



ISAR News

Newsletter of the International Society for Antiviral Research

San Francisco, CA, USA welcomes 26th ICAR

President's message (Phil Furman)

In this, my second message to the membership of the society, I would like to take the opportunity to wish everyone a very happy and prosperous New Year. Excitement is growing as we head towards the 26th annual ICAR. Because of the success of the 23rd ICAR in San Francisco and the enthusiasm of the membership for this venue, San Francisco was once again chosen as the site for the 26th ICAR. As in previous years, the programme promises to be full of an impressive roster of speakers and topics. You can read more about this in Mark Prichard's section of this newsletter or visit the ISAR website. We are very pleased to have Eva Harris, Professor of Infectious Diseases at the University of California, Berkley and President of the Sustainable Science Institute, as our keynote speaker. Again, we will hold the Drug Discovery and Development 101 interactive workshop on Saturday afternoon with four highly qualified speakers discussing topics relating to viral resistance testing in drug development, the developing field of *in vitro* toxicology and safety testing, and the importance and role of formulation in antiviral drug development programmes. This year we will have three mini symposia. The first mini symposium, 'Legacy of Tony Holý: Nucleotides in the Treatment and Prevention of Chronic Viral Infection', will pay tribute to the life and accomplishments of Professor Antonín Holý. This year's clinical symposium, which is typically held

Figure 1. Phillip (Phil) Furman who took over the ISAR Presidency at the end of the 25th ICAR



as a satellite meeting, has been incorporated into the general meeting and will become a permanent part of

Federation of Pharmaceutical Manufacturers' Association of Japan; Gilead Sciences, Inc., Foster City, CA, USA; GlaxoSmithKline, Inc., Research Triangle Park, NC, USA; Southern Research Institute, Birmingham, AL, USA; Alios Biopharma, Inc., South San Francisco, CA, USA; Boehringer Ingelheim (Canada) Ltd., Laval, Quebec, Canada; Chimerix, Inc., Durham, NC, USA; Hoffmann-La Roche, Inc., Nutley, NJ, USA; Japanese Association for Antiviral Therapy, Kagoshima City, Kyushu, Japan; JCR Pharmaceutical Co., Ltd., Ashiya, Japan; Vertex Pharmaceuticals, Inc., Cambridge, MA, USA; Abbott Laboratories, Inc., Abbott Park, IL, USA; AiCuris GmbH & Co.KG, Wuppertal, Germany; Apath, LLC, Brooklyn, NY, USA; Biota Holdings Ltd., Notting Hill, Victoria, Australia; Biotron Ltd., North Ryde, New South Wales, Australia; Bristol-Myers Squibb, Wallingford, CT, USA; Center for Drug Design, University of Minnesota, Minneapolis, MN, USA; Elsevier B.V., Amsterdam, the Netherlands; Idenix Pharmaceuticals, Inc., Cambridge, MA, USA; ImQuest BioSciences, Inc., Frederick, MD, USA; Inhibitex, Inc., Alpharetta, GA, USA; PTC Therapeutics, Inc., South Plainfield, NJ, USA; Toyama Chemical Co., Ltd., Tokyo, Japan; Express Biotech International, Thurmont, MD, USA.
Additional Support Provided by: Office of AIDS Research, National Institutes of Health, Bethesda, MD, USA.

it. As a means of incorporating more chemistry into the meeting and to promote more discussion and interactions between chemists and biologists, Drs Mike Sofia and Paul Scola are organizing two mini chemistry symposia. In addition, we shall have the Gertrude Elion and William Prusoff Awardee Lectures, which are institutions and highlights of ICAR. We have sent out an announcement to all ISAR members asking you to nominate individuals for these prestigious awards. Instructions for doing so can be found on the Society's website (www.isar-icar.com). This year there will be a new addition to the programme. Dr Amy Patick, a Past President of ISAR, has organized a lunch session for women in the society entitled 'Women in Science'. The programme will be held on the Tuesday of the meeting during the free afternoon from 12–2 PM. It will consist of a sit down lunch for about 45 min followed by a one-hour programme. The proposed topics are: balancing work and family life, harassment and discrimination, negotiation, self-promotion, seeking recognition and awards, and professional development.

