **Tim Nilsen** gave an update on the financial successes of the RNA journal and how this success feeds into the society that serves us all. We again are grateful to Tim for his many years of dedicated service to the RNA journal and society. New board members and a new president were also announced at the meeting. Congratulations to **Adrian Ferre-D’Amare**, **Kristin Lynch** and **Fatima Gebauer**, our newest board members, and **Adrian Krainer**, president-elect.

The final event of the annual meeting is the Awards banquet and dance. This is always a great event that brings us together to celebrate our accomplishments and common interests. Poster

prizes were underwritten by several organizations including ACS Chemical Biology, Biochemistry, Nature Reviews Molecular Cell Biology, and Nature Structural and Molecular Biology. The prizes this year were awarded in diverse areas to **Lea Büttner**, **Mohamed Fareh**, **Audrone Lapinaite**, **Sylvain Maenner**, **Kate Meyer**, **George Perdrizet**, **Debashish Ray**, **Carolina Salguero**, and **Jeremy**



**Wilusz**. The very prestigious Scaringe RNA awards this year were awarded to one graduate student, **Wenwen Fang**, and one post-doc, **Je-Hyun Yoon**. This award includes a cash prize and free attendance at the annual meeting. Congratulations to all the recipients of these young scientist awards.

Finally, the culmination of the award ceremony is the presentation of the “Lifetime Achievement Award” and the lecture that goes along with it (see p 5). This year’s recipient was **Phillip Sharp** who shared with us reflections on his very productive career as summarized below. Given the very broad influence that Phil’s laboratory (and its F1 progeny) has had on the RNA community, it was a special privilege for all of us to hear his presentation.

Now, with schools starting up again, we will all go back to our dens for the winter hibernation, but well nourished with new ideas and feedback from the summer. We look forward to seeing everyone at next year’s 19<sup>th</sup> annual RNA Society meeting in Quebec City.

Rachel Green, [ragreen@jhmi.edu](mailto:ragreen@jhmi.edu)



# RNA 2013 Davos, Switzerland Meeting Report

## "RNA Society 2013 Election Results"

The results of the Society elections to identify the new President and three new board members were announced at the meeting. **Adrian Krainer** (CSHL) was selected as the President Elect and will hold the office of President in January 2014. Look for his "From the Desk of the President" piece in the January 2014 Newsletter.

Three new members were elected to the Board of Directors : **Adrian Ferre-D'Amare** (National Heart, Lung and Blood Institute), **Fatima Gebauer** (Ctr de Regulacio Genomica) and **Kristen Lynch** (Univ of Pennsylvania Medical School) were each elected to a two year term, which will start on January 2014.

### Congratulations !

Finally, we bid an early farewell to **Jon Lorsch** who was elected to the Board of Directors for 2013-2014. In March, Jon was appointed Director of the National Institute of General Medical Sciences. That was good news for the general scientific community, but, unfortunately for us the appointment required that he step down from active participation on other boards like ours. We thank Jon for the time he did serve on the Board. See Page 1 for all current, active and elected officers/directors in the Society, and page 13 for the many volunteers who are so effective in making the Society work.

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## Summary of Activities Hosted by Junior Scientists

The RNA Society had a great time at RNA 2013 in Davos, Switzerland and the Junior Scientists in particular made the most of the experience! We participated in a number of engaging events, which helped foster camaraderie among the vibrant RNA junior scientist community. This included socializing, networking and having active discussions on topics related to career development and successful progression in science.

On Tuesday morning before the meeting began, a group of more than 30 junior scientists braved drizzling rain and clouds for a

pre-meeting hike in the Swiss Alps! The group boarded a bus out to the

Rinherhorn cable car and began the excursion by enjoying a beautiful ride up the side of the mountain (not to mention saving our legs from 500 meters of elevation!). We all took a few minutes to enjoy the view and take some great pictures, and then headed out on our hike up the Rinherhorn and along the ridge to the village of Sertig Sand. The hike was almost 7 km (4.3 miles) from the top



of the cable car to our destination, with beautiful scenery ranging from snowcapped peaks to bubbling snowmelt creeks to stately alpine forests. Many of the hikers captured some fantastic photos, which can be seen on the Junior Scientists Facebook page (RNA Society Junior Scientist Members). Upon reaching Sertig Sand, we had a few minutes to rest and grab a snack before catching a bus back to Davos for the opening session for the meeting. Everyone had a great time!



On Wednesday afternoon, more than 250 attendees filled the Aspen conference room for the annual Junior Scientists' Career Development Workshop. This year's workshop had a general theme of "career development skills in science", with a focus on skills for career advancement regardless of career track. The workshop started with a unique presentation entitled "Having a Career with Heart" given by **Martin Ghisletti**, head of the career center at the ETH in Zurich and a personal career consultant to graduate students and postdocs there. His talk focused on general tools and techniques that we can use to determine not only what

type(s) of career would be best for us, but also what role our personality types play into our work ethic and group settings. Following the presentation by Martin, we hosted an exciting discussion panel composed of RNA



scientists from both industry and academia, who fielded questions and gave advice about career development and planning. Our panel included **Elena Conti** (Max Planck Institute for Biochemistry), **Nicole Meisner** (Novartis), **Brett Robb** (New England Biolabs), and **Francoise Stutz** (University of Geneva). The panelists provided valuable insight into their own career skills and experiences, and answered some tough but important questions from the junior scientists in attendance.

Later that evening, before the first poster session of the week got underway, the junior scientists gathered for the annual junior scientist social. The social was a great setting for everyone to get to know each other a little better and discuss science in a very relaxed setting. We really enjoyed talking with everyone over drinks and establishing connections with other junior scientists that led to fruitful conversations and friendships throughout the whole meeting.

The Junior Scientist events at RNA 2013 were a great success, thanks to all of the junior scientists that participated and to the workshop panelists that volunteered their time. We were very pleased with the discussion fostered by this year's workshop as well as the new friends that we made at the pre-meeting hike and social. We welcome ideas for future workshops from the RNA Society junior scientists as we begin planning junior scientist events at RNA 2014 in Quebec! We look forward to meeting all of you next year!

**Jo Marie Bacusmo** (Graduate Student Representative) [bacusmo.1@buckeyemail.osu.edu](mailto:bacusmo.1@buckeyemail.osu.edu)

**Michael Meers** (Postdoc Representative) [mpmeers@email.unc.edu](mailto:mpmeers@email.unc.edu)

**Oussama Meziane** (Postdoc Representative) [meziane20@yahoo.fr](mailto:meziane20@yahoo.fr)

**Callie Wigington** (Graduate Student Representative) [callie.wigington@gmail.com](mailto:callie.wigington@gmail.com)



Lifetime achievement award: Phil Sharp

This year's lifetime achievement award was given to **Phil Sharp**. He began his address by reminding the audience that molecular biology is a young science, with an enormous potential for new discoveries still yet to be made. As participants in scientific research, we may underestimate changes



day to day, but over tens of years during a career one can see the great extent of change that has taken place in the relatively short lifetime of molecular biology. Moreover, despite the wealth of current knowledge,

the impact of our science on society has just begun to have its effects in fields like medicine, ecology, industry, energy, and more.

