RNA Society Newsletter

Feb 2014

RNA Society

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From the Desk of the President, Adrian Krainer

Happy 2014, citizens of the RNA World! As of January 1, I had the privilege to receive the President's torch from now Past-President **Rachel**



Green. Six days later, Rachel and I, together with our CEO, McSwiggen, got together the U.S. **National** Institutes of Health with Director of the National Institute οf General Medical Sciences

(NIGMS) **Jon Lorsch**, who was formerly a Director of the RNA Society. The purpose of our meeting was for Jon to share his vision for the mission of NIGMS, the major funding source of basic biomedical science in the U.S., and conversely, for him to listen to our suggestions and concerns as representatives of the RNA Society and grantees. (Continued on p2)

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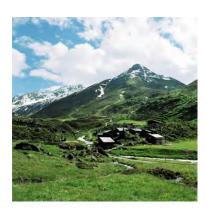
Before taking on his leadership role at NIGMS, Jon ran a lab at Johns Hopkins, studying mechanisms of translation—research that he now continues at the NIH. Thus, Jon knows the importance of RNA research as well as anyone. I realize that NIH funding is mainly of interest to our members in the U.S., although some grant recipients do work outside the U.S., and many others are engaged in international collaborations. Nevertheless, as the general issue of research funding is likely to be of interest to our membership more broadly, I wanted to share with you some of what we learned.

NIGMS has an annual budget of nearly US\$ 2.3 billion, and currently funds 4,675 research grants and 4,320 trainees. We had a very stimulating discussion, and Jon gave us a realistic yet optimistic assessment, based on a thorough analysis of historical trends, budget projections, and strategic priorities, which include a renewed emphasis on investigator-initiated research, as opposed to targeted funding. (As of this writing, there is an expectation, though not a certainty, that a U.S. 2014 fiscal-year budget that partially reduces previous cuts in NIH funding is finally about to be enacted into law.) Other topics of discussion with Ion included new funding mechanisms under consideration, the peer-review process, and support for scientific meetings (which NIGMS will no longer provide) and for training courses (which will be continued). Finally, Jon promised to attend the 2015 RNA Society meeting in Madison, and to participate in the RNA and Society session.

I want to expand on the subject of scientific meetings and the peer-review process. The very first RNA meeting I attended, as a graduate student, was the 1984 RNA Processing meeting at Cold Spring Harbor, which was a precursor to the RNA Society's annual meeting. It has not escaped my notice that this year's meeting in Québec City will take place 30 years later, pretty much to the day! Yet I still remember that first meeting very vividly, and not just because Orwell's 1984 had been a favorite book of mine as a teenager, which now makes me feel like going "back to the future".

That meeting was when the discovery of the lariat as an intermediate in pre-mRNA splicing was first presented; when I gave my first scientific talk; and also when I first met many prominent scientists, whose work had already influenced me: Joan Steitz, John Abelson, Tom Cech, Christine Guthrie, Mary Edmonds, Reinhard Lührmann, Olke Uhlenbeck, Norm Pace, among many others. Since then, I haven't missed a single RNA Society meeting (or its precursors), and besides learning a great deal about RNA science and the latest discoveries, regularly attending these meetings has allowed me to develop many lasting friendships and productive collaborations.

Last year's RNA Society meeting, which was a great success, took place in Davos, Switzerland, and was organized by **Fred Allain and Witek**



Filipowicz, as the local organizers, with help from coorganizers Sara Woodson, **Osami** Nureki, and myself. This coming we will summer, gather in Québec City for our 19th Annual Meeting, and

the organizers, Benoît Chabot, Martin Simard, Elena Conti, Fátima Gebauer, Barbara Golden, and Sean Ryder, are already hard at work, expertly planning every detail. I strongly encourage all members, and indeed all RNA scientists, to attend. It will be a wonderful opportunity to hear cutting-edge presentations, to discuss relevant scientific and societal issues, to network with your colleagues, and to participate in informal career-mentoring sessions.

On the topic of peer review, I want to highlight the vital importance of our journal, *RNA*, which continues its record of success since its launch in 1995. What I especially appreciate about *RNA* is the certainty that our manuscripts will be handled by a knowledgeable editor, who is an active scientist in the same or a closely related area to that of the manuscript. Thus, he or she is highly



qualified to select appropriate referees, to encourage constructive reviews, and to make fair and informed decisions. Nowadays, the crucial importance of these qualities cannot be overemphasized. We are therefore lucky to have a dedicated team of Editors, to whom we owe very special thanks: Tim Nilsen, Tom Cech, Javier Cáceres, Kathy Collins, Elena Conti, Adrian Ferré D'Amaré, Brent Graveley, Rob Singer, Rachel Green, Elisa Izaurralde, Daniel Kolakofsky, Erik Sontheimer, Peter Stadler, Gisela Storz, and Eric Westhof.

