

# 2009 ISICR AWARD WINNERS

## An Interview with 2009 ISICR Milstein Award Winner: **Dr. Peter Stäheli**

Hannah Nguyen



Peter Staeheli, PhD, is Professor in the Virology Department at the University of Freiburg in Germany. He received his diploma and PhD degrees in microbiology and biochemistry from the ETH in Zürich, Switzerland. Postdoctoral training was at the University of Zürich in the Institutes of Medical Virology (Dr. Otto Haller and Dr. Jean Lindenmann) and Molecular Biology (Dr. Charles Weissmann), and at the Scripps Research Foundation, La Jolla, in the Molecular Biology Department (Dr. Greg Sutcliffe). Dr. Staeheli currently directs a molecular virology and immune defence research laboratory, and teaches Basic and Molecular Virology to medical and biology students at the University of Freiburg.

1. Congratulations on receiving the ISICR Seymour & Vivian Milstein Award! What were your first thoughts when you heard the news?

*A: I was truly surprised when the e-mail with the news came in. Of course, I was very happy.*

2. What does the Award mean to you?

*A: The Seymour & Vivian Milstein Award is the most prestigious award of the ISICR. I feel greatly honored.*

3. Your two main research interests revolve around the study of Bornavirus and the study of interferon and influenza virus. How did you first get involved with these research areas, and what excites you the most about working in these areas?

*A: Interferon and influenza viruses were my first (scientific) love. My interest in Bornaviruses started much later. I got involved in interferon research in 1981 when I became a postdoctoral fellow at the University of Zürich in Switzerland and started to work with Otto Haller, Jean Lindenmann and Charles Weissmann. At that time, the mode*

*of action of interferons was still a mystery, but it was clear that the Mx gene product played an important role in the interferon-mediated resistance of mice toward influenza viruses. Trying to solve these questions was truly exciting.*

4. You have investigated interferon as a candidate emergency drug against pandemic influenza. What are your thoughts on interferon as a candidate emergency drug against the current swine flu H1N1 strain the world is encountering right now?

*A: I believe that the prophylactic use of interferon against pandemic influenza should be considered seriously. Vaccines and viral neuraminidase inhibitors will most likely be in short supply when the virus hits hard. Data from animal experiments show that intranasal application of interferon prior to virus exposure is highly effective. In such settings, interferon was shown to inhibit seasonal influenza virus strains. There is no reason to assume that interferon will be less active against the new swine flu H1N1 strain. Thus, the current challenge is to move this approach towards clinic trials.*

5. What do you think is your most important research contribution?

*A: I joined Otto Haller and Jean Lindenmann at a time when their biological studies on the Mx system were very well advanced. Clearly, the Mx system was ripe at that time for a detailed molecular analysis. With great support from the laboratory of Charles Weissmann we managed to depart from the point at which we could only describe a fascinating biological phenomenon and managed to arrive at a new point from which we could start to characterize the virus restriction factor which really matters. Eventually it became clear that Mx proteins represent interferon-induced molecules that interfere with influenza virus replication. Thus, our research on the Mx system helped to shape the current concept of how interferons inhibit viruses.*

6. What are your current and future scientific goals?

*A: I currently have a strong interest in interferon-lambda which appears to play a substantial role in preventing viral infections via mucosal surfaces. I further would like to better understand which cell types in infected organs can contribute to virus-triggered interferon synthesis and thus constitute the first line of the antiviral defense system. Another topic of interest is the avian interferon system which we currently study in the context of avian influenza. Lastly, it would like to further evaluate the interferons as prophylactic drugs against influenza.*

7. Do you have mentors or scientists that had a significant influence on your career?

*A: Otto Haller, Jean Lindenmann and Charles Weissmann had a great influence. The different characters of these mentors helped to look at scientific problems in many different ways. Under this strong influence, I learned to develop my own sensing system that tells me which scientific questions are of sufficient interest to pursue.*

8. Can you describe the research environment at the Spemann Graduate School of Biology and Medicine, Albert-Ludwigs Universitat Freiburg?