A number of ISAR members have been extremely busy and have been working tirelessly planning for the San Francisco meeting and I would like to acknowledge them here. Joe Colacino, ISAR Past President and Chair of the Conference Committee, has been actively working with Lauren Deaton of Courtesy Associates to plan for the San Francisco meeting as well as to begin planning for the 2014 ICAR which will be held in Raleigh, North Carolina. Mark Prichard has done a superb job in his first year as Chairman of the Scientific Program Committee and Bob Buckheit, ISAR President-elect, has provided support to Mark as he takes on his new role and responsibilities. Bob has also participated in the organizing of the clinical symposium and DD101 for the San Francisco ICAR. Andrea Brancale, Chair of the Website Committee, working closely with Lauren Deaton and YourMembership.com, has continued to maintain and update the website and to advertise and prepare it for the San Francisco ICAR. Dale Barnard, ISAR Treasurer, has ably overseen our finances, paid our bills and maintained our accounts across various currencies to maximize our return on investment. Dale informs us that ISAR's finances are in exceptional condition, as you will read in his section of this newsletter. Of course, the society's excellent financial condition is largely due to Roger Ptak's outstanding effort in acquiring financial support from our sponsors. Roger has begun his fundraising campaign for this year. Graciela Andrei, ISAR Secretary, will serve as the point of contact for the Society and is overseeing the application of travel grants to young investigators who are planning to attend the meeting in San Francisco. The deadline for applications was 1st February. Lastly, we would not have a vibrant Society and outstanding conference

without the members of the different committees and you the membership.

Program Committee (Mark Prichard)

This year the 26th annual ICAR will return to the beautiful city of San Francisco and will be held at the Hyatt Regency San Francisco, located at 5 Embarcadero Center. The meeting will commence on Saturday 11 May and will end with the Gala Banquet on Wednesday 15 May. No sessions are scheduled on the afternoon of Tuesday 14 May so delegates can enjoy all that the city of San Francisco has to offer without missing any of the scientific sessions. While ICAR is primarily focused on new scientific developments in antiviral research, opportunities for networking with colleagues are equally important. The meeting was designed specifically to provide many opportunities for all participants to establish and maintain close collaborative relationships among chemists, pharmacologists and biologists that are required for the discovery and development of effective antiviral therapies. The annual meeting also catalyses new ways of thinking about the drug development process and provides a venue to welcome new scientists to our ranks to help them to establish successful careers. Thus, consistent with all of our past ICARs, there will be ample opportunity for everyone to strengthen existing contacts, add to their network contacts by meeting new scientists working in the field and socialize in a relaxed and open environment.

Last year the ICAR programme and the text of all the abstracts were placed on the Society's webpage. This 'green' initiative not only reduced costs associated with the meeting, but also extended the deadline for abstract submissions to about 2 months prior to the meeting, which was just enough time to complete peer review of the submissions, select oral and poster presentations and publish the materials online. We believe this change was well received by the membership and this year we plan to enhance the quantity of material provided online by providing a means to place poster presentations on the website. We will also provide each participant with all the online resources on a thumb drive. These initiatives will provide increased exposure for presented works and will make more data available to Members of the Society so they can further consider the presented data at their leisure when they return home from the meeting.

Each year the meeting begins with an informative session, entitled 'Drug Discovery and Development 101 (DD101)', to provide Attendees with an introduction to the drug discovery and development process. This year's session will feature a series of four talks that includes presentations by Christos Petropoulos (LabCorp/Monogram Biosciences), James M McKim

(CeeTox, Inc.), Anthony Ham (ImQuest BioSciences) and Eric Lefebvre (Tobira Therapeutics) on the topics of resistance testing, *in vitro* toxicology, and drug formulation. The DD101 session is designed to be highly interactive, with time for discussions between speakers and audience. We encourage everyone to arrive in San Francisco early enough to attend this opening session beginning at 1 PM on Saturday 11 May.

The official start of the 26th ICAR will be marked by the sixth annual Keynote Address and will be presented by Eva Harris, Professor, Division of Infectious Diseases and Vaccinology and Director of the Center for Global Public Health at the University of California at Berkeley. This session will begin at 4 PM in the main lecture hall and will be followed by our opening welcome reception.