It seems to me that whenever scientists get together, a favorite topic of conversation involves depressing stories about unfair reviews and arbitrary rejections in various journals; sadly, stories about helpful, reasonable, and constructive reviews tend to be much less frequent. To all PIs, postdocs, and students: you are—or soon will be—a crucial participant in the review process; therefore, when you review a manuscript, try to keep in mind how you hope that your own next manuscript will be treated. Following that golden rule would certainly enhance the all-important publication process for everyone involved.

There has been one important change in our bylaws: after discussion and approval by the Society's Board, followed by ratification by the membership, the President's term will henceforth be for two years, rather than one. This will give the President ample time to learn the ropes, evaluate the current status and needs of the Society, and try to implement his/her vision, working very closely with the Society's elected and appointed Officers. This change will take effect with the 2014 elections.

To conclude: **don't forget to renew your membership,** which among many benefits provides substantial discounts for the annual-meeting registration and for author charges in *RNA*; register for the annual meeting; vote annually to elect your representatives; and contact your current representatives at any time with questions, concerns, or suggestions.

I look forward to seeing all of you in Québec City, and in the meantime, I wish you an exciting year of great discoveries in RNA science.

Adrian Krainer. <u>krainer@cshl.edu</u>





RNA 2014 The 19th Annual Meeting of the RNA Society

The 19th Annual Meeting of the RNA Society will be held in Quebec City, Canada June 3-8, 2014,
Centre des Congrès de Québec

2014 Organizers

Benoît Chabot, Université de Sherbrooke
Martin Simard, Laval University Cancer Research Center
Elena Conti, Max Planck Institute of Biochemistry
Fátima Gebauer, Center de Regulacio Genomica
Barbara Golden, Purdue University
Sean Ryder, U. Mass Medical School

For info and registration materials: http://www.rnasociety.org/conferences/rna-2014/











RNA 2014 Summary of Activities Hosted by Junior Scientists

RNA 2014 is coming up soon and we, your Junior Scientist representatives, hope that you are as excited about it as we are! This year's meeting will take place in lovely Quebec City, one of North America's oldest cities located on the beautiful Saint Lawrence River. We have been working throughout the year to put together a really great lineup of junior scientist events for the meeting and can't wait to share them with all of you this June.

Before the opening of the meeting on Tuesday, we've made arrangements for a group of junior scientists to enjoy a 90-minute cruise along the Saint Lawrence River. The cruise will take us from Cap Diamant at the confluence of the St. Lawrence and St. Charles Rivers, to the breathtaking Montmorency Falls. Montmorency Falls are 275 feet high; 98 feet higher than Niagara Falls! During the tour, a guide will tell us about the history of Quebec City and surrounding areas, and highlight historical and aesthetic points of interest along the way. For more information on the cruise, visit www.croisieresaml.com/en/plan-your-cruise/quebec/maritime-excursion-1/detail. The price of the



excursion will be approximately \$30.00/per person and we will send an email with a schedule and signup procedures later this spring. The tour will have limited seating so make sure to sign up early!!!

On the second day of RNA 2014, we will be hosting the annual Junior Scientist Social. This event is a great opportunity to engage with fellow junior scientists and enjoy casual conversation over drinks, so make sure to join us before Wednesday night's poster session gets going!

On Friday afternoon, we will be hosting our annual career development workshop, which will focus on a particularly important aspect of success in the sciences and beyond: time management. Every career has its own unique time management issues, and scientists are hardly unique in struggling with the best ways to

balance time between life, work, family and friends. Between grant writing deadlines, experiments, paper submissions, travel to conferences, and enjoying time at home with friends and family, a career in science can be difficult to navigate. Therefore, we are excited to present the RNA 2014 workshop, entitled "Time Management in Science: Doing More than Just Surviving". The workshop will be highlighted by a dynamic talk in the first half of the session from a leader in the RNA field with specific insight into time management issues in science. The second half will be an interactive Q+A session that seeks to include specific questions and concerns from the junior scientist community. To that end, throughout the spring we will be using the RNA Junior Scientist Facebook group (RNA Society Junior Scientist Members) to solicit ideas for questions and topics of interest related to time management in science to be included in the workshop. Be sure to stop by and join the conversation!



We are looking forward to meeting all of you at this year's meeting. Please feel free to contact us via Facebook or email (RNAjuniorscientist@gmail.com) anytime before the meeting if you have any questions/comments/suggestions. As always, we are your liaisons to the senior leadership of the RNA Society and we are here to serve you.

