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David Drubin

David Drubin is a 37-year-old investigator who began his career as a budding biochemist, was trained in cell biology, and now calls himself a geneticist. Drubin, now Associate Professor of Genetics at the University of California, Berkeley, was interested in biology from an early age. Despite his nomadic upbringing (his family moved eight times before settling in southern California where Drubin attended high school), he managed to enroll in a grade school program offered at the University of Michigan where he observed beehives, frogs, and bats. Later, copies of Scientific American that his father, an aerospace engineer, left conspicuously around the house provided a constant outlet for his developing interest in science.

Drubin attended the University of California, Berkeley, for college, attracted as much by its academic reputation as its liberal image. Although not especially rebellious, Drubin did delight in provoking his father's conservative engineer friends by his selection of the ultimate radical institution of the 70s. At Berkeley, Drubin was not certain what he wanted to do. He considered a career in writing, but did not want to abandon science. He selected a major in biochemistry primarily because it was the most rigorous option in the life sciences. Biology teachers Dan Koshland, Robert Tjian, and Randy Schekman were 'great' teachers who sealed Drubin's future in science.

Drubin's father, an immigrant from Israel, wanted his son to pursue medicine because he felt that Americans treat their educators and scientists poorly; however, following his junior year as an undergraduate, Drubin did an honors thesis in Michael Chamberlin's lab and couldn't turn back. Drubin spent his entire senior year in the laboratory where he "learned all the good habits of the bench from Chamberlin, whom Drubin calls a 'meticulous scientist'.

After graduating from Berkeley in 1980, Drubin pursued his Ph.D. at the University of California at San Francisco, working in Marc Kirschner's lab. It was his first exposure to cell biology and could not have been more exciting. Drubin observed that cell biology allowed him to actually study biology, applying biochemistry to something that was truly biological. Drubin, who calls Kirschner the 'world's top cell biologist,' found Kirschner's lab full of creativity and nurturing for young scientists. He earned his Ph.D. in 1985.

Near the end of graduate school, Drubin made a stab at mammalian antisense genetics and, although his experiments were not successful, detected that genetics would be an important element in his future work. Having heard an inspiring series of visiting lectures at UCSF by David Botstein, he sought out Botstein to pursue his interest in genetics while studying yeast cells. Drubin moved to Botstein's lab at MIT, a world away from Kirschner's lab at UCSF. Drubin believes the move from cell biology to genetics was a terrific opportunity as genetics was just beginning to make its mark on cell biology. Drubin says that Botstein 'has the highest standards of any scientist I've known and has played a critical role in my professional development.' In 1988, after three years in

Boston, Drubin moved back to become an Assistant Professor at Berkeley. He missed the Bay Area and grew tired of Boston's long and cold winter.

Drubin's lab at Berkeley is currently using genetic and biochemical approaches to determine how signaling factors control morphogenesis in eukaryotic cells. This problem is being studied in budding yeast beginning at the level of protein structure and function for actin and actin-binding proteins and extending to the level of the elucidation of the regulatory circuitry that controls the activity of cytoskeletal proteins. Since the actin cytoskeleton underlies polarized cell growth in budding yeast, the lab is determining how pheromone gradients and cell cycle control genes influence the assembly and function of actin.

Teaching is an element of Drubin's responsibilities that he takes seriously. Drubin finds education challenging and difficult but enjoys it nonetheless.

Drubin is married to Georjana Barnes, also a scientist at Berkeley. They met working in Botstein's lab, 'which explains my appreciation for genetics.' Their son, Casey, one and one-half years old, is Drubin's main interest, with playing volleyball, watching Cal basketball, and running with his dog Roz, an 'F1' female from colleague Jasper Rine's dog genome project, a distant second. Drubin has also enjoyed traveling to Spain, Japan, Germany, Israel, Austria, and Switzerland. A member of the ASCB since 1981, Drubin's advice to aspiring scientists is to 'follow your instincts, think your own thoughts, and arrive at your own conclusions.' He readily admits there is no formula for success, but that once you make science your career choice, prepare yourself: 'Learn to be the harshest critic of your own work, learn to write well, pay attention to details, and learn when to step back from them.'