This year in San Francisco we mark the passing of Professor Antonín Holý with a special mini-symposium entitled 'Legacy of Tony Holý: Nucleotides in the Treatment and Prevention of Chronic Viral Infections' organized by Tomas Cihlar and Graciela Andrei. The session will start on Sunday morning with a personal note on Professor Holý by Erik De Clercq (Rega Institute) and will be followed by a Keynote presentation by John Martin (Gilead) entitled 'A tribute to Antonín Holý'. Also speaking at this session will be Robert Schooley (UCSD): 'Tenofovir in the treatment of HIV infection', Robert Grant (UCSF): 'Tenofovir in the prevention of HIV infection', Henry Chan (Prince of Wales Hospital): 'Nucleotide analogue in chronic hepatitis B – from hope to reality', Richard Whitley (UAB): 'Nucleotides in the treatment and prophylaxis of herpes and other DNA virus infections' and will conclude with Tomas Cihlar (Gilead) with a presentation entitled 'Future potential and therapeutic opportunities for nucleoside phosphonates'. The annual William Prusoff and Gertrude Elion award lectures will also be presented to honour those who have made significant scientific accomplishments in the field of antiviral research. An additional plenary talk will be given by former Prusoff Awardee, Bruno Canard (Universités d'Aix-Marseille I et II).

In keeping with our focus on the interdisciplinary nature of antiviral research, Michael Sofia and Paul Scola organized two Medicinal Chemistry mini symposia. The first, entitled 'Strategies and Tactics in Drug Design', will feature speakers on the topic including Ernesto Friere (Johns Hopkins). The second session is entitled 'Prodrugs as a Tool in Drug Discovery and Development'. This will feature talks by Val Stella (University of Kansas), Randall Lanier (Chimerix), John Kadow (BMS) and Richard Mackman (Gilead).

Each year ICAR features a Poster Awards competition and this tradition will continue in 2013. This year the Poster Award Committee, chaired by Kathie Seley-Radke, is primed and ready to go to work to

review posters. In past years, the competition has been intense and the Program Committee is fortunate to have dedicated members that are willing to serve on this important subcommittee. Cash prizes of up to \$1,000 will be awarded in the categories of Graduate Student, Postdoctoral Fellow and Young Investigator. Awardees will also have the opportunity to present their work in the Oral Shotgun Presentation session. The prominence of the Poster Presentation reflects the high quality of presentations at this meeting and offers new and experienced investigators a high-profile venue to present their work.

The Program Committee and the Society are committed to bringing you the most rewarding scientific experience at the annual meeting. To this end, the Program Committee has worked diligently this year to make changes to the annual meeting in response to feedback we have solicited from our membership. We have endeavoured to keep the best features of the meeting while adding scientific sessions and events which we believe will heighten the experience for all attendees. As always, the Society will maintain its commitment to the newest ISAR members and to antiviral research by again sponsoring a Career Forum, which was organized by Tomas Cihlar and the Placement Committee. At this function, the attendees can meet with established scientists and other professionals active in the pharmaceutical, biotech, academia and the government sectors of antiviral research to discuss various career options. This highly interactive social event will provide participants with the opportunity to join one or more discussion groups to learn about potential career paths. There is no additional fee for the Career Forum, but since the available space is limited, attendees should indicate their interest when registering on-line for the ICAR meeting. A special session on Women in Science will also be held this year, which will include panel discussions to help provide advice for women scientists and their career progress in this field.

We hope that your attendance at the 26th ICAR will also allow time for you to explore the city of San Francisco and all attractions that the Bay Area has to offer. On your free afternoon you can hike in the redwoods, take a cruise to Alcatraz, enjoy fine wine in Napa Valley, catch a Giants game at the nearby AT&T Park, or take the cable cars to one of the many famous shopping districts. All ICAR functions will be held at Hyatt Regency San Francisco at Embarcadero Center, conveniently located in the heart of the city. Further information regarding the 26th ICAR and San Francisco sightseeing activities will be available from Courtesy Associates.

On behalf of the Program Committee, I look forward to welcoming you to the city by the bay and the 26th ICAR in May 2013.

ISAR Elections and Biographies of Board Candidates (Nominations Committee, Joe Colacino, Chair)

This year we see the expiration of the terms of three ISAR Board of Directors: Johan Neyts, Jose Este and Heather Greenstone. We thank these talented individuals for their exemplary service to and active participation in the Society. They have helped guide the society through numerous changes. In particular, we thank Heather for completing the term of Bob Buckheit after his election to the position of President Elect. With the expiration of these terms, we will be holding an electronic election to fill these three board seats. The ISAR Nominations Committee is pleased to announce that we have a strong slate of candidates: Andrea Brancale, William Delaney, Brian Gowen, Heather Greenstone, Jennifer Moffat and Kathie Seley-Radtke. Each of these accomplished individuals has given of his or her time and talents to the Society and would make an excellent Board member. Therefore, we have the 'high class problem' of selecting three of these six outstanding candidates. Their biographical sketches and pictures are provided below. The electronic election opened by an email sent on 11 February to all members. It is being held through the ISAR website and will remain open until 15 March. We strongly encourage all ISAR members to vote in this important election. And... we wish all of these excellent candidates the best of luck.