See you in Quebec!!

Jo Marie Bacusmo (The Ohio State University, <u>bacusmo.1@buckeyemail.osu.edu</u>)
Michael Meers (UNC Chapel Hill, <u>mpmeers@email.unc.edu</u>)
Oussama Meziane, (Laval University, <u>meziane20@yahoo.fr</u>)
Callie Wigington (Emory University, <u>callie.wigington@gmail.com</u>)











From the desk of the CEO Jim McSwiggen



Welcome to 2014 and another exciting year for RNA research. The economy continues to improve, albeit slowly, and I hope that means that the funding climate will also continue to improve for you. I am confident that RNA researchers will continue to make exciting discoveries no matter what the funding situation. The talks and posters that are presented at our annual meeting and the papers published in the journal, *RNA*, are ample evidence to me that the RNA community continues to survive and thrive.

The RNA Society remains in very good condition. Our journal continues to attract high quality manuscripts and is the financial engine of the Society. The 2014 conference in Davos was a huge success, both intellectually and financially, and we expect an equally successful 2015 meeting in Québec. The Society's membership levels have increased another 2% over last year (to 1465 members), and are again at the highest level in our 20-year history.

As a consequence, the financial health of the Society remains strong. That, in turn, provides us with the ability to expand our financial support for the RNA community, and we continue to look for new ways to do so. Our support for other small RNA conferences and colloquia has more than doubled in the last three years, and we've again committed to supplementing the RNA 2014 Québec conference with over \$100 K in funds in an effort to keep down registration costs and to help with travel funds for students, post-docs and others who could use additional assistance.

We have also started to explore the possibility of more direct "hosting" of small RNA-related conferences that might otherwise have difficulty getting going. As a set of test cases, we have agreed to host a 2014 RNAse H meeting and the 2015 Ribosome Synthesis meeting. In addition to providing financial backing and organizational support, we hope to offer a discount on the registration fees for RNA Society members (probably ~\$100). If these two test cases are successful, then we will look to expand this effort to other small RNA-related conferences. If you know of other RNA conferences that could use some assistance then please let me know. I can't promise that we will be able to help, but we will certainly try.

As CEO, my goal is to expand the Society's membership and income so that we can continue to expand our mission of supporting RNA research and education. I am grateful to the many, many volunteers who have helped in this endeavor, and who continue to do so. In particular, I want to thank Past-President Doug Black, and board members Brent Graveley, Tracy Johnson, and Mikiko Siomi who have just completed their terms of office on our board of directors. I also want to thank and bid a fond farewell to Kim Dittmar who has stepped down as chair of our membership committee after three productive years in that position. She has done a wonderful job and will be sorely missed. Serving in her place will be Kristian Baker, who began her term as membership committee chair at the beginning of this year. Also new to our volunteer roster is Máire Osborn, who has been serving as our business development chair since October of this past year. Máire took over from Peter Watson in mid-term, and has been doing a great job contacting companies and soliciting funds for RNA 2014. More information on Kristian and Máire is available in the New Staff Members section of this newsletter (p 8).

As always, if you have questions, comments, concerns or commendations regarding the RNA Society, please let me know. I am always happy to hear from our members (and also happy to hear from non-members who want to become members). Jim McSwiggen, CEO CEO@rnasociety.org



New Staff Members

We are happy to announce two new staff members have joined our ranks in late 2013 and early 2014.

Máire Osborn has taken over the role of Business Development chair from Peter Watson. Máire is a graduate student at the University of Oregon's Department of Chemistry and Institute of Molecular Biology. She is studying Pt drug accumulation within ribosomal RNA in the laboratory of Victoria DeRose, but in the spring she will be moving to the UMass Medical School in Worcester to begin a post-doc in the laboratory of Anastasia Khvorova. As BD Chair, Máire will be looking for ways that the Society can better engage the corporate sector in our activities. That includes more participation by industry scientists at our annual meeting, and hopefully more industry sponsorship of our conferences. Máire will also be exploring grants to help fund student travel to our meetings.





Kristian Baker has taken over the role of Membership Committee chair from Kim Dittmar. Kristian is an Assistant Professor in the Center for RNA Molecular Biology at <u>Case Western Reserve University</u>. She and her lab are studying mRNA translation, degradation and quality control. As membership committee chair, Kristian will be seeking ways to expand Society membership, improve member experience, and develop new member services to increase the value of being a member of the Society. Be on the lookout for a questionnaire soliciting your comments, feedback and ideas about your membership in the Society.