Phil identified the discovery of DNA by Watson and Crick in 1953 as the birth of molecular biology, equivalent to the discoveries of Isaac Newton in physics during the 1700s. In 1961, Jacob and Monod developed the operon model, of which we as RNA scientists are all descendants. That same year, Phil Sharp was a high school senior in Pendleton county Kentucky who knew he wanted to move on and learn more. After studying chemistry and mathematics at Union College, Phil earned a PhD in chemistry at the University of Illinois and completed postdoctoral studies at the California Institute of Technology and Cold Spring Harbor Laboratories. In 1974, Phil accepted a faculty position at MIT, the institution where he remains.

Phil's discovery, in 1977, that mRNA is discontinuous relative to the genome was the beginning of the field now known as genomics and the work for which he won the 1993 Nobel Prize in Physiology and Medicine. He explained that he felt that others that worked in the area missed this discovery simply because they weren't looking for it.



Jacques Monod once said that "anything found to be true of E. coli must also be true of elephants, " but Phil suspected that there was something different between E. coli and an elephant. The idea that there are 23,000 genes in the human genome is a bit of a lie, according to Phil; the human genome really consists of 23,000 transcriptional units, 94% of which are alternatively spliced, etc. He noted that we will never completely define the transcriptome of a mammalian cell, due to this tremendous complexity.

Phil went on to describe the technology behind biotechnology and outlined 3 key discoveries: (1) recombinant DNA in 1972; (2) DNA sequencing in 1977; and (3) chemical DNA synthesis. Phil then went on to describe his experience as one of the



founders of Biogen, the oldest biotechnology company founded in Geneva in 1978. While the biotechnology industry started in Europe, it is now centered in the Boston area. Phil showed a map of high tech companies circling MIT including the biotechnology cluster at Kendall Square. Phil mentioned that President Kennedy initially intended NASA to be located in Cambridge due to the high concentration of scientific expertise in the area.

Phil continued by describing the contributions of his colleagues and collaborators in the field of RNA biology focusing in particular on the development of the first in vitro splicing system by **Rick Padgett**. In 1998, Craig Mello and Andrew Fire, who received his PhD in Phil's lab, received the Nobel Prize for their work on RNA interference (RNAi). Stemming from this discovery, Phil's group developed an in vitro system for RNAi which was a key concept in his founding of Alnylam, an RNAi therapeutics company. Phil stated that he is confident that in several years, systematic RNAi delivery will provide treatments for known genetic diseases. To highlight the great impact of the RNA field, Phil described how the RNAi paper by **Tom Tuschl** has



been cited >5,000 times between 2002 and 2012, similar to the 2003 human genome paper. Small science can have enormous impact, according to Phil, who reminded us that Fire did his groundbreaking work with funding from an R01 grant and Tuschl with start-up funds.

Phil's presentation came to a close as he told the audience that we are now living in an explosion of RNA, where the field is full of unanswered questions about long ago described RNAs as well as

newly identified RNAs. There is enormous promise for this field with important discoveries yet to be made that will aid in the understanding of biological systems. With incremental progress, year by year, Phil told the young scientists in the audience that they will see as much change in coming years as he has seen in his own career. Science is important for the broad ways in which it changes the world and is increasingly important as the challenges become greater. But science is also fun and has provided Phil a challenging, exciting way to live and learn.

Contributed by Kim Dittmar and Rachel Green

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## RNA Society Volunteer Positions Available

### Chair of Membership Committee

The RNA Society is seeking a Chair of the Membership Committee to build our Society membership and to work on ways to improve the member experience. The ideal candidate will have an outgoing personality, an extensive network of fellow RNA scientists, and an interest in finding new ways to bring greater value to being a member of the Society. The position also requires RNA Society membership. For more details, contact Jim McSwiggen, CEO, at [ceo@rnasociety.org](mailto:ceo@rnasociety.org) or [mcswigj@comcast.net](mailto:mcswigj@comcast.net).

**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.

### 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 [ceo@rnasociety.org](mailto:ceo@rnasociety.org) or [mcswigj@comcast.net](mailto:mcswigj@comcast.net).

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

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

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



## Graduate Student / Postdoc Corner: RNA Society Junior Scientists

Greetings from the RNA Society Junior Scientist Committee! As the official graduate student and postdoctoral representatives to the RNA Society, it is our job to communicate the needs and concerns of young scientists in the RNA field, as well as to foster an atmosphere of support and camaraderie among the young RNA scientist community.

After a fantastic RNA 2013 meeting, the Junior Scientist Committee is now focusing on upcoming events for you, the junior RNA scientist community. We recently conducted a survey of the RNA junior scientists asking for input for the next year. We were thrilled to have received enthusiastic responses and a range of great ideas to incorporate into future programs. The ideas included connecting more actively with young RNA scientists through the biannual newsletter and the Junior Scientists Facebook page and coordinating support for more regional RNA young scientist groups. Please ‘stay tuned’ for more information on new events in the future!

The past several months have seen sweeping changes on the junior scientist committee with ‘hellos’ to fresh new faces and ‘goodbyes’ to old ones. In the fall we welcomed two new faculty mentors to the committee, **Beth Tran** and **Katrin Karbstein**. A year later, we’re happy to report that the transition has been smooth and that Katrin and Beth will be staying on as faculty advisors for 2014. Beth and Katrin have been vital in their support of the junior scientist committee’s activities, both by serving as liaisons between the junior scientist reps and the organizers, and through their thoughtful and unique suggestions for the junior scientist events. We thank them for their tireless work on our behalf over the past year, and look forward to productive collaboration with them for the benefit of young RNA scientists well into the future!

With the commencement of RNA 2013 in Davos comes the last hurrah for our outgoing postdoctoral representatives, **Marc-David Ruepp** and **Rita Strack**, whom we would like to thank for their outstanding service to the Society over the past two years. Marc and Rita were instrumental in putting together programs for the benefit of the junior scientists at both the 2012 meeting in Ann Arbor and the 2013 meeting in Davos two months ago. We’ll miss them both and wish them well in their future (hopefully RNA-related) endeavors!

Finally, with one ending always comes a new beginning—we’re excited to introduce two incoming junior scientist representatives for 2014-2015! **Jo Marie Bacusmo** is a graduate student in the Musier-Forsyth lab at the Ohio State University, and **Oussama Meziane** is a postdoctoral fellow in Martin Simard’s lab at the Cancer Research Center and Université Laval. See their personal introductions on page 9!

Thanks to everyone for your continued support of the junior scientists. We will continue to work with the RNA scientist community throughout the upcoming year! Many young scientists have already contributed great ideas for future workshops through the post-meeting junior scientists’ survey, and we’re excited to incorporate many of those suggestions into next year’s events!

Many young scientists have already contributed great ideas for future workshops through the post-meeting junior scientists’ survey, and we’re excited to incorporate many of those suggestions into next year’s events! Reach out to us at any time with ideas, concerns, or suggestions, and make sure to keep up with us in this space in the biannual newsletter!

Until Next Time,

Jo Marie Bacusmo [bacusmo.1@buckeyemail.osu.edu](mailto:bacusmo.1@buckeyemail.osu.edu)

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Hello everyone! I am Jo Marie Bacusmo a senior graduate student in the Musier-Forsyth lab at The Ohio State University. Our lab is interested in the fundamentals of fidelity in proline codon translation. My work focuses on proofreading or editing by prolyl-tRNA synthetase (ProRS) and related single-domain *trans*-editing factors in bacterial systems, which encode for an editing defective ProRS and two *trans* editing domains. I am delighted to have the opportunity to meet all of you and discuss exciting science in Quebec next year. As a representative, I will do my best to express the brilliant ideas & passion for RNA biology of the junior scientists. Keep calm and science on!