Dr Andrea Brancale is a Senior Lecturer in Medicinal Chemistry at the School of Pharmacy and Pharmaceutical Sciences, Cardiff University, UK. He graduated in Medicinal Chemistry in 1996 at the University of Rome 'La Sapienza'. He then moved to Cardiff where he received his PhD in Medicinal Chemistry in 2001, under the supervision of Prof Chris McGuigan. During this time he worked on a project focused on the synthesis of novel antiviral nucleoside analogues, which led to the discovery of a potent anti-VZV compound (Human Phase II successfully completed in October 2010). Following on from the PhD, Dr Brancale worked as a Post Doctoral Fellow (2001/2002) on a GSK-sponsored research project, led by Prof Chris McGuigan, on the design of novel pro-nucleoside analogues as anti-HIV agents.

With his appointment as lecturer at the School of Pharmacy, Cardiff University, Dr Brancale directed his research to the use of computer-aided techniques in the design and discovery of novel antiviral and anticancer compounds. In the antiviral field, his main research projects are focused on the *in silico* design of RNA virus inhibitors (including Dengue, WNV, HCV, Chikungunya virus and Coxsackie virus). Since 2004 he has acted as the Chemistry Editor for *Antiviral Chemistry & Chemotherapy*. Dr Brancale has been a member of

Figure 2. Andrea Brancale



ISAR since 2000 and he has served the Society through participation on the Website Committee (2004 to date; Chair 2006 to date) and on the Publication Committee (2010 to date). Since 2006 he has been the Webmaster of the ISAR website and during this time he has implemented several technical developments on the website, from the on-line registration and membership management to the enhancement of the social profile of the Society on Facebook, Twitter and LinkedIn.

Dr William E Delaney IV earned a PhD in Cell & Molecular Biology from the Pennsylvania State University, Hershey Medical Center in 1998 where his thesis focused on *in vitro* models of hepatitis B virus (HBV) replication. He then completed a postdoctoral fellowship with Dr Stephen Locarnini at the Victorian Infectious Diseases Reference Lab in Melbourne, Australia. While working with Dr Locarnini, Dr Delaney studied the genotypic and phenotypic properties of famciclovir- and lamivudine-resistant HBV strains. Dr Delaney then joined Gilead Sciences in Foster City, CA in 2000. While at Gilead, Dr Delaney participated in the discovery and development of multiple approved and exploratory compounds for the treatment of chronic viral hepatitis. During early years at Gilead, he worked as a Clinical Virologist in support of the approved HBV nucleotide prodrugs Hepsera (adefovir dipivoxil) and Viread (tenofovir disoproxil fumarate); this work included identification and characterization of the first clinical adefovir resistance mutations. His

Figure 3. William E Delaney IV



later research focused on HCV drug discovery. Dr Delaney led interdisciplinary discovery efforts on HCV NS3 protease which yielded the protease inhibitors GS-9256 and GS-9451 (currently in Phase II clinical development). He is currently a Director of Biology and heads Gilead's Viral Hepatitis Discovery Biology group which supports multiple discovery and development projects as well as Business Development efforts for HBV and HCV. Dr Delaney has authored or co-authored >50 published papers, reviews, book chapters and patents in the area of viral hepatitis. He is an ad hoc reviewer for multiple journals including *Antiviral Research*. Dr Delaney has been an active member of ISAR since 1999 and in 2012 received the William Prusoff Young Investigator Award in Sapporo Japan.