The RNA Society is an all-volunteer organization, and we thrive because of the efforts of these and many other volunteers (see page one sidebar). Please be sure to thank them for their service when you have the opportunity.







Chairman of the Meetings Committee David Lilley

As I write this short report it is the middle of the northern winter, and the US in particular



seems to be in the deep freeze. So it's a good time to think ahead to the summer, and to look forward to this vear's annual conference in Ouébec. The meeting is being organized bv committee comprising Fátima Gebauer. Elena Conti, Sean

Ryder, Barbara Golden and Martin Simard under the able leadership of **Benoît Chabot**. Once the organization of any meeting is up and running my job is largely over, but doubtless more details of the meeting are provided elsewhere in this newsletter. Registration has already opened onhttp://www.rnasociety.org/conferences/rna-2014/ line please note that the deadline for and submission of oral abstracts is March 10th. If you have fellow lab workers who are not members of the RNA Society (so may not be reading this) but would like to attend, it is worth pointing out to them the significant financial advantages of joining the society. This applies of course to any of our meetings. Ouébec is a very accessible city in a spectacular location, and I have no doubt that the organizers are going to provide a wonderful celebration of RNA science.

In **2015** we shall be back on familiar ground, as we can finally return to **Madison** with the renovations largely complete. The organizing team will be **Dave Brow (lead), Amy Pasquinelli, Anna Marie Pyle** and **Matthias Hentze.** Like many of us, I attended my first RNA Society meeting in Madison, and still regard this as our home. I look forward to returning next year.

We shall hold our second collaborative meeting with the Japanese RNA Society in 2016. We have been considering two potential sites for the conference. One possibility is to return to the Kyoto International Conference Center, where we met in 2011, while the other is to move to Kobe. We site visited both places last fall, and either would be excellent. But as you can imagine, these decisions require making detailed comparisons of all the financial details and these are still ongoing, though a decision is imminent. If this is not finalized before we "go to print", then please consult the RNA Society web site. What I can tell you is that the organizing committee has been put together. The lead organizer will be Mikiko Siomi, and the other committee members are Erik Sontheimer, Wendy Gilbert, Utz Fischer, Tom Suzuki and myself. RNA 2011 was one of the most memorable society conferences, and I greatly look forward to returning to Japan in two vears.

At the meetings committee meeting held during the conference in Davos last year, the decision was taken to **return to Europe in 2017**. It is probable that Barcelona will enter a bid to hold the meeting, and possibly Prague too. If there are other European venues who would like to make a proposal, I would be very pleased to hear from them. We expect such bids to be led by the local RNA community, who will have identified a suitable conference facility and accommodation. I can provide a document that details the requirements for holding our conferences. Of course I also welcome any suggestions for future conferences in other parts of the world where there is an active RNA research community. A significant number of our recent meeting venues have come out of just such approaches, so please keep them coming in!

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



RNA Society-supported meetings

Reports from recent meetings supported by the Society

Symposium on RNA in Physiology and Disease June 18, 2013

The three judges, Drs Douglas L. Black, Etienne Leygue and Russ Carstens have selected **Aida Sivro** of the Blake Ball & Frank Plummer labs as the winner of the RNA Society Poster Award. Aida's poster was on the splice variant of IRF1 in HIV resistance.

2013 Integrative RNA Biology - Special Interest Group (Formerly Alternative Splicing-SIG) July 19, 2013

The 10th Special Interest Group meeting on Integrative RNA Biology (IRB-SIG) was held July 19, 2013 in Berlin, Germany. 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. The

meeting had speakers covering diverse topics in RNA biogenesis such as miRNA target predictions (Uwe Ohler, Mihaela Zavolan), modeling RBP binding sites from CLIP (Rolf Backofen) and correlations between



epigentic markers (Martin Vingron), circular RNAs (Nikolaus Rajewsky), cross talk between splicing and miRNA processing (Gil Ast), and splicing development across evolution (Ben Blencowe).

Lepennetier Gildas from the University of Münster (Catania Lab, "Testing the intronization theory"), Idit Kosti from the Israel Institute of Technology (Mandel-Gutfreund Lab "Does intragenic DNA methylation determine differential exon expression?"), and Eugenio Mattei from the University of Rome (Citterich Lab "A novel approach to represent and compare RNA secondary structures") received an RNA Society sponsored travel fellowship to cover their registration costs. The RNA Society sponsored poster price of \$100

was awarded to **Ms. Mar Gonzàlez-Porta** from the EMBL-EBI, Wellcome Trust Genome Campus who presented a poster on her work "Small Changes in the Big Picture: Genetic Fine-Tuning in Transcriptome Variation Across Human Populations". The organizers thank the RNA Society for their generous support of IRB-SIG 2013.