Hello Junior RNA Scientists! I am Oussama Meziane, a new postdoctoral fellow in Martin Simard's laboratory at the Cancer Research Centre of Laval University in Quebec City, Canada. The Simard lab focuses on the study of mechanisms involving small non-coding RNAs in animals. I am studying the role of mammalian homologues of different proteins implicated in microRNA expression and stability recently discovered in the nematode *C. elegans*. I am also interested in understanding the role of endogenous siRNAs in cells. I am thrilled about the upcoming RNA society meeting here in Quebec City. It will be a great platform for all of us to share new scientific discoveries and ideas. As a representative of junior scientists, I will take action in communicating needs and new ideas of the junior scientists to the RNA society. Therefore, do not hesitate to contact me!



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## Chairman of the Meetings Committee David Lilley

This year's RNA Society conference in Davos passed off just a few weeks ago, and was enjoyed by all both for the interest of the science and the attraction of the surroundings. I personally congratulate **Frédéric Allain** as lead organizer, and his committee comprising **Witek Filipowicz**, **Sarah Woodson**, **Adrian Krainer** and **Osamu Nureki**.



Next summer RNA 2014 will take place in Québec, Canada, organized by **Benoît Chabot** (lead), **Martin Simard** (local contact), **Fatima Gebauer**, **Elena Conti**, **Sean Ryder** and **Barbara Golden**. Benoît and the team had a number of planning sessions during the Davos meeting and plans are already well advanced. It is clear to me that this is going to be an extremely well organized conference. The location is also very attractive, in the old walled city perched above the St Lawrence river.

In 2015 we are able to return to Madison, following their extensive renovation program. The organizing committee has just been finalized in the period following the Davos conference. The lead organizer will be **Dave Brow**. **Amy Pasquinelli**, **Anna Marie Pyle** and **Matthias**

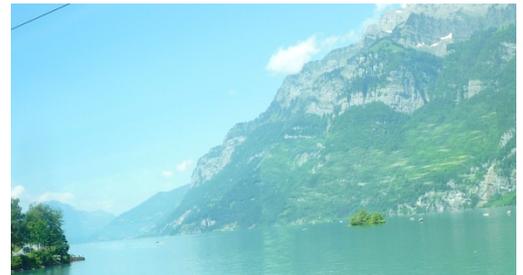


**Hentze** have all agreed to be co-organizers. Returning to Madison always feels like going home for the RNA Society, and I look forward to being back there and experiencing the new facilities.

Following our highly successful collaboration with the Japanese RNA Society to hold our inaugural Asian conference two years ago, we agreed to return to Japan in 2016. A decision on the venue has not been taken yet, but it will be either Kyoto again, or Kobe. We shall site visit both locations in the fall, after which a final decision will be taken. Mikiko Siomi is coordinating the organization for the Japanese RNA Society. I think all of us who attended the Kyoto meeting in 2011 are eagerly looking forward to returning in three years

At the meetings committee meeting a few weeks back the decision was made to return to Europe in 2017. The most recent European conferences in Davos and Berlin were both well attended and highly successful, and there is clearly a demand from our membership to return to Europe on a regular basis. It seems probable that there will be interest from Barcelona and Prague to host the meeting, and the location will be a major item for discussion in Québec. If any European RNA groups would like to propose an alternative location, and have the local facilities required, then please contact me. I can supply a document that outlines the requirements and provides guidelines on writing a proposal. Several of our meetings have essentially come through that route, so please keep the suggestions coming !

Indeed, if anyone has any general thoughts on the organization of our meetings, please again feel free to contact me. David Lilley, [d.m.j.lilley@dundee.ac.uk](mailto:d.m.j.lilley@dundee.ac.uk)



## From the desk of the CEO

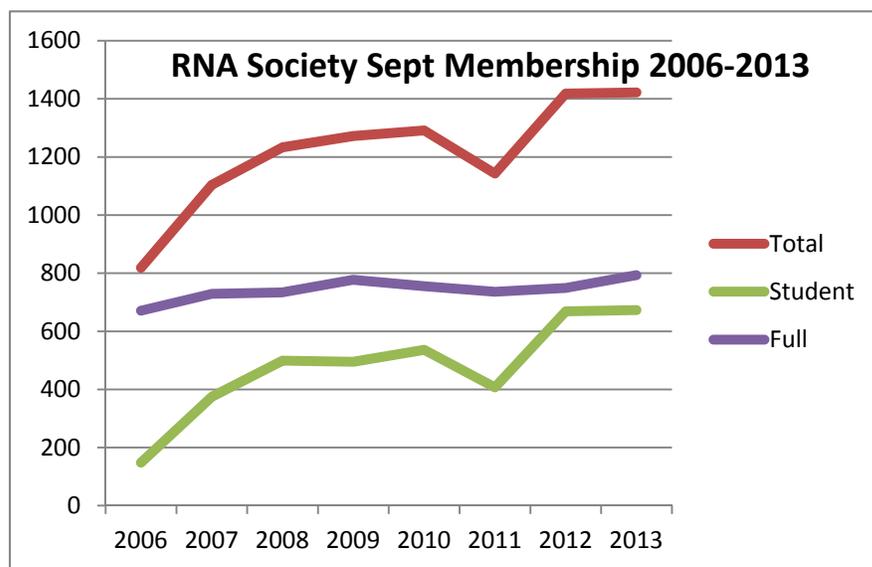
Jim McSwiggen

**20<sup>th</sup> Anniversary Reflections.** The RNA Society is celebrating the 20<sup>th</sup> Anniversary of its establishment this year, and that seems like a good opportunity to look at how far we've come and where we hope to go. This article will focus only on membership, however, because the journal *RNA* will celebrate its 20<sup>th</sup> anniversary next year, while the 20<sup>th</sup> annual conference will be celebrated in 2015.



Our membership numbers have continued to increase from a few hundred in 1994 to an all-time high of 1434 in 2012 (unfortunately we don't have exact numbers from before 2005); the 2013 membership numbers are expected to top last year's numbers by a few. Over the past eight years (Figure 1) the number of full members has increased by about 18%, while our junior membership (students and post docs) has increased 4.5 fold as we continue to make membership easier and

the benefits of membership greater for this group. A membership of only 1400 may seem small when compared to the ~20,000 scientists who have been authors on RNA-related articles in the past five years, but I would argue that these numbers are very robust given the current difficult funding climate and the natural proclivity of scientists to eschew becoming members of almost anything. My only minor concern is that participation in the Society by corporate and government scientists is low (3-5% of the total membership for each group). I believe that greater participation by these scientists would benefit both them and our academic members, so we will continue our efforts to recruit members from these groups.