Dr Brian Gowen received his PhD degree in Biomedical Sciences from the University of South Carolina School of Medicine in 2000, with emphasis in the areas of microbiology and immunology. His undergraduate work, which concentrated on microbiology, was done at Colorado State University. He trained as a post doctoral fellow at the Rocky Mountain Laboratories campus of the National Institute of Allergy and Infectious Diseases, National Institutes of Health, in Hamilton, Montana, from 2000–2004, where he studied host-pathogen interactions and innate immunity and host defence. He joined the Department of Animal, Dairy, and Veterinary Sciences and the Institute for Antiviral Research at Utah State University (USU) in January of

Figure 4. Brian Gowen



2004. In 2012 he joined the faculty in the new USU School of Veterinary Medicine programme and was appointed as an Adjunct Professor at Washington State University in the Department of Veterinary Microbiology and Pathology. Dr Gowen specializes in preclinical development of antiviral therapies for the treatment of arenaviral and bunyaviral haemorrhagic fever agents, immunotherapeutics, innate immunity to viral pathogens and modelling of viral haemorrhagic diseases. He has 36 peer-reviewed publications, is the inventor on one patent and serves on the editorial boards for the journals *Antiviral Research* and *Antiviral Chemistry & Chemotherapy*. In 2010, Dr Gowen was awarded the USU College of Agriculture Researcher of the Year award. He received the prestigious William Prusoff Young Investigator Lecture Award from the International Society for Antiviral Research in 2011.

Dr Heather Greenstone's career in virology began in 1988 with her dialling a wrong number. She called the National Institutes of Health to inquire about a job vacancy for a technician position studying bacteria. The voice on the other end of the line didn't know anything about that position, but thought another lab might have an opening – thus beginning what was to become a three-year commitment to the biochemical and ultrastructural study of bacteriophage, T4. Heather then began her pursuit of a PhD, as part of a collaborative programme between Johns Hopkins University and the NIH. She performed her thesis work at the National

Figure 5. Heather Greenstone



Cancer Institute on a second-generation prophylactic/therapeutic vaccine for human papillomavirus. As part of that effort, she contributed her experience in biochemistry and electron microscopy to the development of the now licensed vaccine for cervical cancer. In 2003, following a five-year post-doctoral fellowship (where she studied viral entry of herpesviruses, flaviviruses and HIV), Heather joined the Virology Branch, in the National Institute of Allergy and Infectious Diseases. Heather now oversees multiple contracts devoted to antiviral testing in support of the scientific discovery and preclinical advancement of antivirals and vaccines. Heather has been a regular attendee of ICAR since 2004, and has served as a board member for the past year, filling the vacancy left by Bob Buckheit when he became President Elect.

Dr Jennifer Moffat trained at Stanford University School of Medicine where she received her doctorate in Microbiology and Immunology and carried out a postdoctoral fellowship in Pediatric Infectious Diseases. She was promoted to Research Associate before coming to Upstate Medical University in 1999. She is now an Associate Professor in the Department of Microbiology and Immunology. Her past leadership positions include vice-chair, president of the Graduate Faculty Organization, and founding chair of the PhD student Advising Committee and the Curriculum Committee of the College of Graduate Studies. She was recently appointed to the SUNY Research Council, which reports to the

Figure 5. Jennifer Moffat



Chancellor and the Board of Regents in Albany. Dr Moffat is an award-winning teacher for medical and graduate courses and she has mentored a number of graduate students and postdoctoral fellows in her laboratory. She is the director of two research core facilities at SUNY Upstate: the Center for Humanized Mouse Models and In Vivo Imaging.

Dr Moffat is an internationally recognized expert on varicella-zoster virus, and her research has focused on developing mouse models to study the pathogenesis and treatment of this virus. The current emphasis of her research group is evaluating antiviral compounds for VZV in a unique humanized SCID mouse model, which is supported by a seven-year, \$4 million NIH contract. She has received multiple NIH and New York State awards for her projects on the molecular basis of VZV disease, as well as contracts with pharmaceutical companies. In 2005, she received the SUNY Chancellor's Award for Scholarship and Research. She has served on several NIH review panels and is on the editorial board of the *Journal of Clinical Virology* and *Antiviral Research*. Dr Moffat has authored 28 peer-reviewed articles, invited reviews and book chapters. She was co-editor of a recent issue of *Current Topics in Microbiology* that covered advances in VZV research.

