



# ISAR News

Newsletter of the International Society for Antiviral Research

## Sapporo, Japan welcomes 25th ICAR

### President's message (Joe Colacino)

It is an honour to address the International Society for Antiviral Research (ISAR) in my last message as President to its membership. Since our successful International Conference on Antiviral Research (ICAR) in May 2011 in Sofia, Bulgaria, we have been busy planning for the 25th ICAR which will be held in Sapporo, Japan from 16–19 April 2012 and co-hosted by the Japanese Association for Antiviral Therapy (JAAT). This will be our Silver Anniversary and we have planned an exciting ICAR. All attendees will receive a gift commemorating this special ICAR and our time in Japan. We gratefully acknowledge the very generous support of this conference from the Federation of Pharmaceutical Manufacturers' Association of Japan (FPMAJ). Special thanks and appreciation go out to our esteemed ISAR colleague, Masanori Baba, for his facilitation of this important funding from the FPMAJ.

A number of ISAR members have been very active all year planning for the Sapporo meeting and carrying out their responsibilities in their leadership roles. It is my pleasure to acknowledge them here. Amy Patick, ISAR Past President and Chair of the conference committee, has been actively working with Lauren Deaton of Courtesy Associates to plan for the Sapporo meeting as well as to begin planning for the 2013 ICAR which will be held in San Francisco. Phil Furman, ISAR President-elect, has diligently carried out the functions of his office and is organizing the clinical symposium for the ICAR in Sapporo. 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 is in very good financial condition as you will

read in his section of this newsletter. Susan Cox, ISAR Secretary, has served as a 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 Sapporo. Young investigators can apply for a travel grant to help defray some of the cost of attending ICAR. Please send applications to Dr Susan Cox, Secretary, as per instructions on the ISAR website.

I would also like to acknowledge the work of our committees throughout the year. The ISAR website now has a

Figure 1. Joe Colacino, President, ISAR, 2010–2012



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**Educational sponsors:** Office of AIDS Research, National Institutes of Health

**Figure 2.** Phillip (Phil) Furman who takes over the ISAR Presidency at the end of the 25th ICAR



new look thanks to the efforts of Andrea Brancale, Chair of the website committee, working closely with Lauren Deaton and YourMembership.com. The new website will facilitate use of the member directory, navigation to external links, renewal of membership, conference registration and electronic balloting, and includes other useful features. You can read more about our new website in Andrea's section of this newsletter. Bob Buckheit, board member and Chair of the scientific program committee has worked tirelessly to put together a timely and exciting scientific programme for the Sapporo ICAR and is also overseeing the submission and review of abstracts. We are pleased to announce that Prof Hiroaki Mitsuya will deliver the keynote address. We will also have internationally known and respected plenary speakers, a clinical symposium and two mini-symposia, one on therapies for viral infections endemic to Asia and the other on novel chemistry for the treatment of infectious diseases. In response to consistently positive feedback from the ISAR membership, the 25th ICAR will continue the interactive workshop series, 'Drug Discovery 101', which this year is overseen by Angela Lam. To commemorate the Silver Anniversary of ICAR, Prof Erik De Clercq will join us in Sapporo and will deliver a lecture that will review the last 25 years of antiviral drug discovery and development from a personal perspective. Prof De Clercq is a founding member of ISAR and has been a major supportive force behind our Society and prolific antiviral researcher who has trained many of the key players in our field.

Roger Ptak, Chair of the finance committee, continues the often thankless and underappreciated, but always critical, task of soliciting support for ISAR and ICAR. Roger's persistence, follow-through, and effectiveness in this role were acknowledged in a plaque which he was awarded at the ISAR Board Meeting in Sofia. We thank him for all his efforts which keep the Society solvent. Johan Neyts, board member and Chair of the membership committee, has worked with his committee members and colleagues at his institute in reaching out to the scientific community to recruit new members to the Society, thus increasing our visibility and relevance. Tomas Cihlar, board member and Chair of the placement committee, has overseen the career opportunities section of our website and is busy organizing career development events for the Sapporo ICAR. Hugh Field, Chair of the publications committee, has continued to provide his editorial acumen and great attention to detail regarding Society-related publications and Anthony Vere Hodge, member of the publications committee, has done a stellar job of organizing and composing ISAR News and preparing in-depth scientific summaries of our conferences. Rich Whitley, Chair of the scientific excellence awards committee has overseen this year's selections for the Elion and Prusoff awards. As a result of his efforts, the process this year to select the individuals who represent the very best of our Society and who will receive these prestigious awards was robust and fair. As of this writing, the deserving awardees have been selected and will be announced at a later date.