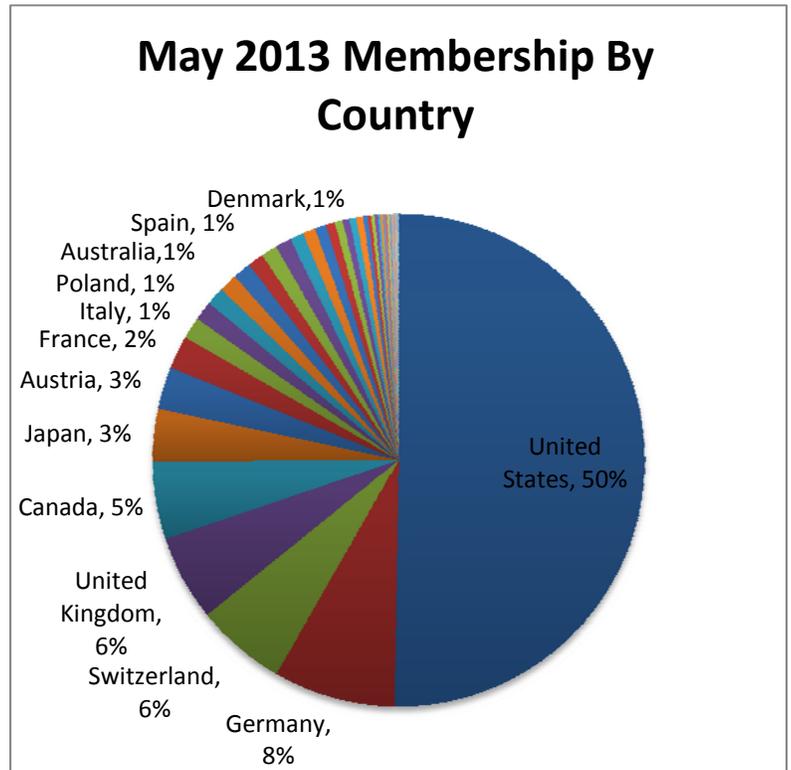
Our membership has also become more international over time. In the August 2007 newsletter, then-CEO Evelyn Jabri wrote that non-US membership in the Society had increased to 36%. In 2013 the non-US membership stands at roughly 50% (figure 2, see pie chart, below).

But this is a bit misleading, however, because our membership ratios tend to shift depending on where the annual meeting is held (table 1).

Year	2005	2008	2010	2011	2012	2013
Meeting Venue	Banff Canada	Berlin Germany	Seattle USA	Kyoto Japan	Ann Arbor USA	Davos Switzerland
Asia	6.6%	5.1%	6.2%	6.6%	5.2%	6.9%
Australia/NZ	0.7%	0.8%	1.0%	1.2%	1.3%	1.3%
Europe	22.4%	29.6%	22.7%	28.3%	21.9%	34.8%
MidEast/Africa	0.4%	1.1%	0.9%	0.8%	0.6%	0.7%
N. America	69.5%	62.7%	68.7%	62.5%	70.3%	55.5%
S. America	0.5%	0.7%	0.5%	0.6%	0.7%	0.8%



When the annual meeting is held in the US, then our US membership increases; when it's held in Europe or Asia those membership numbers increase. For this reason we will continue to plan for annual meetings in Asia and Europe as well as in North America, with a return to Japan in 2016 and to Europe in 2017. At the same time, we recognize that attending the annual meeting becomes more difficult when the meeting is held outside the member's home country or region. The Society has responded to this challenge by tripling its budget for travel fellowships (\$45,000 in 2013), by committing additional funds to keep registration fees down (\$60,000, or \$65/attendee in 2013), and in a more aggressive search for corporate sponsors to help fund both the conference and travel fellowships. We plan to continue these efforts in coming years and to look for even more ways to make our meetings affordable to all. Finally, we continue to explore the possibility of adding some small, focused conferences to our agenda so that members who are unable to attend the annual conference might still be able to attend a smaller RNA Society conference. These later efforts are still in the planning stage, but if you have any suggestions for conference topics or venues I would be happy to entertain them.



In May I asked the membership to fill out a survey giving details of their educational background and their history of participation in the Society (the RNA Society Pedigree survey). My plan was to build a “family tree” showing the labs through which each member had passed and how we are all interrelated. That effort was only marginally successful. A total of 680 members responded to the survey request and 560 provided their lab pedigrees, listing a total of 854 separate scientific ancestors. Unfortunately, only 140 of these ancestors are listed in more than one pedigree, so it makes for a fairly fragmented family tree. I suspect that this reflects more a problem with sample size than it does anything else, but I am disappointed to not be able to provide such a tree. We also asked whether members were somehow related to any of the founders of the RNA Society, namely Marlene Belfort, Tom Cech, Tim Nilsen, Joan Steitz, Olke Uhlenbeck, Alan Weiner, or Marv Wickens. The answer is that 8% of respondents say they worked in one of those labs, while 33% have a more distant link to these labs. I am happy to see that the Society encompasses a much broader slice of the RNA scientific community than I had expected. It will no doubt continue to broaden its membership in coming years.

Finally, you are probably wondering who won the drawing that was offered as an appreciation for filling out the pedigree questionnaire. The winners are **Andreas Kuhn** (Ribological GmbH, Germany) and **Katharina Strub** (University of Geneva, Switzerland). They will each receive a \$200 gift certificate good for a registration discount to one of the RNA 2013 through RNA 2016 meetings. Congratulations to them.

As always, if you have questions or comments about what I have written here—or regarding any other Society business—I will be happy to hear them. You can contact me at [ceo@rnasociety.org](mailto:ceo@rnasociety.org).

Jim McSwiggen, CEO



## 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.

- **Andrew Feig** is the Chair of our Finance Committee Chair and Chief Financial Officer. 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. Andrew assumed this role at the beginning of this year, and he's done a great job already.
- **David Lilley** has been the Meetings Committee Chair 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 Membership Committee. She is working to find more and better ways to serve our membership and to encourage more people to join. She is stepping down at the end of this year, and she will be greatly missed.
- The Nominating Committee 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: **Michael Ibba, David Rueda, and Sarah Woodson**. 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 Davos was a great success. The RNA 2014 organizers are now hard at work preparing for next year's conference, while the 2015 organizers are just getting started.

RNA 2013 Organizers: **Frédéric Allain, Witold Filipowicz, Adrian Krainer, Osamu Nureki, Sarah Woodson**

RNA 2014 Organizers: **Benoit Chabot, Martin Simard, Elena Conti, Fatima Gebauer, Barbara Golden, Sean Ryder**

RNA 2015 Organizers: **David Brow Amy Pasquinelli, Anna Marie Pyle, Matthias Hentze**

### Conference Volunteers

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

- Thanks to **Isabelle Allen**, Fred Allain's administrative assistant, who helped out with many of the organizational tasks in the year or more before the meeting. She then traveled to Davos to help prepare conference packets in the two days before the meeting.
- The ETH fielded an amazing 42 graduate students and other volunteers to help as microphone runners, shuttle bus guides, registration assistants and A/V tech helpers. Thank you to **Pierre Barraud, Irene Beusch, Jonathan Bizarro, Markus Blatter, Georg Braach, Sebastien Campagne, Antoine Clery, Sergio Covarrubias, Fred Damberger, Emral Devany, Nana Diarra, Adrien Dupin, Eva Duskova, Oli Duss, Malgorzata Duszczyk, Erica Fiorini, Courtney French, Michael Gamalinda, Katherine Goldfarb, Mallory Havens, Colleen Kellenberger, Jiri Koubek, Christiane Kowatsh, Elisabeth Lehmann, Fionna Loughlin, Gregoire Maslah, Ahmed Moursy, Kelly Nguyen, Rachel Niederer, Yaroslav Nikolaev, Sabarinathan Radhakrishnan, Bhalchandra Rao, Anna Rath, Nicola Rusca, Sunny Sharma, Michaela Steiner, Dominik Theler, Antonia VanDen Elzen, Jiashi Wang, Jingyan Wu, Jingwei Xie, and Yifan Zhu**
- Each year the Society awards prizes for the best posters in various categories. Judges constitute an appointed Poster Prize Committee. This year the task of choosing the winning posters was accomplished by: **Witold Filipowicz, Frédéric Allain, Andrea Barta, Marc Buehler, Jeff Coller, Zbig Dominski,**



**Fátima Gebauer, Pierre-Emmanuel Gleizes, Dixie Goss, Andrew Grimson, Tetsuro Hirose, Martin Jinek, Nicole Meisner-Kober, Andy Newman, Andres Ramos, Roland Sigel, Petr Svoboda, and Jernej Ule.**

### **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. This year's events were a great success due to their hard work.

Grad Reps                      **Callie Prest Wigington & Michael Meers**  
Post-doc Reps                **Marc-David Ruepp & Rita Strack**  
Faculty Advisors            **Katrin Karbstein & Beth Tran**

### **Newsletter Editor**

**Brenda Peculis** has been the Newsletter Editor 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 ISI Impact Factor of 6.015 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; **Rachel Green**, President; **Douglas Black**, Past-President; **Adrian Krainer**, President Elect; **Mary O’Connell**, Secretary; Board Members **Maria Carmo-Fonseca**, **Brenton Graveley**, **Tracy Johnson**, **Mikiko Siomi**, and **Jonathan Staley**

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## RNA Society-supported meetings

### Reports from recent meetings supported by the Society

#### Gall Symposium April 12-14, 2013

The **Joe Gall** 85th birthday symposium was a terrific success with about 150 people attending from all over the globe! Joe gave a marvelous plenary lecture on his current research on sisRNAs and current details were presented by the students in his lab who did a tag team talk. The entire opening session focused on RNA and other talks about RNA were included throughout the program. The Joe Gall 85th Birthday Symposium report, *A remarkable career in science - Joseph G. Gall*, has now been published in *Chromosome Research* 21, 339-343, 2013 and can be found online at

<http://www.springerlink.com/openurl.asp?genre=article&id=doi:10.1007/s10577-013-9369-5>. Additionally, you may visit the meeting website for access to this article, as well as photos and documents from this event (<https://sites.google.com/site/gallsymposium2013/>).



#### RiboWest 2013 May 23-25, 2013

The 9th annual Western Canada RNA Conference (RiboWest) was held this year at UNBC in Prince George, British Columbia. The invited speakers were **Jörg Vogel** (Institute for Molecular Infection Biology, Keynote Speaker) and **Michelle Scott** (University of Sherbrooke, Invited Speaker). This year, the meeting featured a "lab olympics" organized by the students, which included such events as pipette tip stuffing and loading a gel. The meeting demonstrated once again that RNA science is alive and well in western Canada, and we look forward to celebrating the 10th anniversary of RiboWest next summer in Lethbridge, Alberta.



#### 2013 Gordon Research Conference on Nucleic Acids June 2-7, 2013

The contribution from the RNA Society was received by **Brittany Griffin**, a grad student from Georgetown University, who presented a poster, "Hepatitis delta virus RNP formation requires a flexible, partially double-stranded RNA secondary structure."

## Microsymposium on Small RNAs May 2013

At the end of May, the "Microsymposium on Small RNAs" was again held at IMBA, Vienna (Austria). Since 8 years, the conference brings together leading researchers in the field of RNA interference with Narry Kim presenting the keynote lecture this year. The 2013 edition of the Microsymposium was jointly organised by Javier Martinez, Stefan Ameres and Julius Brennecke and offered an interactive platform to exchange ideas and discuss the latest scientific discoveries in the field of gene regulation by small non-coding RNAs. As in previous years, special emphasis was placed on promoting young scientists. Many of the speakers were young researchers in the process of establishing their own lab and a number of postdocs from leading laboratories presented their work. The PhD workshop in which ten selected students participated was a special highlight. With the support of the RNA society, the two best presentations of the workshop received the "Best Talk Award". This year's winners were **Felix Mürdter** (Hannon Lab, CSHL) for his work on a genome-wide RNAi screen for piRNA biogenesis factors. **Zhao Zhang** (Zamore Lab, UMass Medical School, Worcester) received an award for his work on the characterization of piRNA-producing loci.

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## Symposium on RNA Physiology & Disease June 18, 2013

**Aida Sivro** of the Blake Ball & Frank Plummer labs was the winner of the poster award from The RNA Society. Aida's poster was on the splice variant of IRF1 in HIV resistance.

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## Ribosomes 2013 July 9-12, 2013

The contribution from the RNA Society was used toward 4 poster prizes for junior scientists. The winners are listed below:

**Yasser Hashem**, Columbia University, "Versatile binding of eukaryotic initiation factor 3 on the small ribosomal 40S subunit and the CSFV IRES"

**Reut Shalgi**, MIT, "Widespread regulation of translation by elongation pausing in the mammalian stress response"

**Homa Ghalei**, Scripps Florida, "Hrr25, the homolog of casein kinase 1d, regulates 40S ribosome assembly by promoting the dissociation of the assembly factor Ltv1"

**Daniel MacDougall**, Columbia University, "Regulation of Reversible 50S Ribosomal Subunit Joining to the 30S Initiation Complex during Translation Initiation"

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## Non-coding RNA in Plants July 10-12, 2013

Generously supported by the RNA Society, about 70 plant scientist met in the historic Leucorea in Wittenberg to discuss the most recent findings on non-coding RNA in plants.

The meeting was opened by **Olivier Voinnet** (ETH Zurich) who described how the *de novo* silencing of retrotransposons is established. Subsequent sessions dealt with microRNAs, lncRNAs and NATs, Immunity and Stress, RNA-mediated DNA methylation, Viroids and RNA-binding proteins.



The support of the RNA Society was used to reduce the conference fees for young scientists by 33% and 11 PhD students benefitted from this discount.

The meeting was characterized by intense discussions and an open atmosphere and it is planned to repeat it in a biannual cycle.



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## Upcoming Meetings of Interest :

### 9th International Retroviral Nucleocapsid (NC) Symposium

August 25-28, 2013

Montreal, Quebec, Canada

<http://www.ncsymposium2013.org/>

This 9th International Retroviral Nucleocapsid Protein and Assembly Symposium will be held in Montreal, Quebec, Canada, from the 25th to 28th of August, 2013. Montreal, known as the city of festivals, at this time is gloriously warm and enjoyed by visitors from all around the world. It is a culturally diverse city with the two major languages, French and English, spoken on the streets, in stores and in restaurants. The World Film Festival coincides with the timing of this meeting.

The conference has historically focused on the multiple roles of Nucleocapsid (NC) protein of retroviruses, which is involved in the synthesis, maintenance and integration of proviral DNA and in virus particle assembly. Its role as a chaperone protein is perhaps its most important function as it promotes reverse transcription and coats the retroviral genomic RNAs. In the context of Gag, NC promotes viral RNA assembly and dimerization and interacts with several host cell factors. It is therefore a prime target for anti-HIV-1 therapy. In the 2013 edition of the meeting in Montreal, we have extended the focus of the meeting to include the latest developments in viral RNA function, metabolism and trafficking, restriction factors and on the control of viral assembly. In addition, we have invited speakers with topical expertise in structural biology and anti-viral therapies to round out the meeting and to recognize where the virology field is moving in the future.