Dr Kathie Seley-Radtke is a Professor in the Department of Chemistry and Biochemistry at the University of Maryland, Baltimore County (UMBC). She earned her PhD in Organic Chemistry from Auburn University

Figure 6. Kathie Seley-Radtke



under the direction of Professor (and former Dean) Stewart W Schneller. She continued at Auburn for two years of postdoctoral research, and then joined the faculty at Georgia Tech in 1998. In 2003 she moved her research group to UMBC after she married her husband Dr Mike Radtke, a Scientific Review Officer at NIH (and a familiar figure at ICAR!). Dr Seley-Radtke's research involves a chemical biology approach to nucleoside and heterocyclic drug discovery and development with a therapeutic emphasis on antiviral, anticancer and antiparasitic targets. One of her more notable projects involves her 'fleximers' – flexible nucleobase analogues that have shown promise therapeutically due to their ability to overcome resistance mechanisms related to point mutations, as well as recognition by atypical enzymes.

Dr Seley-Radtke has been a member of ISAR since the early 90s, and has served on both the Career Development and Poster Award committees since 2005, and was recently recruited to Chair the Poster Award Committee at the last ICAR in Sapporo, Japan. In addition, she has been a regular participant at the academic table at almost every career development breakfast or forum since their inception, where she has provided valuable insight to many graduate students and postdocs on pursuing careers in academia.

Additional honours include her current role as Vice President for the International Society of Nucleosides, Nucleotides and Nucleic Acids (IS3NA). She previously held the role of Secretary for IS3NA for the past six years

and will become the next President in 2015. She has been a standing member of the NIH AIDS Drug Discovery and Development (ADDT) study section for the past three years, and prior to that was a standing member of the Biomedical Training study section for six years, as well as ad hoc on the Tropical Medicine and Bioorganic Natural Products study sections. She recently rotated off the American Chemical Society Medicinal Chemistry Division Long Range Planning Committee after a three year term. Dr Seley-Radtke is an Associate Editor for *Current Protocols in Chemical Biology* and reviews for more than 35 journals. In 2006 the National Academies of Sciences and the US Department of State selected her as one of the Jefferson Science Fellows. Since her year at the State Department, she has continued her work with the US government and the US Embassy in Moscow, working with researchers, universities and government officials on a number of scientific issues such as the changing landscape of Russian science, emerging and reemerging infectious diseases and the nonproliferation of biological and chemical weapons.

Financial summary of 25th ICAR in Sapporo, Japan (Dale Barnard)

I would like to thank the ISAR officers, ISAR Board and ISAR committees for their extremely dedicated support of the ICAR meetings. However, without the support of members and guests, the ICAR meetings would never be successful. We are pleased to verify that the meeting in Sapporo was financially successful (Table 1). We can attribute this financial success to the local organizing committee under the strong leadership of Dr Masanori Baba, the Japanese Association for Antiviral Therapy and their members attending our meeting, generous support from the Federation of Pharmaceutical Manufacturers' Association of Japan (FPMAJ), a grant from the City of Sapporo, and to the continued success of Dr Roger Ptak's excellent campaign to increase sponsorships and the amounts donated by each sponsor. Our sponsors continue to be very generous to the society. We thank them as well. In addition, we are very grateful to the National Institutes of Health for their continued interest in our educational programmes and the financial support that we receive from them.

Members invited to use new options on website (Andrea Brancale)

The new ISAR website is now fully operational and, as mentioned previously, allows a high level of interaction between the site users. For this reason we would like to invite all ISAR members to make better use of these facilities, starting from keeping their personal profile updated. Also, we would like to remind members that the new

Table 1. 25th ICAR Sapporo, Japan 16–19 April 2012

REVENUES	12/2/11
Registration	\$122,236
Award sponsorship	\$10,000
NIH grant	\$45,000
Corporate sponsorship	\$108,000
FPMAJ	\$58,859
City of Sapporo	\$12,889
Other revenue	\$5,000
Total Revenue	\$361,984
EXPENSES	
Advertising	\$116
Food and beverage	\$53,532
Audio/visual	\$44,690
Hotel expenses	\$69,564
Exhibits/posters	\$10,491
Invited speakers	\$21,393
Conference bags	\$1,106
Shipping	\$3,918
Onsite staffing	\$750
Courtesy Associates – labour	\$62,886
Courtesy Associates – out of pocket	\$9,070
Credit card fees	\$11,227
Other (insurance, refunds, gifts, etc)	\$17,015
Awards (Elion, Prusoff, poster, travel)	\$47,455
Board travel	\$6,491
Total	\$359,704
Net Balance	\$2,280

website allows the creation of personal webpages associated with the member profile as well as a CV upload. This offers a very good opportunity for young scientists and increases the visibility of any researcher looking for a new career prospect. If you would like to use these services but are not sure how to do it, you are very welcome to contact the Chair of the Website Committee, Dr Andrea Brancale (brancalea@cardiff.ac.uk) and he will be very happy to help. Furthermore, do not forget that the ISAR is on Facebook (www.facebook.com/ISARICAR), on Twitter (@ISARICAR) and on LinkedIn (www.linkedin.com/groups?home=&gid=4345180&trk=anet_ug_hm). These social services are extremely useful for keeping up to date with the Society activities and to extend your professional network. You are strongly invited to join us on all these sites.

