

Klein Scientific Symposium

by Dr. Pierre McCrea



Imagine a surprise celebration where your colleagues and friends arrive at your doorstep, unbeknownst to you, not only from various distant cities and states within the USA, but also from China, Taiwan and Switzerland. Such was the enthusiasm and appreciation of former trainees and current colleagues, who recently organized a celebration and scientific symposium in honor of BMB Chairman, Dr. Bill Klein.

When Dr. Klein arrived to the atrium area outside Onstead Auditorium on Friday, November 5, expecting that he was about to exit the building, he was instead greeted to a hearty banquet with friendly faces from the past and present, who gave personal reflections over dinner that surveyed Dr. Klein's scientific and educational achievements, and yes, one or two endearing peculiarities. A former postdoctoral fellow of Dr. Klein, now a Professor at Brown University, Dr. Gary Wessel, was the principal architect of the event, with assistance also coming from those more recently at MD Anderson, such as former student Dr. Dan Wagner (Asst. Prof., Rice U.), former postdoc Dr. Judy Venuti (Assoc. Prof., LSU-HSC), former postdoc Athula Wikramanayake (Prof., U. Miami), as well as individuals now at MD Anderson.

The scientific symposium took place on Saturday, November 6, and started with an opening from our institution's president, Dr. John Mendelsohn, who commented on Dr. Klein's deep educational and institutional contributions and also presented a gift. Dr. Mien-chie Hung, Professor and Chair of the Department of Molecular and Cellular Oncology, then reviewed Dr. Klein's career scientific advances, which had additionally been highlighted at Friday's banquet. Going back a few years, in a collaborative effort with Dr. Lynne Angerer (NIH), how many of us were aware that Dr. Klein had a central hand in executing the very first mRNA whole-mount *in situ* conducted in any organism, in this particular case the sea urchin? Using urchins, the laboratory of Dr. Klein, as well as of Dr. Eric Davidson, then undertook a number of the world's leading-edge mechanistic studies in the field of cis-regulatory gene

control elements. And later, while on sabbatical in the mouse lab of Dr. Frank Costantini (Columbia U.), the symposium's lead-off speaker, Dr. Klein participated in the group's first genetic knock-out, an approach he brought back with him to Houston, and that his students and fellows have continued to successfully employ in studies of muscle and eye. Thus, for those attending, it was a treat to learn of Dr. Klein's scientific and academic history, as most of us have had occasion to overlap with only part of his active ongoing career. As importantly, the symposium then drew us into the experiences and ongoing achievements of Dr. Klein's former and current trainees, who made the scientific presentations.

Talks came from various model systems, including a number used by the Klein laboratory, such as mice, and until very recently, sea urchins. From collaborator Dr. Lynne Angerer came an intriguing presentation that certain urchin mouth neurons arise from the foregut endoderm, even as most of the scientific literature has traditionally promoted the view that neurons arise from ectodermal territories. Other presentations involved *Drosophila*, zebrafish, sea anemones and mice, with one or two coming from investigators/entrepreneurs outside the traditional "white tower" of academe, such as next-generation methods to sequence DNA. As one might predict given Dr. Klein's

prior and continuing contributions, retina and gene regulatory studies were well represented, as well as evolutionary perspectives upon basic biological problems. In one case, we heard, from former postdoc Dr. Judy Venuti, of novel light-reactive neurosensory organs located at the ends of sea urchin tube-feet, consistent with an ancient derivation of photo-sensation. The highly successful scientific program ended on Saturday evening, and was followed by a get-together at the new Rice University Bioscience building.

In summary, from his arrival to MD Anderson as an Assistant Professor in 1985 to the present, our thanks go to Dr. Klein for a career of mentorship, scholarship and scientific conversation. We also appreciate the efforts of those who organized this memorable event, and also those who traveled remarkable distances to honor Dr. Klein and the scientific and training experiences he continues to promote as a laboratory head and departmental chairman.

William Klein, Ph.D. Scientific Symposium

Saturday, November 6, 2010
Onstead Auditorium, BSRB 53.8012

Introductory remarks	9:00 Dr. Pierre McCrea, Deputy Chair, Biochemistry and Molecular Biology
	9:00 Dr. John Mendelsohn, President of MD Anderson Cancer Center
	9:15 Dr. Mien-chie Hung, Vice President for Basic Research, Professor and Chair of Molecular and Cellular Oncology
Session 1	
	9:30 Costantini, Frank Control of branching morphogenesis during kidney development
	9:45 Tyner, Angela Tyrosine kinase signaling in the gut
	10:00 Brandhorst, Bruce Sulfation and oral-aboral patterning of the sea urchin embryo
	10:15 Angerer, Lynne Unexpected origins of mouth neurons
Coffee break	10:30-11:00
Session 2	
	11:00 Hardin, Susan Venturing beyond the ivory tower
	11:15 Hardin, Paul Gene expression and the 4th dimension
	11:30 Eldon, Beth Epithelial migration in <i>Drosophila</i> from the perspective of 18-wheeler
	11:45 Gan, Lin LIM-codes in the development of mouse inner ear
	12:00 Xiang, Mengqiang Molecular control of inner retinal cell development
Lunch break	12:15-1:30
Session 3	
	1:30 Burke, Robert Integrins on eggs: "What does this mean?"
	1:45 Venuti, Judy Is seeing be leaving? Neurosensory and neuromuscular organization in the tube feet of the purple sea urchin
	2:00 Wagner, Dan Epidermal differentiation in the zebrafish
	2:15 Mao, Chai-An How Tbr2 shapes neurogenesis
	2:45 Wikramanayake, Athula Evolution of the animal vegetal axis: Insights from sea urchins and sea anemones
Coffee break	3:00-3:45
Session 4	
	3:45 Li, Xiaotao Oncogenic potential and regulation of the proto-oncogene activator REOgamma
	4:00 Vivian, Jay Nodal signaling in embryonic stem cell maintenance
	4:15 Wang, Steven Is it the retinal or ciliary margin of the eye?
	4:30 Ma, Xuegan Building a model for a gene regulatory network, piece by piece
	4:45 Davis, Judy The immune response of muscle
	5:00 Cameron, Andy Regulation of the brachyury gene in sea urchin endoderm
	5:15 Concluding remarks

Surprise event for Dr. Klein

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