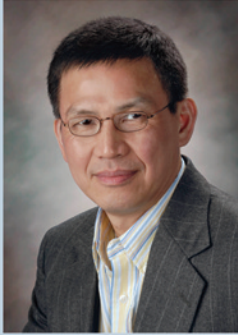


Zhi-Min Yuan Returns to Harvard



Dr. Yuan has an M.S. in Pharmacology from Hunan University, an M.D. specializing in internal medicine from the Jiangxi Medical College in China, and a Ph.D. in Biomedical Chemistry from the University of Maryland.

He completed his post-doctoral studies at Dana-Farber Cancer Institute before joining the HSPH faculty originally in 1998.

Professor Zhi-Min Yuan, currently the holder of the Greehey Distinguished Chair and Professor and Chief of Radiation Biology in the Department of Biochemistry at The University of Texas Health Science Center, will return to the Harvard School of Public Health as Professor of Radiobiology in the Department of Genetics & Complex Diseases. His major research interests are the elucidation of mechanisms for regulation of tumor suppressor p53; characterization of c-Abl tyrosine kinase in stress response; and investigation of mechanisms underlying the correlation of aging and cancer with a focus on the importance of the tissue microenvironment. In each of these areas, Dr. Yuan has made outstanding and lasting contributions. His most recent activities have produced critical insights into how low-dose radiation sets the stage for tumor susceptibility and delved into fundamental processes related to tumorigenesis, gene environment interactions and how these integrated systems relate to radiobiology and adaptation to stress. Furthermore, his basic research activities and academic program are highly relevant and complimentary to other tumor-related activities in our environment and will enhance our presence in this area greatly, including exploration of the unique metabolic properties of cancer and how stress and inflammatory responses and body's adaptive responses set the stage for common and chronic diseases.

Professor Hotamisligil stated his enthusiastic support for the appointment of Prof. Yuan, stating "Zhi-Min's program and leadership have several unique features. First, he is a recognized leader in the field of radiobiology as a protégé of John B. Little, emeritus professor in our department. He will bring vibrant leadership in this area to our department, School, and the local community, which has become a global priority as the exposure to radiation is widely recognized as a major threat to many populations on earth. Second, his basic research program is in excellent harmony with our core vision, hence will open up many collaborative and joint activities. Third, Dr. Yuan is an outstanding teacher and mentor and a superb colleague. He will be a much welcome force to add to our faculty. We welcome Dr. Yuan to the GCD faculty with great joy and enthusiasm."

Welcome to the Mair Lab

William Mair, Ph.D., was recruited by the Department of Genetics & Complex Diseases in 2011 and began his appointment in November of that year, focusing on the molecular and genetic pathways underlying the aging process and age-related pathology. With a doctoral degree from the University College London, Dr. Mair (Will) completed a postdoctoral fellowship at The Salk Institute for Biological Studies in La Jolla, California, where he made fundamental contributions to the aging field. The challenges of starting up a new laboratory in a new part of the country, where the views out of the window are Huntington Ave. and not the Pacific Ocean, are not trivial.



Mair's research exploits the power of genetics in model organisms, and aims to transform discoveries from this platform to other species, including humans. His work has tremendous potential to identify targets and intervention strategies in mammalian systems towards the development of novel preventive measures and therapeutics for age-associated disorders. Mair joins a vibrant "worm" and aging research community at Harvard and affiliated institutions as well as the broader community in Boston area. Many of these outstanding researchers were involved in his recruitment and enthusiastically welcome Will to the community.



"Microinjection set up for transgenic strain construction"

{continued on page 3}

inside this issue



**Zhi-Min Yuan
Returns to HSPH**
page 1

**Welcome
Mair Lab**
page 1

**Welcome from
the Chair**
page 2

**Post-Doc Profile:
Jessica Howell**
page 2

**Faculty
Accomplishments**
page 2

**Chih-Hao Lee
2012 Tashjian
Award Recipient**
page 3

**Green Team
In Action**
page 3

**In the Community:
Ed Martinez**
page 4

The Fantastic Five
page 4

contact us

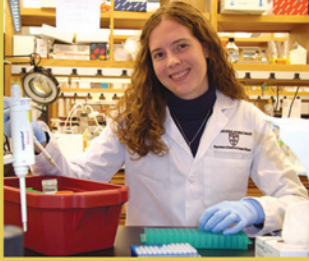
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HARVARD
School of Public Health

Spotlight: Jessica Howell, Ph.D

Postdoctoral Research Fellow
Manning Laboratory



We invited Jessica Howell to be the first Postdoctoral Research Fellow to be profiled in the debut GCD newsletter, and posed three questions. Here are her delightfully candid and thoughtful responses.