An important change for 2012 is that the ICAR programme and abstracts will be made available on our website to members with a valid ID and password. The decision to have the abstracts made available on the website, rather than published in *Antiviral Research*, enables us to extend our deadline for the submission of abstracts, thus allowing more flexibility for conference attendees as well as the abstract review committee. Bob Buckheit will discuss this change in greater detail in his section of this newsletter.

The future of our Society depends on the quality of its membership and, importantly, its leadership. This year Amy Patick, Chair of the nominations committee worked diligently with her group to identify individuals with the interest and the qualifications to serve the Society effectively in leadership roles. We were fortunate to have an impressive slate of candidates for the positions of President-elect, Secretary and two Board seats and balloting was conducted through the new ISAR website. Please read Amy's section of this newsletter for the election results and details of the voting process this year.

As I mentioned above, this is my last message as President of ISAR. At the Sapporo ICAR, the gavel will be passed on to Phil Furman. Having worked closely with Phil on ISAR and ICAR related matters over the last

two years and having known him for over 20 years, I can assure you that ISAR will be in good hands. Phil is a remarkable scientist, leader and person of high integrity, and the Society is fortunate to have him as a friend, colleague, and soon as President.

This is an exciting time for antiviral drug discovery and development. In 2011, two HCV protease inhibitors were approved by the FDA for the treatment of chronic hepatitis C virus infection. Other direct-acting antivirals (DAAs) to treat chronic HCV infection are in late-stage clinical development and offer promise for combination therapies that may eliminate, or at least reduce, the need for interferon and ribavirin. Basic research in molecular and cellular biology is resulting in the identification of cellular and viral factors and the elucidation of cellular pathways that are intimately involved in virus replication or the maintenance of virus latency and may point the way to novel strategies for broad spectrum antiviral therapies. Many ISAR members are working in areas that have led to these advances, thus underscoring the importance and relevance of our Society. I look forward to our annual conference in Sapporo, Japan in April 2012 co-hosted by the JAAT, where the latest and most exciting advances in antiviral drug discovery will be presented and discussed. I also look forward to seeing you there!

### Program committee (Bob Buckheit)

The upcoming ICAR represents a major milestone for ISAR as we celebrate our 25th anniversary. The 25th ICAR, co-hosted by JAAT, will be held at the Hotel Royton Sapporo in Sapporo, Japan from Monday 16 April to Thursday 19 April, 2012. As all members are well aware, the ICAR is primarily focused on new scientific developments in antiviral research, but equally important are the networking opportunities. An annual reconnecting of colleagues and friends allows all of us to maintain close collaborative relationships among chemists and biologists dedicated to the discovery and development of effective antiviral therapies. The annual meeting catalyzes new ways of thinking about the drug development process, welcomes new scientists to our ranks and helps them to establish successful careers. Thus, consistent with all of our past ICARs, there will be ample opportunity for everyone to re-establish contacts, increase the network of contacts by meeting new scientists working in the field and socialize in a relaxed and open environment. Unlike past meetings, the 25th ICAR will begin on Monday and conclude with a Gala Banquet on Thursday evening.

