Candidates for RNA Society Board
(in alphabetical order)
Term: 2020-2021; Choose 3

Gordon Carmichael
Department of Genetics and Genome Sciences
UCONN Health, USA

Biographical Information

After graduating from Duke with a BS in Physics I entered the Biophysics Graduate Program at Harvard, having never taken a biology or advanced chemistry course. Everything was new to me. In the lab of Wally Gilbert and Jim Watson and my thesis project was to study a bacterial host factor for RNA phage Qbeta replication (now known as HfQ). There I first engaged in RNA research and as part of my thesis work I was among the first to purify proteins using RNA affinity chromatography. My first postdoc was with Bernhard Hirt at the Swiss Institute for Experimental Cancer Research in Lausanne. There I switched to the study of small DNA tumor viruses and developed a new method for the gel analysis of RNAs using glyoxal. In a second postdoc with Tom Benjamin at Harvard Medical school, I studied virus-induced cell transformation and was among the first to use synthetic oligonucleotides (11-mers costing more than $4,000 each!) to introduce point mutations into a viral genome. Since joining the faculty at UCONN I have focused on the synthesis and processing of RNAs. We have studied and published on virology, transcription, splicing, polyadenylation and nucleocytoplasmic mRNA export. Also, starting with a viral model we studied the fate of dsRNA in the nucleus and learned that many of these duplexes are not only promiscuously edited by ADAR1, but are retained in the nucleus, in specific nuclear bodies (paraspeckles) which are organized by a long noncoding RNA (NEAT1). More recently we have studied other lncRNAs and discovered an entirely new class having snoRNA ends (sno-lncRNAs) that are highly expressed from a region always deleted in patients with Prader-Willi Syndrome. This imprinted genomic region also expresses abundant box C/D snoRNAs that appear to have the ability to direct RNA 2'-O methylation, but whose targets are unknown. This led to our current interest in mapping sites of RNA modification by box C/D snoRNAs, not only in rRNAs but also genomewide. Toward this end we have developed a new sequencing method, RibOxi-seq, that may allow us to accomplish this goal. All this work illustrates my passion to explore a wide variety of RNA-related topics, always trying to look at data and projects in a fresh way.
https://scholar.google.com/citations?user=DKaGmaYAAAAJ&hl=en

RNA Society Statement

The future of the RNA community lies in its youngest members. An important goal of the RNA Society should be to continue to promote and encourage high quality training and professional career development. Throughout my career I have maintained a small lab, but have been blessed with a number of outstanding PhD students who have been responsible for almost all of our major findings and many of whom have gone on to exceptionally productive careers. A consistent pattern has been to encourage independence by discussing or even arguing with them about ideas and methods. Whenever possible I support them in pursuit of innovative ideas and approaches developed jointly or even by them alone. I feel that it is critically important to encourage an appreciation and understanding of diverse fields of RNA biology and a drive to look at projects, data and problems both critically and creatively.

Soo-Chen Cheng

Institute of Molecular Biology
Academia Sinica, Taiwan

Biographical Information

I received my B. S. from National Taiwan University in 1977, and Ph. D. from Duke University in 1983. I conducted my graduate work with Paul Modrich, investigating mechanisms of protein-DNA interactions. After doing a short postdoc with George Khoury at NIH, studying transcription regulation, I moved to Caltech in 1984 to work on pre-mRNA splicing with John Abelson. I was involved in the development of the in vitro splicing system and establishment of the spliceosome assembly pathway in yeast. I established my own lab at the Academia Sinica in Taiwan in 1988, where I continued to study the molecular mechanism of pre-mRNA splicing in the yeast system. Here, we have identified and uncovered the functional roles of several splicing factors, as well as revealed new insights into the mechanism of splicing reaction mechanisms. I am now a Distinguished Research Fellow at the Institute of Molecular Biology, Academia Sinica, and was the Director of the institute from 2013 to 2019.
http://www.imb.sinica.edu.tw/~mbscc/

RNA Society Statement

The growing awareness of the functional importance of RNA molecules and RNA binding proteins has attracted increasing attentions from scientists of different research fields. Accordingly, RNA research community has been expanding globally. The RNA Society plays a key role in connecting RNA researchers, thereby promoting their research and interactions. I would like to see researchers from less popular areas become better integrated into the RNA research community.

Archa Fox

School of Human Sciences and School of Molecular Sciences
The University of Western Australia, Australia

Biographical information

I received my Ph.D. in 1999 from the Department of Biochemistry at the University of Sydney, Australia, examining the molecular interactions between zinc finger transcription factors in the haematopoietic system. My postdoctoral studies were completed at the University of Dundee with Angus Lamond, where I discovered a new nuclear body, the paraspeckle, a structure we've since gone on to realise is built on an architectural long noncoding RNA. In 2006, I began my independent career at The University of Western Australia and am now a Future Fellow funded by the Australian Research Council in the School of Human Sciences and School of Molecular Sciences. Current work in the laboratory is focused on understanding the structure and function of paraspeckles, particularly the long noncoding RNA-protein interactions that build the paraspeckle, as well as the RNA processing of the NEAT1 long noncoding RNA. In 2017 I received the emerging leader award of the Australian/New Zealand Society of Cell and Developmental Biology. I am President of the RNA Network of Australia, and through this role have facilitated increased links between Australian RNA scientists and those in Asia. In particular, our network, with key members from the Japan RNA Society, has co-organised two symposia for Japanese and Australian RNA researchers (Sydney, 2014 and Hokkaido, 2018). Outside Australia, I co-organised a Keystone symposia on noncoding RNA in 2017.
https://www.uwa.edu.au/Profile/Archa-Fox
https://scholar.google.com.au/citations?user=hv5NBAcAAAAJ&hl=en