*A: The University of Freiburg did very well in a recent nation-wide competition, designated "Excellence Initiative". As a result of the positive evaluation, the Spemann*

*Graduate School was founded. The graduate school is a formidable platform which helps attracting talented students from all over the world.*

9. What is your idea of relaxation and your idea of ultimate stress?

*A: Sitting in the garden of our house with a glass of Italian wine is highly relaxing. On the stressful side, I may mention the struggle involved when it comes to meeting all deadlines listed in my calendar.*

10. What is your favorite and least favorite thing about Switzerland?

*A: I left Switzerland nearly 20 years ago for a position in Freiburg, Germany. Since Freiburg is located close to the Swiss border, frequent visits are possible and constant access to fresh Swiss chocolate is ensured. I certainly also greatly enjoy hiking in the Swiss Alps. As I live across the boarder, I can easily avoid the less enjoyable sides of Switzerland.*

11. What are some of your extracurricular interests?

*A: Freiburg is a fairly small town in the Black Forest which offers immediate access to excellent off-road biking. Riding home by bike after work or going for longer bike rides in the nearby mountains is great fun.*

12. In your opinion, what are the key elements to doing great research? What advice do you give to scientists in training?

*A: My advice is to start with a truly interesting biological phenomenon, find a working hypothesis and a suitable experimental approach that will ensure funding, recruit motivated students, and work hard to get the research project moving.*

# An Interview with 2009 ISICR Milstein Award Winner: **Dr. Glen Barber**

Thomas Tan



Glen N. Barber, Ph.D., holds the Eugenia J. Dodson Chair in Cancer Research, is leader of the Viral Oncology Program, and associate director for Basic Research at UM/Sylvester, and professor in the Department of Medicine at the University of Miami Leonard M. Miller School of Medicine.

Barber's laboratory is focused on developing novel virus-based therapies to treat cancer and his research has contributed key insights into mechanisms of innate immunity to viral infection and malignant disease.

Barber did his post-doc work at the University of Washington, Seattle and spent nearly a year at the University of Tokyo, before becoming an assistant professor in the Department of Microbiology and Immunology at Emory University School of Medicine, Atlanta, Georgia. Barber joined UM in 1999.

1. Congratulations on receiving the Milstein Award this year! How did you first find out and where were you?

*A: I received an e-mail in my office at the University of Miami, from Dr Eleanor Fish.*

2. What does the Award mean to you?

*A: It's obviously very gratifying to be acknowledged by colleagues for your contributions to the field. It's also an acknowledgment of past and present lab member's efforts and contributions. So I am also happy for them.*

3. Among your many contributions to the field of cytokine research, can you name one of which you're most proud of?

*A: Our recent work on STING, bringing to light the importance of this molecule in DNA as well as RNA-regulated innate immune pathways, was an enjoyable piece of work. Hiroki Ishikawa did a great job and I was pleased that he obtained a nice publication for all his hard work.*

4. Thinking back, how has the trajectory of your scholastic pursuits influenced your career choices and present position? Did you have a role model?

*A: Well, I've always been intrigued with cancer research and so gravitated towards that and ended up being part of a cancer research center. While in Seattle, with Michael Katze, I became interested in evaluating the potential deregulation of known innate immune pathways, such as those governed by PKR. Of course a lot more is known about innate pathways now and it will be interesting to evaluate their potential role in cancer. I didn't have a role model, though was impressed by much of the work from labs in the early 90's that unraveled the IRF and Jak/STAT pathways. The labs that started to unravel the Toll-dependent and independent pathways were impressive too!*

5. What do you think are some of the mandatory/key components of a successful lab?

*A: Motivated lab members (and some money for the research...)*

6. Can you give us a brief overview of the Sylvester Comprehensive Cancer Center (SCCC) and what are your current priorities as the Associate Director of SCCC?

*A: The SCCC at the University of Miami Leonard M. Miller School of Medicine is the major institute in Southern Florida for cancer-related research, diagnosis, and treatment. Nearly 4000 new cases of cancer are reported here each year. There are over 100 clinical trials in progress. Physician and scientist members of the SCCC are all associated with a translational research program, such as the Viral Oncology Program, which I presently direct, or one of several other programs such as the Tumor Immunology or the Breast Cancer Program. There are atypically high levels of viral-associated malignant diseases in the Southern Florida region, which is why the Viral Oncology Program started. I mention this, in that many of these types of cancer respond to interferon treatment and other anti-viral drugs. Needless to say many of these viruses probably target innate immune pathways to remain latent, events which may contribute towards the transformation process.*

*As Associate Director of Basic Research I help oversee a number of the SCCC programs as well as ensure that we have up-to-date technology to facilitate research for our members.*

7. If you weren't a scientist, what would you be?

*A: I don't know. I wanted to be a professional soccer player but there was one small problem; I wasn't good enough....*