A major enhancement to the ICAR programme involves publication of the submitted abstracts. In the past, Elsevier has published an abstract issue of *Antiviral Research* free of charge. However, as costs have escalated, Elsevier concluded that they would have to charge the extra cost to the Society. The Society has decided to minimize

the costs of publication by placing the abstracts on the Society's webpage. This 'green' initiative has yielded a secondary and important benefit to the membership by delaying the deadline for abstract submissions to a mere couple of months prior to the meeting – just enough time to complete peer review of the submissions, select oral and poster presentations, put together the abstract booklet and publish online. Attendees will be able to print all or parts of the abstract book prior to departing for Sapporo or access the abstracts locally while attending the meeting. We believe this change to our customary practices will be well received by the Membership in light of the fact that responses to our meeting surveys always suggest shifting the abstract deadline closer to the meeting. And in this day and age, who can complain about green initiatives?!

Like past ICARs, the 25th ICAR will begin with an informative session, entitled 'Drug Discovery and Development 101 (DD101)', that will provide attendees with an introduction to the drug discovery and development process. This year's session will feature three talks by Raj Kalkeri (Vertex Pharmaceuticals), Sina Bavari (USAMRIID) and Isabel Najera (Roche) on the topics of high throughput screening, animal models and resistance testing, and how they impact the drug development process. The DD101 session is intended to be highly interactive, with time for discussions between speakers and audience. We encourage everyone to arrive in Sapporo early enough to attend the session beginning at 2 PM on Monday afternoon.

The official start of the 25th ICAR will be marked by two special presentations that are sure to begin the meeting in a highly robust fashion by providing a forward look at new methods to discover antiviral agents for drug development as well as celebrating 25 years of both antiviral research and our Society. The fifth annual Keynote Address will be presented by Dr Hiroaki Mitsuya of the National Cancer Institute (USA) and Kumamoto University School of Medicine entitled 'Structure-Guided Development of AIDS Therapeutics: Success, Challenges, and Opportunities'. Dr Mitsuya's presentation will be immediately followed by a special 25th anniversary presentation by Prof Erik De Clercq entitled 'Successes and failures in an antiviral drug development: a personal account'. This session will begin at 5 PM in the main lecture hall and will be followed by our opening welcome reception.

In Sapporo, the Society is pleased to be able to present two mini-symposia, our annual William Prusoff and Gertrude Elion award lectures, and an additional plenary lecture by Joachim Hauber (Heinrich Pette Institute). Prof Hauber's lecture is entitled 'Towards Virus Eradication: Excision of HIV-1 Proviral DNA Using LTR-specific Recombinase'. This year's mini-symposia include 'Therapies for Infections Endemic to Asia', with presentations

on therapeutic strategies for influenza, hepatitis B, hepatitis C, dengue, HTLV-I and Japanese encephalitis, and 'Building a Better Clinical Candidate: Issues, Strategies and Tools', which will focus on critical medicinal chemistry aspects of drug development. Speakers in the two symposia will include Kouichi Morita (Nagasaki University), Jun-ichi Fujisawa (Kansai Medical University), Takaji Wakita (NIH, Japan), Pei Yong Shi (Novartis), Timothy Block (Hepatitis B Foundation, Drexel University), Reza Oleyai (Gilead Sciences), Robert Zahler (PharmD Consulting), Paul Scola (Bristol-Myers Squibb), Avinash Phadka (Achillion) and Dominique Surleaux (Idenix).

For many years, ICAR has included a Poster Awards competition and this tradition will also continue in 2012. Mark Prichard's team of reviewers is primed and ready to go to work to review posters that will be presented in the Graduate Student, Postdoctoral Fellow and Young Investigator categories. In past years, the competition has been intense and the program committee is fortunate to have dedicated members willing to serve on this important subcommittee. The increased emphasis on enhancing the scientific quality of our Poster sessions is an important and integral part of the ICAR.

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 the Poster Award session and the Career discussion. At the afternoon Career Forum, which will be organized by Tomas Cihlar and the placement committee, the attendees can meet with established scientists and other professionals active in the pharmaceutical, biotech, academic and the government sectors of antiviral research to discuss various career paths. The new interactive format will provide participants with the opportunity to join more than one discussion group during the course of the event. There is no additional fee for the Career Forum, but since the available space is limited, attendees should indicate their interest when registering online for the ICAR meeting.

