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Bernie Gilula

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Gilula was born the middle of seven children, six boys and one girl. They were raised in West Frankfort, Illinois, a small coal mining town in the rural Midwest. Gilula's parents both emigrated from Eastern Europe; his father was a family physician and his mother worked alongside him as his nurse. Gilula was inspired to pursue medicine by his parents, as were two older brothers, one now a psychiatrist and the other a radiologist. His other siblings pursued creative careers: one is an artist, one founded a theater group, and the third has a video production company; his sister is a musician.

In high school, Gilula's passion was sports: he played baseball, basketball and football. In 1962 he entered Southern Illinois University at Carbondale on a football scholarship. After two seasons, Gilula left the football team to concentrate on his academic studies. In his junior year, as a pre-med student, he "realized that medicine was not what would give [him] the most satisfaction," and he became increasingly interested in biomedical research. "I was also attracted to research because I could have more control of my time, unlike my father who was constantly getting up in the middle of the night to treat his patients," he remembers. After receiving his Bachelor's degree, Gilula went on to earn a Master's degree in Physiology at SIU.

In 1968 Gilula entered the Ph.D program in the Physiology Department at the University of California, Berkeley. He chose Berkeley because of its well-known intellectual and cultural diversity. While at Berkeley, Gilula discovered the field of cell biology in which he has worked ever since. Peter Satir, Dan Branton, and Daniel Mazia "shaped his formative years" at Berkeley. There he studied ciliated epithelia in the clam gill with an emphasis on cell-cell communication, and cell junction interactions during early sea urchin development. "I especially enjoyed the fundamental nature of the work on junctional communication between cells," