

The network remains

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Abstract Eric Davidson was a legend both in his science and his personality. He inspired and challenged a new generation of developmental biologists and I was lucky to be one of them. He changed the way we think about biological interactions by synthesizing a large scale, almost incomprehensible set of data into a causal model of a gene regulatory network. While his death leaves a big hole in our lives, his contribution to the conceptualization of regulatory biology will inspire developmental and evolutionary biologists for decades to come.

Keywords Gene regulatory networks · Scientific inspiration · Scientific development

Eric was the heart and soul of everything he took part in. This workshop was very important to him and he loved coming here and discussing scientific progress in the eye of history. I was looking forward to seeing him here and the last thing I thought I would be doing was talking about him in the past tense. I was a post-doc in his lab for 7 years, and would like to share with you a little of my history with Eric and how much he changed my life.

I heard about Eric when I was looking for a post-doc position in biology. I was trained as a physicist and was fascinated by the miracle of embryo development. I talked to people who had made the transition from physics to biology before me, and they told me about this guy who changed peoples' views of the regulatory control of development. I wrote to him, as well as to other biologists, saying that I'm a physicist who would like to learn biology. Eric was one of the very few who

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responded to my letter. He wrote that he was intrigued by the abrupt change I wanted to make in my research direction and invited me for an interview.

I went for the interview in the winter of 2003. The lab was a vibrant place, full of highly intelligent people, excited about their science. Eric and the complexity of gene regulation in development had scared me quite a bit, but luckily for me he invited me to work with him.

My first few years at Eric's lab became some of the best years of my life. It was 2004 and everyone was working on the sea urchin genome and deciphering the heart of gene regulatory networks. The lab was like the sun after the winter, warming the scientist seed in me and helping it grow. Eric was extremely patient with me as I learned molecular biology and embryo development. While he was waiting for me to develop into a mature experimentalist he generously offered that I write reviews with him. We wrote five reviews together about gene regulatory networks and the quantitative aspects of gene regulation. (Clearly, he had waited quite a long time for me to start producing data.) These writing experiences, although excruciating at times, were highly educational for me. They gave me the basis for the path that I am now forging in my own lab, incorporating quantitative measurements and mathematical modeling for better understanding of developmental processes. Later, Eric introduced me to Ute, who invited me to speak at the 2010 workshop here. This visit, in 2010, paved the way to my current position at Haifa University.

I must admit that working with Eric wasn't all rosy. He challenged me, criticized me, made me doubt myself, and showed me that I need to work hard to improve. But arguing with him taught me how to base my arguments on logic and solid data and to design good experiments that would prove either him or me wrong. He sometimes got the details wrong, but he was always a master at seeing the big picture. His ability to synthesize complicated data into novel understandings and to draw the lines between the dots and generate a spectacular picture of how things work always left me in awe.

One of the nicest traditions in Eric's lab was the dim-sum farewell party held for long-time survivors of the lab. Eric's farewell speeches were genuine and reflected his true opinion of the person that left, so obviously I was a little worried when it was my turn. To my utter surprise Eric said that he had learned from me. It was one of the best compliments I ever heard from him, and I will always remember it.

When I left his lab and started establishing my own lab, I understood the difficulties of being a mentor. When I asked his advice for picking people for my own lab, he told me that intelligence and spark were the two most important qualities he looked for, more than what people did in their past.

In my last letter to him a day before he passed away I told him how much I wished he could visit my lab. I told him that I shaped my lab to be a lot like his, and I did it both in the physical space and in the scientific atmosphere I am trying to create, one that thrives on love of science and striving for excellence. Eric pushed me to develop my own language of science, and I will always be grateful to him for that. I wish he was physically here with us today, but in so many ways, he is and will always be.