We hope that your attendance at the 25th ICAR will also allow time for you to explore Sapporo and the surrounding countryside. All ICAR functions will be held at the Hotel Royton Sapporo near which shopping, dining and sightseeing opportunities abound. Further information regarding the 25th ICAR and Sapporo sightseeing activities will be available from Courtesy Associates.

Figure 3. Robert (Bob) Buckheit



On behalf of the program committee, I look forward to welcoming you to the beautiful city of Sapporo and the 25th ICAR in April.

### ISAR elections and biographies of newly elected President-elect, Secretary and Board members (Amy Patick)

The nominations committee was charged this year with finding two candidates for the office of President-Elect, two candidates for the office of Secretary and four candidates for two Board seats.

Based upon discussions among committee members and discussions and/or e-mail exchanges with potential candidates, an outstanding slate of candidates was developed. Once again, an electronic (web-based) election was run. An e-mail was sent out to 176 registered users. Sixty two members accessed the voting site representing a 35% voter turnout.

#### President-elect

Robert (Bob) Buckheit

Dr Robert (Bob) Buckheit is President and CEO of ImQuest BioSciences and Executive Vice President of ImQuest Pharmaceuticals, companies that he founded in 2004 and 2005. During his 25 years of experience in antiviral research Bob has assisted academic researchers, biotechnology companies and pharmaceutical companies

to develop agents to treat infectious disease based on his expertise in antiviral screening, mechanism of action, resistance and combination assays. Bob's research has resulted in over 150 publications in the peer review literature, especially involving the development of HIV therapeutics and topical microbicides. Over the past five years he has led efforts resulting in an IND submission on the pyrimidinedione IQP-0410 as an HIV therapeutic and the advanced development of IQP-0528 as a topical microbicide product. Bob was named Entrepreneur of the Year in 2010 by the Maryland Entrepreneur Council in recognition of his leadership in the growth and development of ImQuest BioSciences. ImQuest BioSciences was named 2010–2011 Small Business of the Year by the Maryland Technology Council. Bob has been a member of ISAR for over 20 years during his tenures with Southern Research Institute, Therimmune Research Corporation and ImQuest. He has held various positions to support the Society and the annual Conference, including the membership committee, the poster awards committee, and the conference committee. For the past four years Bob has chaired the program committee and has taken an active role in improving the scientific robustness of the conference, instituting the DD101, Keynote Address, Shotgun Poster presentations for young investigators and the development of key scientific mini-symposia at each conference. In 2010, Bob was also elected to serve on the Board of Directors of ISAR. Bob serves as Scientific Advisor and consultant for a variety of small businesses, sits on the Board of Directors of the biotechnology incubator (Frederick Innovative Technology Center), is a member of the Editorial Board for *Antiviral Research*, *Future Virology* and *Expert Opinion on Investigational Drugs*, and acts as an ad hoc reviewer for journals such as *Antimicrobial Agents and Chemotherapy*, and special emphasis review panels for the National Institutes of Health. Bob also is an adjunct Professor at Hood College in Frederick, MD and acts as thesis advisor for students in their Biomedical Sciences Program.

## Secretary

### Graciela Andrei

Graciela Andrei holds a PhD in Biological Sciences and is an Assistant Professor at the Faculty of Medicine, Katholieke Universiteit Leuven, Belgium. At the Rega Institute for Medical Research, Department of Microbiology and Immunology, she carries out her research work, which is mainly focused on chemotherapy of viral diseases, with emphasis on herpesviruses (cytomegalovirus, varicella-zoster virus and herpes simplex), poxviruses (vaccinia, cowpox, orf), polyomaviruses and papillomaviruses, and the study of the molecular mechanisms underlying the antiviral drug resistance phenomenon and anticancer activity of nucleotide analogues.

Figure 4. Graciela Andrei



Dr Andrei has authored approximately 30 and co-authored approximately 260 papers in international peer-reviewed journals between 1983 and 2011. She has also (co)authored 6 book chapters and 10 proceedings articles and about 260 published abstracts between 1983 and 2011.

Dr Andrei has been a member of ISAR since 1989 and has attended ICAR regularly. She has been a member of the poster awards committee during the last ICAR Meetings. She is also a member of the American Society for Microbiology (ASM) since 2003.