Calendar (Simon Tucker)

BIO-Europe Spring® 2013

11–13 March 2013

Barcelona, Spain

<http://www.europabio.org/cross-sectors/events/bio-europe-spring-2013>

Discovery Congress Chemistry

19–20 March 2013

Munich, Germany

<http://selectbiosciences.com/conferences/index.aspx?conf=DCC2013>

11th European Meeting on HIV and Hepatitis - Treatment Strategies and Antiviral Drug Resistance
20–22 March 2013

Rome, Italy

http://www.virology-education.com/index.cfm/t/11th_European_Meeting_on_HIV___Hepatitis___Treatment_Strategies___Antiviral_Drug_Resistance/vid/BC6788E6-D282-EEF5-D20EE47729CCAE8C

2nd ESCMID Conference on Impact of Vaccines in Public Health

22–24 March 2013

Prague, Czech Republic

<http://www.eid.ed.ac.uk/event/2nd-escmid-conference-impact-vaccines-public-health>

Society for General Microbiology Spring Conference 2013

25–28 March 2013

Manchester, UK

<http://www.sgm.ac.uk/meetings/MTGPAGES/Manchester2013.cfm>

Immune Activation in HIV Infection: Basic Mechanisms and Clinical Implications

3–8 April 2013

Breckenridge, CO, USA

<http://www.keystonesymposia.org/index.cfm?e=web.Meeting.Program&meetingid=1226>

Antiviral Drug Discovery - Small Molecule Candidates to Combat Human Viral Infections

15 April 2013

San Diego, CA, USA

<http://www.giiconference.com/chi252870-2013/Antiviral-Drug-Discovery.shtml>

Eighth Annual Drug Discovery Chemistry

16–18 April 2013

San Diego, CA, USA

<http://www.drugdiscoverychemistry.com/>

16th Annual Conference on Vaccine Research

22–24 April 2013

Baltimore, MD, USA

<http://www.cvent.com/events/16th-annual-conference-on-vaccine-research/event-summary-db97bedd5ee041eb09d971650f76be0.aspx>

Positive Strand RNA Viruses

28 April – 3 May 2013

Boston, MA, USA

<http://www.keystonesymposia.org/index.cfm?e=web.Meeting.Program&meetingid=1230>

Viruses & Cells

5–10 May 2013

Lucca, Italy

<http://www.grc.org/programs.aspx?year=2013&program=viruses>

The 26th International Conference on Antiviral Research

11–15 May 2013

San Francisco, CA, USA

<http://www.isar-icar.com/?page=ISAR>

American Transplant Conference (ATC)

18–22 May 2013

Seattle, WA, USA

<http://2013.atcmeeting.org/>

ASM 113th General Meeting

18–21 May 2013

Denver, CO, USA

<http://gm.asm.org/>

Retroviruses

20–25 May 2013

Cold Spring Harbour, NY, USA

<http://meetings.cshl.edu/meetings/2013/retro13.shtml>

High Throughput Chemistry and Chemical Biology

2–7 June 2013

New London, CT, USA

<https://www.grc.org/programs.aspx?year=2013&program=highthru>

15th International Negative Strand Virus Meeting

16–21 June 2013

Granada, Spain

<http://www.nsvmeeting2013.com/>

CRISPR: Evolution, Mechanisms and Infection

17–19 June 2013

St Andrews, UK

<http://www.biochemistry.org/Conferences/AllConferences/tabid/379/View/Conference/MeetingNo/SA148/Default.aspx>