Dr. Howell, what motivated you to pursue a Ph.D. degree?

No one in my immediate family had pursued a doctoral degree but a cousin of my mom's and one of my grandmother's cousins received doctoral degrees – one in economics and one in physics. I think that if I had sought advice from my mom's cousin, he probably would have said "Don't do it!"

I discovered my love for science in my junior year of high school, taking an advance placement biology course. It was in that class that I was introduced to molecular biology for the first time. I was lucky that

my teacher was supportive of my interests and we worked together to design an independent study. He stayed after school with me and even raised funds to provide the necessary materials.

In college, I knew from the start that I really wanted to get into a lab. Celeste Simon took me in as a sophomore undergraduate research assistant. I was taking swing dance lessons and the instructor was an administrative assistant in one of the departments at the University of Pennsylvania. I talked to her about my interest in getting into a lab and she offered to distribute my resume and interest statement. She stuck them in the mailboxes and Dr. Simon offered me the position. I like to think she was impressed by my ambition. I remained in her laboratory through senior year and the summer before graduate school. She was the prime reason I continued on to do my Ph.D. at Rockefeller University.

Where do you see yourself in 10 years?

Ideally in an academic setting, running my own research lab, teaching on the side, remaining in the field of metabolism. It is such a complex subject, yet so fundamental that it is always relevant. I'm particularly interested in its contribution to many diseases, such as diabetes, obesity and cancer.

What is your favorite thing about your work in GCD?

I think the environment in my lab, and the department as a whole, is excellent. Everyone is helpful, engaged and interested in not only what they are doing, but what others are doing as well. And of course the research itself – which is what keeps you going day to day.

I remember reading a paragraph in my bio textbook that made the connection for me that scientists are not just people that work to understand the world around us – they are actually and actively involved in discovery that makes contributions to society.

Message from the Chair

Gökhan S. Hotamisligil, M.D., Ph.D.

J. S. Simmons Professor of Genetics and Metabolism

This marks the debut of our department newsletter. I want to thank David Hastings for bringing this to fruition and all that have contributed. As the youngest department of our School and University – and faced with the mandate of growth at a time of austerity – it has been a unique time for all of us in GCD. I am happy to report that with the outstanding performance of our students, fellows, faculty and staff, our department has done very well and continues to do so even in the face of deep economic challenges. Our research and academic activities have grown dramatically and expanded into important new areas with the recruitment of new faculty members and the emergence of new and exciting areas in the existing groups. Our department continues to grow in stature and in numbers, and we have much to celebrate and share together. Our central departmental focus – *the complex interplay of biological processes with environmental factors as they apply to chronic, multigenic, and multifactorial diseases* – has become central to the globe's most important health challenges, placing us at the center stage of current academic pursuits. Just as with the challenges, the implications of discoveries emerging from our laboratories in the area of chronic disease are enormous. So the times are also exciting.

We are most grateful to our friends and alumni who are committed to our work and provide strong support to the outstanding faculty, fellows and students who are involved in our academic programs. For example, we are grateful to Dr. Gerald Chan and his family for the recent establishment of the Morningside Professorship in the John B. Little Center for Radiation Biology. This generous commitment will provide a great stimulus for the activities in this area. We are also working to develop new programs with several institutions to increase our interactive studies and international reach.

We hope to use this newsletter as one method to communicate and share information so that we may learn more about each other, our laboratories and our accomplishments as we continue to develop the relationships and collaborations within the department. It is my wish that you will find the information here both interesting and thought-provoking. I hope to see you all during our retreat and wish you a wonderful spring and summer.

Warmest Regards,

2011-2012 Faculty Accomplishments:

Below is just a sampling of faculty accomplishments this past year:

- 32 active sources of external funding
- 30 publications
- 25 invited talks and presentations

BRENDAN D. MANNING: Sanofi Innovation Award

GÖKHAN HOTAMISLIGIL:

Honorary Doctorate Degree from Bahçeşehir University
Istanbul, Turkey

CHIH-HAO LEE:

Armen H. Tashjian Jr. Award for Excellence in Endocrine Research

Chih-Hao Lee, Recipient of the 2012 Armen H. Tashjian, Jr. Award

Chih-Hao Lee has been chosen to receive the 2012 Armen H. Tashjian, Jr. Award for Excellence in Endocrine Research. This annual award began in 2011, with the recipient being a faculty member or senior fellow at the Harvard School of Public Health who is pursuing innovative research ideas in basic biomedical sciences related to endocrinology. The nominating committee consists of eminent researchers, all of whose careers have been enriched by their collaborations with Dr. Tashjian.

Gökhan Hotamisligil, chair of the award committee, was one of the scientists who had the privilege of being mentored by Dr. Tashjian during his distinguished career. Tashjian's legacy is notable because of his seminal contributions to the field of endocrine research, encouragement and teaching of fellows and students, a unique ability to ask questions that are thought provoking and stimulating across many fields, and a warm personality that brought people together to make science happen.



Conversations with him created intellectual excitement, motivating students, fellows and peers. His family has joined with many generous donors to create this award in his name – a truly loving response to a great man's contributions to research and teaching. Dr. Hotamisligil noted Dr. Lee's seminal contributions to the field of endocrinology through his studies on nuclear hormone action in the relationship between immune response and energy homeostasis, and more recently, in inter-organ communications as the basis of his selection.

"Chih-Hao is an excellent choice also for his focus on outstanding scholarship and mentoring, an attribute of Armen's that he shares." Dr. Lee has instituted an exemplary style of mentoring graduate students and established vigorous standards for their activities in a very supportive and nurturing environment. He was also among the youngest to receive the Student Mentoring Award of the School. As a result he is highly sought after as an advisor in the graduate program, has recruited outstanding students into his lab, and his students have prospered under his guidance and mentorship."

Dr. Lee presented the Award Lecture on May 1, entitled "Endocrine control of metabolism by lipid and inflammatory signaling."

GCD Green Team

Have you heard that "Green is the new Crimson?" The saying has been tossed around Harvard since 2008, and it shows the commitment the University places on sustainability efforts. We are proud to say that GCD is one of the most active departments in the HSPH "Green Team." Caitlin Key, Claudia Garcia-Wagner and David Hastings are actively working to make our department – and School – a greener place for all.

The next big push is to bring our offices and shared spaces up the University's "Green Leaf Certification" standards. This means we'll all commit to composting and recycling, purchasing recycled products when available and turning off computers at night. While the office space is important, our labs are the real pride and joy of GCD. The Laboratory Managers have already begun a program to recycle Styrofoam packing boxes. The boxes are taken to a vendor that grinds them up and reuses the material, avoiding the need to create new Styrofoam. Do you have any suggestions as to how we can "green" our labs? Caitlin, Claudia, and David would love to hear from you!



ARMEN H. TASHJIAN, JR. AWARD COMMITTEE

S. James Adelstein, M.D., Ph.D.
Paul C. Cabot Distinguished Professor of Medical Biophysics, Harvard Medical School

David E. Golan, M.D., Ph.D.
*Dean for Graduate Education
George R. Minot Professor of Medicine
Professor of Biological Chemistry and Molecular Pharmacology, Harvard Medical School
Physician, Brigham and Women's Hospital and Dana-Farber Cancer Institute*

Gökhan S. Hotamisligil, M.D., Ph.D.
*Chair, Department of Genetics & Complex Diseases; James Stevens Simmons Professor of Genetics and Metabolism
Harvard School of Public Health*

Leona D. Samson, Ph.D.
Director, Center for Environmental Health Sciences, Professor of Toxicology and Biological Engineering, American Cancer Society Research Professor, Massachusetts Institute of Technology

Welcome Mair Lab

{continued from page 1}

Dr. Mair and his Research Specialist/Laboratory Manager lanessa (Nessa) Morante have been extremely busy establishing the laboratory from scratch, equipping it with the necessary microscopes and worm-handling equipment, including full microinjection/ transgenic strain construction facilities, which are now fully installed and productive.