## Two Board Members

### Rhonda Cardin

Dr Cardin received her AB in Biology and Psychology in 1983 from Washington University in St Louis, and in 1984, began her PhD studies at Tulane University in New Orleans, and after this moved to Baton Rouge, received her PhD in Microbiology in 1989 from Louisiana State University on the mechanisms of bacteriochlorophyll synthesis in a photosynthetic bacterium. She then joined Dr Ed Mocarski's laboratory at Stanford University, a leading CMV expert, for her postdoctoral studies on murine cytomegalovirus pathogenesis and latency. In 1994, she joined the laboratory of Dr Peter Doherty at St Jude Children's Research Hospital in Memphis, TN, as an instructor level scientist to work on murine gammaherpesvirus pathogenesis and immunology as a model for the human gammaherpesviruses, EBV and KSHV. During

Figure 5. Rhonda Cardin



her exciting time in Dr Doherty's lab, he was awarded the 1996 Nobel Prize in Medicine for his pioneering research in immunology. In 1998, she joined Park-Davis Pharmaceuticals as a Senior Scientist where she supervised the *In Vivo* Herpesvirus program for evaluation of anti-herpesvirus compounds in animal models. She also worked on the development of high throughput assays for discovery of HIV entry inhibitors. After the Pfizer, Inc. merger with Parke-Davis, she joined ChemoCentryx, Inc. in the San Francisco Bay area as a Senior Scientist to work on chemokine therapeutics for diseases and vaccine strategies. In 2003, she returned to academia and joined the faculty of the Division of Infectious Diseases at Cincinnati Children's Hospital Medical Center. Her lab research efforts are aimed at characterizing host and viral genes required for CMV pathogenesis and latency. She is a co-PI on an NIH contract for evaluating novel antivirals and vaccine strategies in CMV and HSV animal models, and has collaborated with a number of pharmaceutical companies to evaluate their novel compounds in the herpesvirus models. She is currently characterizing a new model of CMV hearing loss in newborn guinea pigs following *in utero* transmission which mimics the onset of progressive hearing loss in newborn infants following placental transmission of HCMV infection. She served as the President of the Women's Faculty Association at CCHMC and is currently on the Faculty Development Committee. She frequently serves as a reviewer for *Antiviral Research*, *Journal of Infectious Diseases*, *PLoS One*, *Journal of Immunology* and *Virology Journal*. She also

Figure 6. Roger Ptak



serves as a grant reviewer for the American Heart Association and the NIH. She joined ISAR in 2003 and has actively attended and presented at the ICAR meeting each year, has been a co-chair of the herpesvirus plenary sessions at the ICAR meeting since 2007, has served as a poster judge at ICAR and currently serves as a member of the finance committee and the membership committee.

#### Roger Ptak

Roger Ptak is an accomplished scientist with over 18 years of research and project management experience in antiviral drug discovery and development. He received his BS degree in Biology from the University of Notre Dame in 1992. From 1993–1999 his work supported the discovery of novel herpesvirus and HIV-1 inhibitors at the University of Michigan. In 1999 he joined the Southern Research Institute Department of Infectious Disease Research in Frederick, MD where he is currently Program Leader for the *In Vitro* Antiviral Drug Development Program. In this role he manages an extensive staff of scientists and research technicians responsible for execution of *in vitro* assays and assay development for the discovery and development of antiviral drugs and topical microbicides on multiple large government programmes and approximately 150 commercial contracts annually for the biotechnology and pharmaceutical industry. He currently serves as Principal Investigator for the NIAID contract '*In Vitro* Testing Resources for AIDS Therapeutic Development Part A: Confirmatory *In Vitro* Evaluations of HIV Therapeutics' and as Co-Principal Investigator of

the NIAID contract 'In Vitro Testing Resources for AIDS Therapeutic Development Part B: Specialized *In Vitro* Virological Assays for HIV Therapeutics and Topical Microbicides'. As the leader of Southern Research's commercial *in vitro* antiviral drug development programme, he provides support to many clients in the form of pre-clinical antiviral testing data and reports that support IND applications submitted to the US FDA. In this capacity, he provides management and oversight for *in vitro* HIV, HCV and HBV drug development projects, as well as antiviral range of action testing against a wide variety of other viruses. In addition to his work at Southern Research, Roger is affiliated with the Frederick County Hepatitis Clinic, where he serves as a board member and volunteers his time to support the clinic's mission of providing comprehensive access to care for persons infected with viral hepatitis. He has co-authored 59 peer-reviewed publications and review articles related to antiviral research. As a member of ISAR since 1995, he has served the Society through participation on a number of committees including the finance committee (2004 to present; Chairman from 2009 to present), website committee (2002 to present), Conference Exhibitors (2002 to present) and conference committee (2010 to present).

### Financial summary of 24th ICAR in Sofia, Bulgaria (Dale Barnard)

I would like to once again 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 not be successful. The summary of the income and expenditure for the 24th ICAR at Sofia is given in Table 1. We were pleasantly surprised that the meeting in Sofia was financially successful despite somewhat lower attendance than usual. We can attribute this financial success to the local organizing committee under the strong leadership of Dr Angel Galabov and to the continued success of Roger Ptak's excellent campaign to increase sponsorships and the amounts donated by each sponsor. The sponsors continue to be very generous to the society. We thank them as well. In addition, we gratefully thank the National Institutes of Health for their continued interest in our educational programmes and the financial support that we have received from them over many years.

### New website for ISAR-ICAR (Andrea Brancale)

The Society has invested in the redevelopment of the website, which was launched in November 2011. The new platform, hosted by YourMembership.com, is considerably more advanced than our previous website. It allows a more personalised and user-friendly experience. Members now each have a unique

**Table 1.** Financial summary of 24th ICAR, Sofia, Bulgaria, 7–11 May 2011. Accounts to date, 2 December 2011

<b>REVENUES</b>	
Registration	\$123,639
Award Sponsorship	\$10,000
NIH Contribution	\$45,000
Corporate Sponsorship	\$134,453
Other Revenue	\$8,442
<b>Total Revenue</b>	<b>\$321,534</b>
<b>EXPENSES</b>	
Advertising	\$2,033
Site selection trip	\$3,323
Food and beverage	\$33,433
Audio/visual	\$36,657
Hotel expenses	\$37,251
Exhibits/posters	\$0
Invited speakers	\$8,647
Conference bags	\$1,049
Shipping	\$3,802
Onsite staffing	\$608
Courtesy Associates - out of pocket	\$6,534
Courtesy Associates - labour	\$82,614
Credit Card Fees	\$14,044
Awards	\$27,417
Board travel	\$2,740
<b>Total</b>	<b>\$260,152</b>
<b>Net balance</b>	<b>\$61,382</b>

username and password and are able to update their profiles online. Furthermore, membership renewals and conference registration can now be completed directly on the website.

Communication between committee members is facilitated by the creation of specific groups and sub-sites. Individual members can quickly send a message to fellow members directly from the Society website, without using e-mail. In addition to these services, more tools will become available in the near future that will transform the ISAR website into a social hub, significantly facilitating networking and collaborations between members.

### Calendar (Simon Tucker)

#### The 22nd Annual Meeting of the German Society for Virology (GfV) 2012

14–17 March 2012

Essen, Germany

<http://globalmedicaldiscovery.com/event/gfv-2012-22nd-annual-meeting-of-the-society-for-virology/>

#### Keystone Symposia: Addressing the Challenges of Drug Discovery - Novel Targets, New Chemical Space and Emerging Approaches

19–23 March 2012

Tahoe City, CA, USA  
<http://www.keystonesymposia.org/meetings/viewMeetings.cfm?MeetingID=1150>