Organizers: Andrew Mouland, Karin Musier-Forsyth, Robert Gorelick, Larry Kleiman, Chen Liang, and Michael Laughrea

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### RiboClub 2013

*Deducing RNA functions from high-throughput data*

September 23-25, 2013

Orford, Quebec, Canada

[http://www.riboclub.org/cgi-bin/OpeningSession/index.pl?page=opening\\_session&year=2013](http://www.riboclub.org/cgi-bin/OpeningSession/index.pl?page=opening_session&year=2013)

On behalf of the RNA scientists in Sherbrooke, it is my pleasure to announce that registration is now open for the 14<sup>th</sup> RiboClub Meeting to be held in Orford (in the vicinity of Sherbrooke, Québec, Canada) on September 23<sup>rd</sup> – 25<sup>th</sup>. This year the meeting is organized in partnership with Grant-in-aid and the RNA Society of Japan.



The program includes keynote lectures by John Mattick and Harry Noller, poster sessions and 18 invited speakers on plenary sessions covering the following topics: RNA technologies, RNA splicing, RNA stability, non-coding RNA and translation. The flavor of the year is “Deducing RNA functions from high-throughput data”. Additional talks will be selected from submitted abstracts. The program also includes an after-dinner presentation by Alan Bernstein, president of the Canadian Institute for Advanced Research.

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### **Rustbelt RNA Meeting (RRM) 2013**

October 18-19, 2013

Cleveland, OH

<http://rustbeltrna.org/2013/index.php>

Co-chairs: Kristian Baker and Jane Jackman

Vice chairs: Philip Bevilacqua and Kausik Chakrabarti

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### **North East Postgraduate Conference**

October 28, 2013

New Castle, UK

<http://nepg.org.uk/>

The North East Postgraduate Conference provides an excellent opportunity for postgraduate students of North East universities to present exciting new research to peer group members. Now in its 8th successive year, the conference is the largest annual conference for medical research and bioscience postgraduate students. Hosted by postgraduate students, last years conference attracted over 300 delegates from seven different universities. Featuring 38 short presentations and 40 posters, the 2012 conference proved a huge success amongst delegates and sponsors alike, a proclamation we aim to exceed in 2013.

2013 sees the conference returning to the Great North Museum: The Hancock on Monday 28th October 2013. Through out the day postgraduate students will deliver a series of short presentations and poster communications accompanied by insightful talks from Key Note speakers. The conference will be followed by an evening drinks reception at the Northern Stage, Newcastle.

We aim to deliver a range of both oral and poster communications from postgraduate students, allowing students to disclose current research findings within a public domain. With topics including; cell biology, immunology, and health and disease we aim to attract delegates from a wide range of research backgrounds. With networking becoming increasingly important we believe this conference provides a key opportunity for students to not only to discuss current research and controversial theories, but also to build new, vital connections across the scientific community.

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### **RNA UK 2014**

January 24-26, 2013

Lake District, Windermere, UK

<http://web1.bio.ed.ac.uk/mauk2014/Welcome.html>

The meeting will start in the afternoon on Friday 24th of January and will continue through to lunchtime on Sunday 26th. The talks will be selected from the abstracts. We anticipate a poster session, which will take place in the hall adjacent to the meeting room of the Low Wood Hotel.



The meeting covers all aspects of the RNA biology, including but not limited to: co-transcriptional and post-transcriptional processing, splicing, editing, export, translation, localization, stability/turnover, short and long non-coding RNAs, RNA in disease.

Organizers: Niki Gray, Gracjan Michlewski, and Steve West

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### **CRISPR 2014**

May 14-16, 2014

Berlin, Germany

<http://www.crispr2014.de/>

Uptake of foreign mobile genetic elements is often detrimental and can result in cell death. For protection against invasion, prokaryotes have developed several defence mechanisms, which take effect at all stages of infection. The most recent discovered defence system is the prokaryotic immune system, termed CRISPR/Cas. This defence system directly degrades invading genetic material and is present in almost all archaea and many bacteria. Current data indicate a large variety in their mechanistic molecular approaches.

This meeting is the third European CRISPR meeting after the previous meetings in Wageningen 2010 (organised by John van der Oost, Stan Brouns, Edze Westra, Philippe Horvath) and in St. Andrews 2013 (organised by Malcolm White, John van der Oost, Emanuelle Charpentier). The meeting is sponsored by the DFG Research Group "Unravelling the prokaryotic immune system" (FOR1680).

Leading international experts on CRISPR/Cas will give lectures, additional oral presentations will be selected from submitted abstracts. Poster presentations will give scientists the opportunity to discuss their current work. Sessions will cover the following topics: evolution of the CRISPR/Cas system, CRISPR/Cas systems I-III, virus-host interactions and applications.

Confirmed speakers are: R. Barrangou, E. Charpentier, J. Doudna, E. Koonin, L. Marraffini, F. Mojica, J. van der Oost, K. Severinov, M. Terns, M. White, B. Wiedenheft

Organizers: Anita Marchfelder, Emmanuelle Charpentier, Luciano Marraffini, Ümit Pul, Nadia Heidrich

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### **DNA Habitats and Its RNA Inhabitants**

July 3-5, 2014

Salzburg, Austria

<http://rna-agents.at/>

The shifting perspective from a read-only-memory genome with copying errors to a read- and-write genome with competent change operators is fundamental: For decades it was assumed that driving force of evolution is mutation (error) and selection. Now it is recognized that errors cannot explain genetic novelty and complexity.

A variety of RNA based agents play essential roles in evolution and regulation in all DNA/Protein based life: basic non-coding RNA secondary structures built of (paired) stems and (not-paired) loops. RNA stem-loop swarms such as group I introns, group II introns, viroids, viral (RNA viruses, retrotransposons, LTRs, non-LTRs) and subviral networks (SINEs, LINEs, Alus) cooperate within cellular genomes as modular tools with its abundance of regulatory functions. Some noncoding RNAs built complementary consortia such as rRNAs, tRNAs, spliceosomes, editosomes, and other RNPs. Additionally counterbalancing modules such as toxin/antitoxin (TA) -, restriction/modification (RM) -, and insertion/deletion (INDEL) – modules assure



identity (self/non-self) of cells, tissues, organs and even organisms.

Infectious RNAs manipulate host genomes for (i) selfish replicative purposes or (ii) persistent co-evolutionary integration. The latter in most cases remain as defectives, i.e. abundance of parts that now serve as co-opted modular tools for cellular needs or as full function elements that regulate complex developmental processes such as placentation in mammals. Also mixed consortia of RNA- and DNA virus-derived parts that integrate in host genomes have been found.

All fine-tuned steps and substeps of key cellular processes such as gene expression, transcription, translation, DNA recombination and repair, epigenetic imprinting (memory, learning), as well as various forms of innate and adaptive immunity are essentially constituted by such natural genetic content operators.