Describing the addition of Dr. Mair to GCD, Dr. Hotamisligil spoke highly of how well his research is integrated into the department and in to the greater community. "Dr. Mair's expertise and future plans have great relevance to research initiatives under way in the department. His major themes of nutritional and cellular stress, longevity and age-related pathobiology will integrate extremely well with the goals and interests of the GCD faculty and open up many collaborative possibilities. The high impact of his work has been recognized by a stellar publication record, receipt of numerous fellowship awards and invitations to speak and present at scientific sessions. Will's program will be instrumental in moving effectively between discovery of basic molecular and genetic mechanisms controlling physiology of aging and translate this in pursuit of applications to human disease."

The Mair lab has also recently received funding and affiliation for the Harvard Transdisciplinary Research in Energetics and Cancer (TREC) center. They will be welcoming a new post-doctoral research fellow, Kristopher Burkewitz, to their laboratory in May. Our professor emeritus John B. Little, and the Mair laboratory are looking forward to the arrival of Zhi-Min Yuan and his lab to fill out the 5th floor of Building 1, and restore it to a vibrant community of collaborative researchers.



GCD in the Community: Edward Martinez

A professional with a strong history of work-site accomplishments, dedicated husband and father Edward Martinez still finds time to give back to his community. He was originally introduced to community organizing by a friend in the Dominican Republic. Since 1999, Edward has been a board member of the Dominican Festival, Dominican Liberation Party, Dominican Development Association and several other non-profit organizations.

Edward is currently a member of the Association of Harvard Latino Faculty and Staff [AHLFS]. AHLFS was founded in 2009 to articulate, support and promote the needs and goals of Latino faculty and staff at Harvard University. Membership is free of charge and open to all faculty, administrators, fellows and staff employed by Harvard University and its affiliates who support the mission of this Association. Its vision is to be an influential channel of communication to address issues impacting the Latino community at Harvard University.



Edward is also a board member of the Boston Council for The Dominican-American National Roundtable (DANR). The DANR is a non-partisan, non-profit corporation seeking to bring together the different voices of all people of Dominican origin in the United States. As a national forum for analysis, planning and action to advance the educational, economic, legal, social, cultural and political interests of Dominican-Americans, it aims to ensure for U.S. Dominicans the full exercise of the rights and freedoms guaranteed in the Constitution of the United States of America. With those objectives in mind, DANR is committed to enriching the quality of life in the United States by highlighting the contributions of Dominicans to the larger American society.

If that were not sufficient to occupy his few remaining free hours, Edward is also the Boston youth campaign director for the Dominican Liberation Party (PLD). The PLD (Spanish: Partido de la Liberación Dominicana, or PLD) is one of the major political parties of the Dominican Republic. For the first time in the Dominican Republic history, the Dominican diaspora will have representation in the Dominican congress. Approximately 154,000 Dominicans living abroad are registered to vote in the Presidential and congressional elections – a wonderful achievement for the diaspora given that they contribute approximately 8% of the GDP and will now have a political voice to match their economic contributions.



A team of research assistants, all new college graduates, were hired in the summer of 2011 to join the Hotamisligil laboratory.

As the legend goes...

"unbeknownst to the department, each came with their own unique magic power; like the Fantastic Four of Marvel comic fame ...only one better – they are the Fantastic Five!"

But seriously, all five staff – coming on board within weeks of each other – have formed a strong bond between themselves and the laboratory group, combining their intelligence, skills and energy to bring a delightful spirit to the sixth floor. It is almost as if they do have individual "super powers."

As a challenge, they were asked to come up with nicknames, citing their individual hidden or not-so-hidden talent.



Ariel White: "THE MOUSE WHISPERER"
Truc Nguyen: "THE GFP LANTERN"
Lisa Rickey: "THE POWER PIPETTER"
Arianne Panzer: "THE ISOLATOR"
Joshua Blanco: "THE HUMAN TORCH"

It is worth a trip to the sixth floor laboratory for a visit, and to watch their powers in operation. They are indeed fantastic!

genetics & complex diseases



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