**Keystone Symposium: 2012 HIV Vaccines**

21–26 March 2012

Keystone, CO, USA

<http://www.keystonesymposia.org/meetings/viewMeetings.cfm?MeetingID=1168>

**Keystone Symposia: Viral Immunity and Host Gene Influence**

21–26 March 2012

Keystone, CO, USA

<http://www.keystonesymposia.org/meetings/viewMeetings.cfm?MeetingID=1169>

**XIV International Symposium on Respiratory Viral Infections**

23–26 March 2012

Istanbul, Turkey

<http://www.themacraegroup.com/2012-symposia>

**ICVH: 2012 International Conference on Viral Hepatitis**

26–27 March 2012

New York, NY, USA

<http://www.confmanager.com/main.cfm?cid=2562>

**SGM: Spring Conference 2012, Convention Centre, Dublin**

26–29 March 2012

Dublin, Ireland

<http://www.sgm.ac.uk/meetings/MTGPAGES/Dublin2012.cfm>

**Keystone Symposia: Cell Biology of Virus Entry, Replication and Pathogenesis**

26–31 March 2012

Whistler, BC, Canada

<http://www.keystonesymposia.org/meetings/viewMeetings.cfm?MeetingID=1167>

**Keystone Symposium: 2012 Frontiers in HIV Pathogenesis, Therapy and Eradication**

26–31 March 2012

Whistler, BC, Canada

<http://www.keystonesymposia.org/meetings/viewMeetings.cfm?MeetingID=1166>

**VLA: 8th International Symposium on Avian Influenza**

1–4 April 2012

London, UK

[http://vla.defra.gov.uk/news/new\\_isai12\\_intro.htm](http://vla.defra.gov.uk/news/new_isai12_intro.htm)

**25th International Conference on Antiviral Research**

16–19 April 2012

Sapporo, Japan

[http://www.isar-icar.com/?page=25\\_ICAR](http://www.isar-icar.com/?page=25_ICAR)

**13th International Workshop on Clinical Pharmacology of HIV Therapy**

16–18 April 2012

Barcelona, Spain

[http://www.virology-education.com/index.cfm/t/13th\\_Intl\\_Workshop\\_on\\_Clinical\\_Pharmacology\\_of\\_HIV\\_Therapy/vid/44F796F0-0E79-A748-FB905323539AED90Clinical\\_Pharmacology\\_of\\_HIV\\_Therapy/vid/44F796F0-0E79-A748-FB905323539AED90](http://www.virology-education.com/index.cfm/t/13th_Intl_Workshop_on_Clinical_Pharmacology_of_HIV_Therapy/vid/44F796F0-0E79-A748-FB905323539AED90Clinical_Pharmacology_of_HIV_Therapy/vid/44F796F0-0E79-A748-FB905323539AED90)

**Cambridge Healthtech Institute's 5th Annual HCV Drug Discovery**

18–19 April 2012

San Diego, CA, USA

[http://www.drugdiscoverychemistry.com/dch\\_content.aspx?id=111646&libID=111601](http://www.drugdiscoverychemistry.com/dch_content.aspx?id=111646&libID=111601)

**28th Annual Clinical Virology Symposium and Annual Meeting of the Pan American Society for Clinical Virology**

20–25 April 2012

Daytona Beach, FL, USA

<http://www.virology.org/CVS.html>

**2012 International Symposium HIV & Emerging Infectious Diseases**

23–25 May 2012

Marseille, France

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

**Li Ka Shing Institute of Virology and Gairdner Foundation Symposium 'Meeting the Challenge of Emerging, Acute and Persistent Viral Diseases'**

31 May – 1 June 2012

Edmonton, AB, Canada

<http://likashingvirology.med.ualberta.ca/conferences/>

**9th Asia Pacific Congress of Medical Virology**

6–8 June 2012

Adelaide, Australia

<http://www.global-cc-alliance.com/events/9th-asia-pacific-congress-medical-virology>

**ESF-EMBO Symposium: Antiviral RNAi: From Molecular Biology towards Applications**

11–16 June 2012

Pultusk, Poland

<http://www.esf.org/activities/esf-conferences/details/2012/confdetail392.html>

**ASM 112th General Meeting**

16–19 June 2012  
San Francisco, CA, USA  
<http://gm.asm.org/>

**Elsevier - 13th Tetrahedron Symposium: Challenges in Bioorganic Medicinal Chemistry**

26–29 June 2012  
Amsterdam, the Netherlands  
<http://www.tetrahedron-symposium.elsevier.com/>