9th International NC and Assembly Symposium August 25-28, 2013

Thanks to the RNA Society for supporting the 9th International NC and Assembly Symposium, held Aug 25-28, 2013 in Montreal, Canada.

We concluded what was probably our best NC symposium to date. There were approximately 100 participants. Two Keynote Lectures were delivered by Mark Wainberg (McGill University, Jewish General Hospital) and Sarah Woodson (Johns Hopkins University). Topics of the sessions included RNA Translation & Assembly, RNA Trafficking, Dimerization, & Encapsidation, Host Factors/Viral Restriction, Biophysical Studies, and Therapeutic Strategies.



Funding from the RNA Society was used for travel fellowships for two students whose abstracts were selected for oral presentation. The RNA Society Winners are:

Kathy Chaurasiya presented her work carried out as a graduate student at Northeastern University in the lab of Mark Williams Talk title: "Oligomerization Transforms Human APOBEC3G from a Fast Enzyme to a Slow Binding Protein"

Jordan Becker, graduate student in the lab of Nathan M. Sherer, University of Wisconsin-Madison Talk title: "Crosstalk between the HIV-1 Gag Matrix Domain and Viral Genome During Virus Particle Assembly"

RiboClub 2013 September 23, 2013

The RiboClub meeting 2013 took place last September in Orford (Quebec, Canada), and it was a big success this year again. The meeting was organized in partnership with the RNA Society of Japan and non-coding RNA grant-in-aid. John Mattick (Brisbane) gave an outstanding opening lecture on Regulatory RNA in Human Development while Harry Noller (Santa Cruz) was the concluding keynote on Ribosome Structure and Function. Session topics included translation, RNA technologies, gene silencing and editing. The flavor of the year was "Deducing RNA function from high-throughput data". In addition to the 30+ high quality oral presentations, two very interactive poster sessions showcased the work of students and post-docs. Thanks to the support of the RNA Society, we provided 2 travel scholarships that were given on a competitive basis.



This year, the two travel scholarships from the RNA Society were awarded to:

Je-Hyun Yoon, (on left) from NIH, Baltimore (laboratory of Pr. Myriam Gorospe) and **Sohani Das Sharma**, (on right) Hunter College, Department of Chemistry, City University of New York (laboratory of Pr. Dixie Goss).



North Carolina RNA Symposium October 18-19, 2013

The NC RNA Society symposium, held at UNC's Genome Sciences Building on October 18 and 19, included 90 registered faculty, postdocs, and graduate students. There were eight invited speakers, seven from Universities throughout the U.S., and one from the UK. Of the 38 abstracts submitted, mostly by graduate students and postdocs, 10 were selected for oral presentation. The remaining 28 were selected for poster presentations.

In addition to those who were able to pay for registration, symposium organizers opened the meeting to 20+ students working in labs at the National Institute of Environment Health Services (NIEHS). These were attendees who would have paid for registration, had it not been for the government shutdown during the first half of October. Symposium organizers felt it was more important to have them share in the scientific collaboration, than not have them attend.

RNA Society travel fellowships were awarded to three students:

- **Jennifer West**, Graduate Student at the University of Virginia
- Peter Randolph, Graduate Student at the University of Virginia
- Anthony Szempruch, Graduate Student at the University of Georgia

2013 Rustbelt RNA Meeting (RRM) *October 18-19, 2013*

The 2013 Rustbelt RNA Meeting (RRM) was held at the Marriott Hotel and Convention Center in



downtown Cleveland, Ohio on October 18th and 19th, 2013. This year's RRM marked the 15th anniversary of the establishment of this annual meeting that draws RNA researchers from across the Midwest together to present and discuss new developments in RNA-related research. The 2013 RRM was attended by the largest number of participants to date; the 297 scientific registrants included 187 graduate student and

postdoctoral trainees, 23 undergraduate students, and 72 PIs from 30 different academic institutions throughout the Midwest. The meeting was organized by co-Chairs Kristian Baker (Case Western Reserve University) and Jane Jackman (Ohio State University) and co-Vice Chairs Philip Bevilacqua (Pennsylvania State University) and Kausik Chakrabarti (Carnegie Mellon University). A hallmark of the RRM is its focus on trainee research and career development. Accordingly, the meeting highlighted 24 oral presentations by graduate and post-doctoral trainees, with 2 presentations made by junior investigators new to the local RNA community (Seth Kelly of Wooster College and Thomas Leeper from the University of Akron). An evening poster session highlighted the work of 146 trainees. Presentations on Friday were



capped off by a keynote lecture, "Long ncRNAs and their protein partners: Marching toward mechanism", presented by our distinguished guest, Dr. Tom Cech (HHMI, University of Colorado Boulder).