This symposium assembles approximately 50 experts from different fields to discuss a fundamental new understanding of genetic novelty, code-generating, genome-formatting factors, multi-use nature for RNAs and behavioral motifs of RNA-consortia. The small number of participants guarantees a relaxed and inspiring atmosphere for presentation and discussion. The Proceedings will be published.

Organizers: Guenter Witzany and Luis Villarreal

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## Employment Opportunities

If you are a member and would like to have your employment opportunity listed on this page, follow the instructions on [this page](#) (you must log in to view the page). 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.

### [Postdoctoral Fellow With Experience in RNA Biology](#)

Posted on [July 29, 2013](#)

The Nakamura lab is seeking an outstanding postdoctoral fellow with experience in RNA biology.

Our research will encompass the role of small RNA species in metabolic diseases such as obesity-induced type 2 diabetes. We will build on our recent discoveries [Nakamura et al. Cell (2010); Ben et al. Nature (2012)] to explore the networks of RNA-RNA binding proteins and to analyze circulating small RNAs in metabolic disease models. The successful applicants will characterize new genetic mouse models with physiological, cellular and molecular biological, and high-throughput RNA analysis approaches.

Candidates who are interested in making use of their experience and background in RNA biology to pursue molecular mechanisms of metabolic diseases are encouraged to apply.

The position will be available immediately. Interested individuals should e-mail a cover letter describing their current and future research interests along with an attached CV and contact information for three references to Takahisa Nakamura, Ph.D. [takahisa.nakamura@cchmc.org](mailto:takahisa.nakamura@cchmc.org).



### [Position for Ph.D. student](#)

Posted on [July 8, 2013](#)

Topic: nonsense-mediated mRNA decay (NMD) in human cells

In the laboratory of Oliver Mühlemann, Dept. of Chemistry & Biochemistry, University of Bern, Switzerland (<http://muehlemann.dcb.unibe.ch/>).

The position is for 3 to max. 4 years, starting date upon mutual agreement. The successful candidate will join the Ph.D. program Molecular Biology & Biochemistry of the Graduate School for Cellular and Biomedical Sciences (<http://www.gcb.unibe.ch/>). We offer the opportunity to work in a scientifically thriving environment and to develop an internationally competitive research project in the field of RNA biology.

We are looking for a top motivated young scientist with a strong theoretical and practical background in biochemistry, molecular and cell biology and with a M.Sc. degree or an equivalent qualification.

Please send your application (including a short statement of interest, your curriculum vitae, and the names and addresses of two academic references) to <[christina.schuepbach@ibc.unibe.ch](mailto:christina.schuepbach@ibc.unibe.ch)> until August 9, 2013.

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### [Post-doc position to work on alternative polyadenylation in Drosophila](#)

Posted on [July 8, 2013](#)

I am looking for highly motivated candidates with a Ph.D. degree in the field of Informatics, Molecular Biology, Biochemistry or related areas to work on the project described here:

[http://www.ibmc.up.pt/sites/default/files/BPD%20II%20AMoreira\\_0.pdf](http://www.ibmc.up.pt/sites/default/files/BPD%20II%20AMoreira_0.pdf)

in collaboration with Bin Tian (Rutgers University) and Nick Proudfoot (university of Oxford).

My group studies alternative polyadenylation and RNA processing mechanisms in human cells and Drosophila. Work in my lab is funded by FCT (Portugal) and the EU (FP7). The IBMC is a multidisciplinary research institution, with strong basic research, organized in three thematic units: Infection and Immunity, Molecular and Cell Biology, and Neuroscience. It harbors 37 research groups from different scientific backgrounds, 580 collaborators, 195 holding PhD and 49 post-graduate students. IBMC maintains close scientific interactions with the University of Porto, the Biomedical Engineering Institute (INEB), the Institute of Molecular Pathology and Immunology (IPATIMUP).

A postdoctoral fellowship position is available to work in the group of Alexandra Moreira, Gene Regulation Group, at the IBMC, in collaboration with Bin Tian (Rutgers University) and Nick Proudfoot, (University of Oxford) in the project PTDC/SAU-GMG/116621/2010, funded by FCT/MCTES (PIDDAC) and co-funded by pelo FEDER through COMPETE – Programa Operacional Factores de Competitividade (POFC).

The fellowship is due to start in September 1st, 2013, for one year, renewable for up to a maximum of two years. The application should include a letter of motivation, CV and 2 reference letters/contacts, and should be submitted on the IBMC webpage: <http://www.ibmc.up.pt/gestaocandidaturas/index.php?codigo=PR28052> until 14th August 2013, until 5 p.m.

More info at [http://www.ibmc.up.pt/sites/default/files/BPD%20II%20AMoreira\\_0.pdf](http://www.ibmc.up.pt/sites/default/files/BPD%20II%20AMoreira_0.pdf)

For informal enquiries please contact: [alexandra.moreira@ibmc.up.pt](mailto:alexandra.moreira@ibmc.up.pt)



## [Head, mRNA Sciences](#)

Posted on [June 6, 2013](#)

Visit <http://www.modernatx.com/revolution> to apply

We seek a candidate to lead our mRNA Sciences group and help optimize and engineer our modified mRNA molecules for optimized drug-like properties. This job entails establishing the scientific strategy and direction of the mRNA Sciences group and leading a group of scientists and research associates. The remit of this group is to advance RNA therapeutics through engineering of mRNA sequences for optimized drug-like characteristics. Intimate knowledge of mRNA biology and biochemistry, especially transcription and translation is absolutely required. We are looking for a high-energy candidate with ability to adapt to demands of high performance and form a very good collaborative environment with colleagues in the mRNA Sciences group, other R&D groups, and across the company. Lastly, applicants should have the ability to multi-task and to meet technology development and research goals under aggressive timelines

### Qualifications:

- PhD with 10+ years of experience in mRNA biology and biochemistry, especially transcription and translation required
- Track record of excellence in mRNA sciences required; industry experience a plus but not required
- Proven ability to think creatively about mRNA biology/biochemistry
- Ability to manage and maintain scientific business relationships and contract research agreements
- Positive team building and teamwork skills
- Ability to manage and mentor a group of scientists
- Strong track record of publications required

### Competencies:

- Teamwork
- Effective Communication (oral & written)
- Results Orientation
- Leadership

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## [Postdoctoral position to study mechanisms that protect transcripts from nonsense-mediated mRNA decay](#)

Posted on [May 31, 2013](#)

A post-doctoral position is available immediately in Audrey L. Atkin's research group at the University of Nebraska-Lincoln to identify the mechanisms that protect mRNAs from nonsense-mediated mRNA decay. This position is funded by a grant from the National Science Foundation for up to three years.

The Atkin lab studies mechanisms for regulation of mRNA decay using the yeast nonsense-mediated mRNA decay (NMD) pathway as a model system. NMD is a specialized pathway that is responsible for the recognition and rapid degradation of mRNAs with premature stop codons, and some wild type mRNAs as well. However not all wild type mRNAs with NMD targeting signals are degraded by the NMD pathway. The mechanism responsible for protection of these mRNAs from NMD is unknown and is a focus of the Atkin lab's current research.

The Atkin research group is located in the Beadle Center, the focus of life sciences research at the University of Nebraska. The Center is home to multiple interdisciplinary research programs and to core facilities for bioinformatics, genomics, microscopy, mass spectrometry, and structural biology. Atkin group collaborates with other fungal biologists as well as faculty with expertise in bioinformatics, computer science and statistics.