**Virology Education: 7th International Workshop on Clinical Pharmacology of Hepatitis Therapy**

27–28 June 2012  
Cambridge, MA, USA  
[http://www.virology-education.com/index.cfm/t/7th\\_International\\_Workshop\\_on\\_Clinical\\_Pharmacology\\_of\\_Hepatitis\\_Therapy/vid/CD0BEF5A-A778-65C7-8E3750815F7D7C70](http://www.virology-education.com/index.cfm/t/7th_International_Workshop_on_Clinical_Pharmacology_of_Hepatitis_Therapy/vid/CD0BEF5A-A778-65C7-8E3750815F7D7C70)

**7th International Workshop on Hepatitis C – Resistance and New Compounds**

28–29 June 2012  
Cambridge, MA, USA  
[http://www.virology-education.com/index.cfm/t/7th\\_International\\_Workshop\\_on\\_Hepatitis\\_C\\_Resistance\\_New\\_Compounds/vid/D24F5408-DF67-0735-D2A54E68112914F6](http://www.virology-education.com/index.cfm/t/7th_International_Workshop_on_Hepatitis_C_Resistance_New_Compounds/vid/D24F5408-DF67-0735-D2A54E68112914F6)

**RICT 2012 - 48th International Conference on Medicinal Chemistry**

4–6 July 2012  
Poitiers, France  
[http://www.chemistry-conferences.com/2012/07/04%20-%2006%20Interfacing%20Chemical%20Biology%20and%20Drug%20Discovery%20\(Poitiers%20-%20FR\).htm](http://www.chemistry-conferences.com/2012/07/04%20-%2006%20Interfacing%20Chemical%20Biology%20and%20Drug%20Discovery%20(Poitiers%20-%20FR).htm)

**ASV: 31st Annual Meeting of American Society for Virology**

21–25 July 2012  
Madison, WI, USA  
<http://conferencing.uwex.edu/conferences/asv2012/>

**4th Annual World Summit of Antivirals (WSA-2012)**

30 July – 1 August 2012  
Guangzhou, China  
[http://www.bitlifesciences.com/wcm2012/fullprogram\\_wsa.asp](http://www.bitlifesciences.com/wcm2012/fullprogram_wsa.asp)

**3rd Annual Symposia of Hepatitis Virus**

30 July – 1 August 2012  
Guangzhou, China  
<http://www.bitlifesciences.com/wcm2012/default.asp>

**37th International Herpesvirus Workshop**

4–9 August 2012  
Calgary, AB, USA  
<http://www.herpesvirusworkshop.com/2012/>

**2nd World Congress on Virology**

20–22 August 2012  
Las Vegas, NV, USA  
<http://omicsonline.org/virology2012/>

**EFMC ISMC 2012 - 22nd International Symposium on Medicinal Chemistry**

2–6 September 2012  
Berlin, Germany  
<http://www.rsc.org/ConferencesAndEvents/conference/alldetails.cfm?evid=108353>

**The Oxford Influenza Conference 2012**

11–13 September 2012  
Oxford, UK  
<http://www.libpubmedia.co.uk/Conferences/RNAi2012/Home.htm>

**Elsevier - 13th Tetrahedron Symposium (Asia): Challenges in Bioorganic and Organic Medicinal Chemistry**

27–30 November 2012  
Taipei, Taiwan  
[http://www.chemistry-conferences.com/2012/11/27%20-%2030%20Challenges%20in%20Bioorganic%20and%20Organic%20Medicinal%20Chemistry%20\(Taipei%20-%20TW\).htm](http://www.chemistry-conferences.com/2012/11/27%20-%2030%20Challenges%20in%20Bioorganic%20and%20Organic%20Medicinal%20Chemistry%20(Taipei%20-%20TW).htm)

**ICVID 2012 - International Conference on Virology and Infectious Diseases**

26–28 December 2012  
Bangkok, Thailand  
<http://www.waset.org/conferences/2012/thailand/icvid/>

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