Awards for scientific merit and presentation were given to a number of student and post-doctoral trainees. These cash prizes were made possible, in part, by sponsorship generously provided by the RNA Society.

Oral presentation award winners were:

Andrea Putnam (Jankowsky lab, Case Western Reserve University)

Jenna Smith (Baker lab, Case Western Reserve University)

Poster presentation award winners were:

Brandon Crowe (Foster lab, Ohio State)

Luke Diorio-Toth (Woolford lab, Carnegie Mellon University)

Andrew Knappenberger (Harris lab, Case Western Reserve University)

Kaylen Lott (Read lab, SUNY Buffalo)

Paul Sample (Alfonzo lab, Ohio State)

Frank Tedeschi (Jankowsky lab, Case Western Reserve University)

Siwen Wang (Tran lab, Purdue University)

Jingyan Wu (Hopper lab, Ohio State)

This year, funding acquired from the National Science Foundation was applied, in part, to support two **Travel awards** for outstanding presentations by underrepresented minority students; this year's award winners were

Catey Dominguez (Chandler lab, Ohio State) **Nathan Raynard** (Goldstrohm lab, University of Michigan)

The organizers of the RRM would like to acknowledge continued support from the National Science Foundation (MCB-1314938) and our many academic sponsors including: The Ohio State University Center for RNA Biology, Carnegie Mellon Center for Nucleic Acids Science and Technology, Case Western Reserve University Center for RNA Molecular Biology, Cleveland State University, The Cleveland Clinic Foundation Lerner Research Institute Departments of Molecular Genetics and Cellular and Molecular Medicine, The Ohio State University Departments of Chemistry and Biochemistry, Microbiology and Molecular Genetics, and Nationwide Children's Hospital. Funding generously provided by a number of industry sponsors also played an important part in helping to fund this event.

For more information about the Rustbelt RNA Meeting please visit http://rustbeltrna.org/ or contact any of the organizers. We hope to see you in 2014 at the RRM in Pittsburgh!

Finger Lakes RNA Conference October 25-26, 2013

The Finger Lakes RNA Conference, October 25-26, 2013 in Canandaigua, NY was a big success! RNA Society sponsorship supported fellowships for the following junior scientists:

- Jung Hoon Doh, Postdoctoral Fellow, Wadsworth Center, Center for Medical Sciences
- Kimberly Harris, Postdoctoral Fellow, SUNY Albany,
- Clarence Ling, Graduate Student, University of Rochester Medical Center, Department of Biochemistry & Biophysics
- Yicheng Long, Graduate Student, Ohio State University
- Hansen Xu, Graduate Student, Cornell University



Northeast Postgraduate Conference October 28, 2013,

The Northeast Postgraduate (NEPG) is a bioscience conference organized by postgraduate students, for postgraduate students. The conference provides an environment in which postgraduate students from seven Universities can present their work in a professional but friendly environment and also offers the opportunity for vital connections and networks to be established.

Funds generously donated by the RNA society contributed to the organization and running of the conference, ensuring the conference remains free to attend. Contributions from vital donors made it possible to advertise the conference, produce high quality conference merchandise including an exceptional conference booklet to providing over 350 attendees with abstracts for all presentations delivered on the day.

The day proved to be a great success, with 36 talks and 42 poster communications presented by postgraduate students from across seven different universities. The NEPG committee would like to congratulate everyone for their hard work, especially those who won prizes for their oral and poster communications;

Winners of Oral Presentations:

1st Victoria Barlow **and** 2nd Sarah Marinnan.

Winners of Poster Presentations:

1st Alison Pitts and 2nd Lauren Harkin.

Standing- Left to right: Anna Stanton, Megan Webster, Jodie Birch, Livingstone Fultang

Seated- Left to right: Lauren Walker, Sadaf Atarod, Helen Lawrence



Upcoming Meetings of Interest:

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 defense mechanisms, which take effect at all stages of infection. The most recent discovered defense system is the prokaryotic immune system, termed CRISPR/Cas. This defense 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 (organized by John van der Oost, Stan Brouns, Edze Westra, Philippe Horvath) and in St. Andrews 2013 (organized by Malcolm White, John van der Oost, Emanuelle Charpentier). The meeting is sponsored by the DFG Research Group "Unraveling 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

FASEB Machines on Genes

June 22-27, 2014 Snowmass, CO http://www.faseb.org/Science-Research-Conferences

This FASEB Science Research Conference focuses on the anatomies, architectures and mechanisms of protein and protein-nucleic acid machines that access, maintain, and decode the information stored within DNA and RNA.