63rd Annual Conference of the Canadian Society of Microbiologists

17–20 June 2013

Ottawa, ON, Canada

http://www.csm-scm.org/english/conf_upcoming.asp

Swiss Society for Microbiology Annual Congress

26–27 June 2013

Interlaken, Switzerland

http://www.swissmicrobiology.ch/Framesets/fr_annual_congress.htm

Nucleosides, Nucleotides & Oligonucleotides

30 June – 5 July 2013

Newport, RI, USA

<https://www.grc.org/programs.aspx?year=2013&program=nucleo>

RICT 2013

3–5 July 2013

Nice, France

http://www.ldorganisation.com/produits.php?langue=english&cle_menus=1238915596

AIDS-Related Mycoses

3–5 July 2013

Cape Town, South Africa

http://www.astmh.org/AM/Template.cfm?Section=Events_Calendar&Template=/CM/ContentDisplay.cfm&ContentID=4537

The Australian Society for Microbiology, Annual Scientific Meeting

7–10 July 2013

Adelaide, Australia

<http://www.theasm.org.au/meetings/asm-adelaide-2013/>

The 18th European Symposium on Organic Chemistry (ESOC 2013)

7–12 July 2013

Marseille, France

<http://esoc2013.eu/index.html>

The Many Faces of Drug Metabolism

7–12 July 2013

Holderness, NH, USA

<https://www.grc.org/programs.aspx?year=2013&program=drugmet>

38th Annual International Herpesvirus Workshop

19–24 July 2013

Grand Rapids, MI, USA

<http://www.herpesvirusworkshop.com/2013/>

32nd Annual Meeting of the American Society for Virology

20–24 July 2013

University Park, PA, USA

<http://asv.org/meetings.html>

5th Congress of European Microbiologists (FEMS Congress 2013)
21–25 July 2013
Leipzig, Germany
<http://www2.kenes.com/fems2013/pages/home.aspx>

Computer Aided Drug Design
21–26 July 2013
South Dover, DE, USA
<https://www.grc.org/programs.aspx?year=2013&program=cadd>

Medicinal Chemistry
4–9 August 2013
New London, CT, USA
<https://www.grc.org/programs.aspx?year=2013&program=medchem>

Host-Microbes Interactions
30 August – 7 September 2013
Spetses, Greece
<http://events.embo.org/13-host-microbe/>

Society for General Microbiology Autumn Conference 2013
2–4 September 2013
Sussex, UK
http://www.sgm.ac.uk/meetings/MTGPAGES/SU_Programme.cfm

Plant Viruses: Green Viruses, from Gene to Landscape
7–11 September 2013
Hyères, France
<http://events.embo.org/2013/coming-soon/index.php?EventID=w13-28>

ICAAC 2013 – 53rd ICAAC
10–13 September 2013
Denver, CO, USA
<http://www.icaac.org/index.php/scientific-program/meeting-resources/icaac-2013-call-for-symposia>

European Congress of Virology
11–14 September 2013
Lyon, France
<http://www.eurovirology2013.eu/events.php?IDManif=695&IDModule=71&IDRub=332>

6th Annual International Partnering Conference
BioPharm America 2013
17–19 September 2013
Boston, MA, USA
<http://www.ebdgroup.com/bpa/index.php>

The 5th EMBO meeting
21–24 September 2013
Amsterdam, the Netherlands
<http://2013.the-embo-meeting.org/programme/concurrent-sessions.html>

Pseudotype Viruses: Applications and Troubleshooting
2 October 2013
Stevenage, UK
<http://www.regonline.co.uk/builder/site/default.aspx?EventID=1138675>

2013 International Meeting on Molecular Biology of Hepatitis B Viruses
20–23 October 2013
Shanghai, China
<http://www.hepb.org/hbvmeeting/>

3rd World Congress on Virology
20–22 November 2013
Baltimore, MD, USA
<http://www.omicsgroup.com/conferences/virology-2013/>

7th Australasian Virology Society Meeting
8–11 December 2013
Queenstown, New Zealand
<http://www.avg.org.au/>

ICVID 2013: International Conference on Virology and Infectious Diseases
24–25 December 2013
Bangkok, Thailand
<https://www.waset.org/conferences/2013/bangkok/icvid/>

ISAR News is a publication of the International Society for Antiviral Research and it is published on the Society's website (www.isar-icar.com) and on the AVCC website (<http://www.intmedpress.com/index.cfm?pid=16>). ISAR News is prepared by the ISAR Publication Committee: Hugh Field (Chair), Masanori Baba, Andrea Brancale, Mike Bray, Brian Gowen, Justin Julander, Luis Schang, Ashoke Sharon, Bart Tarbet, Simon Tucker and Anthony Vere Hodge.