8. What keeps you up at night and what's your idea of relaxation?

*A: Aside from the recession, terrorism, world poverty etc? The neighbor's cats fighting, thinking about the next series of experiments and agonizing about how my soccer team will do at the weekend. All at the same time...*

*Relaxation? I'm lucky enough to have a boat, which helps you make the most of living in Miami. When time allows, I like golfing, reading history, keeping up to date with the soccer games in England and am occasionally known to drink a beer. I like cooking, but I don't want to mention it too much in case my lab members make fun of me. You can*

*multi-task some of these. For example, sticking the soccer on the telly, rustling up Rognons au de Veau flambés au Madère, while drinking beer...*

9. This year's ISICR meeting will take place in Lisbon, Portugal. What are you most looking forward to?

*A: I'm looking forward to the seminars and to meeting colleagues and old friends. Of course the restaurants in Lisbon are an attraction also...*

10. Who will you thank during your acceptance speech at the Milstein award ceremony?

*A: Past mentors and lab members as well as the Milstein family and the ISICR Awards Committee!*

**2009 ISICR Honorary Membership Award Winner  
Dr. Charles Weissmann**



Charles Weissmann obtained his M.D.(1956) and Ph.D.degrees (1961) at the University of Zürich. After 7 years at the NYU School of Medicine as postdoc, Assistant and then Associate Professor he became Director of the Institute of Molecular Biology, University of Zürich in 1967. In 1999 he moved to the MRC Prion Unit, University College, London as Senior Scientist. In 2004 he was appointed Chairman of the Department of Infectology, Scripps Research Institute, Florida. He has contributed significantly to our understanding of RNA virus replication, developed site-directed mutagenesis and reverse genetics, discovered quasispecies in viral populations, cloned the human interferon alpha genes and produced recombinant interferon in E.coli, cloned the prion gene and demonstrated that its knockout in mice abrogated prion replication and conferred protection from prion disease.

**2009 ISICR Honorary Membership Award Winner  
Dr. Sidney Grossberg**



Sidney Grossberg received his M.D. degree (1954) at the Emory University School of Medicine. His post-graduate training in internal medicine at Duke University was interrupted by two-years' service in the U.S. Army Medical Corps in Korea and Japan. After Duke and a year's post-doctoral fellowship at the Johns Hopkins Hospital, he joined the Microbiology faculty at the University of Minnesota Medical School (1959-1962), and continued as Assistant Professor of Microbiology at Cornell University Medical College (1962-1966), during which he had a sabbatical year with André Lwoff at the Pasteur Institute. From 1966 to 1997 he served as Chairman of the Department of Microbiology and Walter Schroeder Professor at the Medical College of Wisconsin; during this period he spent sabbatical years with Luc Montagnier at the Pasteur Institute (1974) and Ernest Borden at the University of Wisconsin – Madison (1989). He produced the NIH Reference Standards for mouse and human alpha, beta, and gamma interferons, several of which became WHO International Standards, and directed the international collaborative studies required to establish their potency. He identified potent biological and low-molecular-weight chemical inducers of IFN, described chemical stabilization and reactivation of IFNs, described IFN inhibition of cell differentiation, and demonstrated high-affinity nuclear receptors for IFN-beta and -gamma. He identified linear and conformational epitopes on IFN-beta and contributed to our understanding of the quantification of IFNs and other cytokines and their antibodies. He discovered the phenomenon of virus-induced hyperlipemia and identified a novel murine retrovirus constitutively infecting human cells. From 1987-2008 he was Chairman of the ISICR Standards Committee.

## **Christina Fleischmann Award Winner**

Special thanks to the Fleischmann Foundation for the continuing support of this award

### **Caini Liu, Ph.D.**

Dept. Immunology  
Lerner Research Institute  
Cleveland Clinic  
Cleveland, OH

## **Seymour & Vivian Milstein Young Investigator Award Winners**

Special thanks to the Milstein Family for their continuing support of the ISICR Milstein awards

### **Hiroki Ishikawa, Ph.D.**

Cancer Center  
University of Miami  
Miami, FL

### **Xiao-Ling Li, Ph.D.**

Dept. Microbiology and Immunology  
University of Maryland  
Baltimore, MD

### **Benjamin tenOever, Ph.D.**

Dept. Microbiology  
Mount Sinai School of Medicine  
New York, NY

### **Niamh Mangan, Ph.D.**

Centre for Innate Immunity  
Monash University  
Clayton, 3006 Victoria, Australia