Topics will include the structural mechanisms of enzymes involved in a wide range of important nucleic acid transactions, including DNA replication, repair, and recombination, transcription, mRNA modification, translation, RNA-driven catalysis, chemical biology of nucleic acids, and epigenetic gene regulation, and will highlight the use of emerging biophysical methodologies such as single-molecule spectroscopy/microscopy and small-angle X-ray scattering.

The 2014 meeting marks a consolidation of the long-running FASEB Nucleic Acids Enzymes Conference with the Biochemical Society Machines on Genes Conference, which has taken place in the UK twice since 2010, and therefore brings together a broad range of investigators from across the globe. A large number of oral presentations will be selected from the abstracts, and the selected talks, poster presentations, and recreational activities will provide students and postdoctoral fellows the opportunity to exchange ideas and formulate new collaborations.

Funds have been secured to provide student/postdoc travel scholarships. The meeting will also feature several organized panel discussions to help junior colleagues navigate various topics related to careers in science. Therefore, the program will facilitate cross-talk between multiple areas of science, techniques, and skill levels to inspire new innovations and quality science in the area of nucleic acid structural and mechanistic biology.

Program can be found at https://secure.faseb.org/FASEB/meetings/summrconf/Programs/11574.pdf
Organizers: Thomas Carrell, Brandt Eichman, and Jeffrey Kieft



RiboWest 2014

June 18-21, 2014 Alberta, Canada

In 2014, the **RiboWest Conference** will take place for the 10th time, and we would like to invite you to this special event! To celebrate the 10th anniversary, there will be more fascinating speakers than before and some special events such as a trip to the Rocky Mountains. The RiboWest Conference is an annual meeting of RNA researchers from western Canada and beyond. In particular, we welcome whole research groups to attend as we offer several opportunities for young researchers in a very friendly setting. This meeting is an excellent opportunity for networking, establishing new collaborations and having fun in sharing our enthusiasm for RNA. The first RiboWest Conference has been organized in 2005 by Stephen Rader at the University of Northern British Columbia in Prince George, BC. Since 2008, this annual Conference alternates between Prince George and Lethbridge.

Keynote Speakers:

Tom Steitz, Yale University, USA Joan Steitz, Yale University, USA

Invited Speaker:

Nahum Sonenberg, McGill University, Canada Brenda Bass, University of Utah, USA François Bachand, Université de Sherbrooke, Quebec, Canada Bonnie Schmidt, Let's Talk Science, Canada

Organizers:

Alberta RNA Research and Training Institute (ARRTI)

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 RNAgents manipulate host genomes for (i) selfish replicative purposes or (ii) persistent coevolutionary 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 RNAgents 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

4TH Zing conference on Nucleic Acids

December 5-9, 2014 Riviera Maya, Mexico

http://www.zingconferences.com/conferences/4th-zing-nucleic-acids-conference/

The Zing Nucleic Acids conferences combine excellent scientific presentations and in-depth discussion in a relaxed environment on the Caribbean Sea. The program will comprise both plenary lectures from

distinguished speakers and talks chosen from submitted abstracts. The focus will be an understanding of the processes involving RNA and DNA at the molecular and chemical level

There are good opportunities for laboratories to present their work, and a number of financial awards available to speakers.

Organizers: David M.J. Lilley and Wei Yang





Positions available

<u>Postdoctoral research position is available in the laboratory of Regulation of Protein Synthesis led by Dr. Fátima Gebauer</u>

Posted on **January 24, 2014**

One postdoctoral research position is available in the laboratory of Regulation of Protein Synthesis led by Dr. Fátima Gebauer. The successful candidate will investigate the role of RNA binding proteins in cancer progression using cutting edge genomics technologies and molecular and cellular biology assays. The candidate will integrate on a team with interests in post-transcriptional regulation of gene expression and molecular mechanisms of translational control.

Requirements: Candidates must hold a PhD degree on Molecular Biology, Cellular Biology, Biochemistry or Biomedicine. Expertise in RNA and protein manipulation is required. Experience in Bioinformatics, Genomics, Proteomics and Cancer Biology will be valued. Personality: highly motivated, analytical, interactive and independent.