Applicants must have completed a Ph.D., have a strong background in molecular/cell biology, biochemistry or a related field, and an established publication record. Previous experience in RNA biology is an advantage. Strong technical and communication skills, as well as independent thinking are essential. Applicant should send their CV, contact information for three referees, and a brief personal statement that include scientific and career goals as a single PDF document to [atkinlabUNL@gmail.com](mailto:atkinlabUNL@gmail.com).

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#### [mRNA Research Associate/Senior Research Associate](#)

Posted on [May 31, 2013](#)

Visit <http://www.modernatx.com/revolution> to apply

Moderna Therapeutics is the first biopharmaceutical company dedicated to the discovery and development of a new class of drugs, messenger RNA therapeutics™. Leveraging the natural way in which proteins are made by humans, our proprietary modified messenger RNA (mRNA) enables the patient's protein translation machinery to synthesize therapeutics without inducing an undesirable innate immune response. This approach envisions dosing a patient with stable, modified RNA that encodes a therapeutic protein of interest, that upon translation in a cell type, results in therapeutic treatment with high efficacy, low unintended immunogenicity, and more biologically relevant dosing. The technology alleviates the need for laborious and expensive in vitro tissue culture or protein manufacture and purification. Our manufacturing process is cell-free. The technology is therefore a quantum advance in the field of drug development with great promise for novel ways of treating disease with direct application in the worldwide market of therapeutic biologics, which includes peptides, proteins, and antibodies. Moderna is seeking smart, committed individuals who would like to change the world by bringing new drugs to patients.

Moderna recently signed a collaboration agreement with Astra Zeneca that provided a \$240MM upfront payment (plus milestone payments).

Visit <http://www.modernatx.com/news> to read more and to apply.

#### Overview:

Applicants should have exceptional time management skills and pay strong attention to detail. Applicants should have the ability to resolve problems independently with standard protocols. Previous experience with protein and nucleic acids and, specifically, mRNA is required. This job entails engineering of messenger mRNA for optimized drug-like properties. We are looking for a high-energy candidate with ability to adapt to demands of high performance and form a very good collaborative environment with colleagues.

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#### [Postdoctoral Research Fellow: Posttranscriptional Control of Gene Expression](#)

Posted on [May 31, 2013](#)

A Postdoctoral position is available in the group of Prof. André Gerber to investigate combinatorial control of gene expression by RNA-binding proteins and non-coding RNAs (for review see Imig et al. 2012 BioMol. Concepts, 3, 403). The project is funded by the BBSRC for up to 3 years.

The aim of the project is to investigate how combinatorial arrangement of proteins/ncRNAs affects the fate of selected mRNAs during stress and in cancer. It involves the application and further development of a new method for biochemical purification of stress and cancer-related RNAs from yeast and human cancer cells, respectively, followed by the systematic identification of the bound proteins/ncRNAs with proteomics/genomics means. You will be expected to combine transcriptomics (e.g. RNA-Seq, microarrays) and proteomics with classical biochemical, genetic and cell-biological methods.



You will be an excellent and highly motivated scientist with a Ph.D. in biochemistry, molecular biology or related field. Previous experience with genomics and/or proteomics tools and bioinformatics/computational biology would be a great plus. Good communication skills are essential. You will also be expected to participate in national and international collaborations.

Informal enquiries should be addressed to Prof. Andre Gerber (e-mail: [a.gerber@surrey.ac.uk](mailto:a.gerber@surrey.ac.uk)). More information about the group is available at [http://www2.surrey.ac.uk/microbial/People/professor\\_andr\\_gerber/index.htm](http://www2.surrey.ac.uk/microbial/People/professor_andr_gerber/index.htm).

Our benefits package includes generous annual leave, final salary pension scheme, relocation provision, childcare assistance and leisure facilities.

You can apply online at [www.surrey.ac.uk/jobs](http://www.surrey.ac.uk/jobs). Applications should include a cover letter, CV and the names of three references. Alternatively, for an application pack, contact 00441483684596 (24 hour answer phone) or email Human Resources at: [FHMS\\_HumanResources@surrey.ac.uk](mailto:FHMS_HumanResources@surrey.ac.uk).

Closing date: Wednesday 29th May 2013; late applications will be considered until the post has been filled.

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### **[Postdoctoral/Research Associate Position in the Laboratory of Dr. Paul F. Agris](#)**

Posted on [May 17, 2013](#)

Postdoctoral/Research Associate position in the laboratory of Dr. Paul F. Agris within the RNA Institute (SUNY). Applicants are sought with expertise in structural biology by NMR. Successful applicant will have had experience with macromolecular structure determination by NMR (MDS), but will not need to have had experience with RNA. RNA experience is preferred. Projects include RNA/RNA, RNA/Protein and RNA/small molecule interactions involved in control of gene expression and in infectious disease.

Applicants should submit:

- 1) complete resume',
- 2) names and contacts of three references and
- 3) a brief description of NMR research experience that includes those approaches/technologies with which the applicant has extensive experience.

Modern 700MHz and 500 MHz NMRs each with cryoprobes are available for data collection; HPC including GPU systems are available for data processing, structure determination, predictive interactions. The RNA Institute provides a unique research resource environment for some 50 principal investigators and ~400 researchers conducting RNA science and its applications to human health problems, technology development and drug discovery in New York's Capital District. Albany has the cultural activities of a large city but within the environment of a small city atmosphere, ready access to the Adirondacks, Berkshires, the NY lake district, Boston, and NYC.

Submit completed application materials by email attachment to Dr. Paul F. Agris: [PAgris@albany.edu](mailto:PAgris@albany.edu)

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TENURE TRACK/TENURED POSITIONS : CENTER FOR RNA BIOLOGY  
UNIVERSITY OF ROCHESTER MEDICAL CENTER



The Center for RNA Biology (<http://www.urmc.rochester.edu/rna-biology/>), directed by **Lynne E. Maquat, PhD**, and **David H. Mathews, MD, PhD**, invites applications for a tenure-track position at the **ASSISTANT, ASSOCIATE** or **FULL PROFESSOR** level. We are seeking outstanding candidates holding a PhD and/or an MD degree(s) and at least two years of post-doctoral training with research interests in the area of RNA biology. Emphasis is being placed on, but is not limited to, the study of RNA metabolism or the use of RNA as a therapeutic target or tool. 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 College of Arts, Sciences and Engineering are part of a world-class life sciences research campus, providing excellent opportunities for interactions and collaborations, and offer an outstanding research environment with established strengths in RNA Biology. Our Center for RNA Biology has expertise in genome stability, post-transcriptional processing and regulation, structural and functional characterization of molecular interactions, computational biology, and biophysical chemistry. Studies encompass rRNA, pre-mRNA, mRNA, tRNA, lncRNA and miRNA in humans, model organisms, pathogens and *in vitro*.

Applicants should apply on line at [www.rochester.edu/jobopp](http://www.rochester.edu/jobopp) , job number 176618 and forward their CV, descriptions of research accomplishments and future research plans, and letters from three references to Sharon Kubiak, Manager of Candidate Administration Services at [sharon\\_kubiak@urmc.rochester.edu](mailto:sharon_kubiak@urmc.rochester.edu)

*The University of Rochester has a strong commitment to principles of diversity and, in that spirit, actively encourages applications from groups underrepresented in higher education.*