### **Ramtin Rahbar, Ph.D.**

Dept. Immunology  
University of Toronto  
Toronto, Ontario, Canada

## 2009 Milstein Travel Winners

Manel Amri, University USTHB, Algeria  
Joseph Ashour, Mount Sinai School of Medicine, USA  
Betsy Barnes, UMDNJ, USA  
Brigitte Blanchard Sury, CNRS, France  
Viviana Blank, University of Buenos Aires, Argentina  
Daniel Burke, University of Toronto, Canada  
Lally Chan, The University of Hong Kong, China  
Olivia Chan, University of Toronto, Canada  
Mounira. Chelbi-Alix, CNRS, France  
Jieliang Chen, Shanghai Med Col of Fudan Univ, China  
Wanjun Chen, NIH/NIDCR, USA  
Ahmet Civas, Paris Descartes University, France  
Jean F Clement, University of Montreal, Canada  
Ann Cornish, Walter and Eliza Hall Institute, Australia  
Alexandre Corthay, University of Oslo, Norway  
Marco De Andrea, Medical School of Turin, Italy  
Heather Ezelle, University of Maryland, Baltimore, USA  
Brenda Fredericksen, University of Marylandq, USA  
Nir Friedman, Weizmann Institute of Science, Israel  
Ka Yee Fung, Monash Institute of Medical Research, Australia  
Carole Galligan, Toronto General Research Institute, Canada  
Yiwei Gao, Stony Brook University, USA  
Sanjukta Ghosh, Harvard, School Public Health, USAS  
Alan Goodman, Universty of Washington, USA  
Nathalie Grandvaux, Université de Montréal, Canada  
Simon-Pierre Gravel, Université de Montréal, Canada  
Claire Greenhill, Monash Institute of Medical Research, Australia  
Francesca Gugliesi, University of Turin, Italy  
Bret Hassel, University of Maryland Schl of Medicine, USA  
Deborah Hodge, NDI-Frederick, USA  
Markus Hofer, University Hospital Marburg, Germany  
Teresa Hsi, University of Maryland Sch. of Medicine, USA  
Archontoula (Nadia) Kavrochorianou, Hellenic Pasteur Institute, Greece  
Hiu (Jessie) Kiu, The Walter and Eliza Hall Institute, Australia  
Christopher Krause, Mol Genetics, Microbiology & Immunology, USA  
Thomas Kuri, Inst for Med Microbiol & Hygiene, Germany  
Christophe Lallemand, CNRS, France  
Andrew Larner, Virginia Commonwealth University, USA  
Chien-Kuo Lee, National Taiwan University, Taiwan

Jana Liskova, 1st Medical Faculty, Charles University, Czech Republic  
Barbora Lubyova, Institute of Immunology and Microbiology, Czech Republic  
Katherine Martin, Monash University, Australia  
Jenny Miu, McGill University, Canada  
Reem Mohamed, institue of endemic diseases, Sudan  
Markus Mordstein, University of Freiburg, Germany  
Bei Morrison, Taussig Cancer Institute, USA  
Kazuhide Onoguchi, Institute for virus research, Kyoto univ, Japan  
Anna Overby, Univ of Freiburg, Germany  
Leesa Pennell, University of Toronto, Canada  
Hongwei Qin, University of Alabama at Birmingham, USA  
Nupur Raychaudhuri, Kellogg Eye Center at Univ. of Michigan, USA  
Shlomit Reich-Zeliger, Weizmann, Israel  
Erin Rogers, Department of Immunology, Canada  
Giovanna Romeo, Sapienza University of Rome, Italy  
Saleela ruwanpura, Monash University - Faculty of Medicine, Australia  
Martina Schroeder, National University of Ireland Maynooth, Ireland  
Martina severa, Istituto Superiore di Sanità, italy  
Ha Youn Shin, Stony Brook University, USA  
Håkan Steen, Temple University, US  
Shadi Swaidani, Cleveland Clinic-Lerner Reseach, USA  
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Chafia Touil-Boukoffa, University: USTHB, Faculty: FSB, Algeria  
Shawna Wall, CTRC @ UTHSCSA, USA  
Marta Wlodarska, University of British Columbia, Canada  
Jae-Kwang Yoo, University of Toronto, Canada  
Raza Zaidi, National Cancer Institute, NIH, USA