Duration: 3 years

Starting date: As soon as 1st of April 2014

Email: fatima.gebauer@crg.eu

RNA BIOTECHNOLOGY

Posted on **January 8, 2014**

Postdoctoral position in RNA Biotechnology in the Department of Biological Sciences at Columbia University. The candidate will develop mammalian cell vectors that promote high level monoclonal antibody production through improved post-transcriptional processing. The targets include realizing greater mRNA stability and translation initiation. Although the goals are in engineering, i.e., to create useful vectors, it is likely that interesting information regarding the regulation of mRNA stability and translation will be discovered as well. A second project involves genetic engineering of CHO cells to facilitate gene amplification. Methods involve molecular genetic manipulation and RNA molecular biology; expertise in a range of recombinant DNA technologies is required. This position is industrially funded in a laboratory that is otherwise supported by the NIH to study pre-mRNA processing in mammalian cells. The position is available immediately and has assured funding though April 2015 with a history of renewal. Email a cover letter and CV to Larry Chasin, lac2@columbia.edu.

IMMEDIATE POSTDOCTORAL POSITION IN H/ACA RIBONUCLEOPROTEIN ASSEMBLY AND DISEASE

Posted on <u>December 27, 2013</u>

A postdoctoral position is available immediately for at least two years (renewable yearly). The ideal candicate will have a strong background in molecular biology and biochemistry and have experience in expression of recombinant proteins and protein purification.



H/ACA ribonucleoproteins (RNPs) are a large family of small RNA-protein particles that include snoRNPs and scaRNPs (responsible for the pseudouridylation of ribosomal RNAs and spliceosomal snRNAs, respectively), mammalian telomerase, intronic Alu RNA particles, and others. Some of the RNP core proteins and assembly factors of H/ACA RNPs are targets of inherited disease and cancer. We are studying the molecular mechanisms underlying these diseases. For more information see our home page: http://www.einstein.vu.edu/labs/tom-meier/

Albert Einstein College of Medicine is a vibrant scientific community that caters to postdoctoral researchers through its postdoctoral association, the Belfer Institute. Postdoctoral housing is available. For more details check out the webpage of the Belfer Institute:

http://www.einstein.yu.edu/research/belfer-institute/

Send application letter, CV, and addresses of three references to: tom.meier@einstein.yu.edu

Postdoctoral position in host-bacteria interactions and RNA biology

Posted on December 16, 2013

"Cellular mRNA decay and translation in response to Listeria monocytogenes infection"

A two-year post-doctoral position is available in the "Bacterial Infection and RNA Destiny" team lead by Alice Lebreton, in the Biology Institute of École Normale Supérieure, Paris, France, starting September 2014.

Invasion and proliferation of Listeria monocytogenes, the bacterial agent of listeriosis, in human cells is coupled with extensive reprogramming of gene expression and cell function.

Our team aims to unravel the post-transcriptional regulation that affects eukaryotic mRNA stability or translation during infection, its molecular mechanisms and its physio-pathological consequences. These studies should allow a better understanding of the mutual requirements for bacteria-host niche adaptation, the characterization of new virulence factors, and the exploration of eukaryotic translational control pathways.

We seek to recruit a highly motivated, open-minded and creative postdoctoral researcher to explore these novel aspects of the host-bacterial dialogue. The project relies on cutting-edge technologies for the analysis of mRNA fate, such as ribosome profiling and mRNA degradome, but also more classical approaches in cellular microbiology and biochemistry. The selected candidate will benefit from the very stimulating and multidisciplinary environment of IBENS, from exceptional opportunities to develop collaborations, and from the strong expertise of the group leader, both in the Listeria and RNA fields. Candidates should have a strong background in cell biology and biochemistry; previous experience with RNA biology, Hi-Seq and/or host-bacterial interactions would be an asset. Applicants interested in developing "dry lab" aspects of their research are also encouraged to apply.

Contact: ebreton@biologie.ens.fr

<u>Use a combination of molecular genetics, cell biology and biochemical techniques to study nuclear assembly and cytoplasmic maturation of eukaryotic ribosomes.</u>

Posted on December 3, 2013

I am anticipating one and possibly two post-doc positions in my lab beginning in spring 2014 with funding for up to four years We use a combination of molecular genetics, cell biology and biochemical techniques to study nuclear



assembly and cytoplasmic maturation of eukaryotic ribosomes. Projects include: understanding the dissociation of U3 snoRNA and the SSU processome from the pre-40S subunit in the nucleus and the mechanisms of quality control that test newly assembled 60S subunits in the cytoplasm. I am looking for a highly motivated person with strong experimental training in molecular or cell biology with a strong publication record. Prior experience in protein purification and biochemistry and/or in vivo and in vitro RNA work are essential. Interested candidates should email a cover letter, CV, and contact information for three references to Dr Arlen Johnson at arlen@austin.utexas.edu.

http://www.bio.utexas.edu/faculty/ajohnson/

UT Austin has a vibrant research community and Austin is a great place to live. Check out what The Lonely Planet has to say about our city: http://austin.smallplanetguide.com/rentals/index.php?p=austin tx overview

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