RNA Society Statement

The RNA Society has been pivotal in my career – I gave my first talk on paraspeckles at the RNA meeting in Banff back in 2001 and I can also count some of my most supportive mentoring relationships as stemming from the RNA Society network. I am passionate about the future of RNA research and the role of the RNA Society in driving and sustaining this vibrant community. I want to give back by helping the Society not only embrace its diversity of scientific sub-disciplines, but also boosting connections with RNA scientists in the Asia Pacific time-zone. My experience leading the RNA network in Australia has helped forge strong links with other groups in this time zone, including Japan and China. I am also very focused on gender equity and would like to help the Society better understand the challenges facing women in our field. I have attended many RNA Society meetings in my career and in this time have also had two children. I have brought my children to two RNA meetings thus far, and it is a fun and enriching experience for them – but a constant juggle for the parents!

Lori A Passmore

MRC Laboratory of Molecular Biology
Cambridge UK

Biographical Information

A major aim of my research is to understand the molecular basis of how poly(A) tails are added and removed from eukaryotic mRNAs. I studied Biochemistry at the University of British Columbia in Vancouver, then moved to London UK to work with David Barford for my PhD at The Institute of Cancer Research. I developed an interest in RNA biology during post-doctoral work on translation initiation at the MRC Laboratory of Molecular Biology in Cambridge UK with Venki Ramakrishnan. Both my PhD and post-doctoral work focused on the structure and function of large macromolecular assemblies using cryo-EM. I started my own lab at MRC LMB in 2009, studying the mechanisms of protein complexes involved in regulating gene expression. We use an integrated approach combining structural (cryo-EM, x-ray crystallography), biochemical and functional studies, aiming to purify the multi-protein complexes involved in mRNA polyadenylation and deadenylation, reconstitute their activities in vitro, and determine their high-resolution structures to understand their mechanisms.
http://www2.mrc-lmb.cam.ac.uk/groups/passmore/

RNA Society Statement

The RNA Society already excels in many aspects: The annual meeting is a highlight for most RNA biologists, support for regional RNA events is invaluable for local networking and dissemination, and the Society's journal *RNA* is a top choice for publishing important advances in the field. Through these initiatives, the RNA Society provides a scientific network for researchers working in many areas of RNA biology, and this advances the field. The RNA Society promotes members at all career stages, for example through annual awards, by giving them a chance to present at the annual meeting, and through Member Spotlights. I would strive to continue to enhance and expand on all these initiatives to support young investigators, and to promote diversity. This can be achieved through financial support for travel, recognition of achievements, and mentoring. Looking forward, we should also continue to facilitate and encourage outreach and advocacy, so the RNA Society can continue to influence the future of our field.

Yukihide Tomari

Institute for Quantitative Biosciences (IQB)
The University of Tokyo, Japan

Biographical information

My affection for RNA started more than 20 years ago, when I conducted my undergraduate work on the molecular mechanism of CCA-adding enzyme (tRNA nucleotidyltransferase) in the lab of Profs. Kimitsuna Watanabe and Takuya Ueda at The University of Tokyo. I continued working on this fascinating RNA enzyme and more broadly on tRNAs and translation in my graduate program, where I acquired a wide range of skills in classical biochemistry. After obtaining my Ph.D. at The University of Tokyo, I joined Prof. Phil Zamore's laboratory as a postdoc, and started working on small non-coding RNAs. Since 2006, I have been leading my own research group back in Tokyo, and we are having fun exploring how non-coding RNAs are made, how they are assembled into the functional RNP complex, and how they exert their functions. Classical biochemistry is still the essence of our lab, but we have been eagerly expanding our repertoire of experimental approaches, including single-molecule imaging, ribosome profiling and proteomics. Please also refer to my personal reflection in the 20th anniversary issue of *RNA* https://rnajournal.cshlp.org/content/21/4/747

RNA Society Statement

I have served as a co-organizer of RNA 2017 in Prague and also worked for the Nominating Committee and Meeting Committee. Through these activities, I realized that internationalization in the true sense of the word is one of the key factors for our Society. I'm currently a Council Officer of the RNA Society of Japan, and if I am elected to the Board of Directors, I hope to work as a bridge between RNA research communities in America, Europe, and the Asia-Pacific region, to further strengthen and broaden our relationships. I'm also keen to preserve the good and unique tradition of the RNA society—warmth, friendliness and openness—and hand it down to young, next-generation scientists. Last but not least, I feel that we need to think strategically about how we can take full advantage of having our own society journal, *RNA*.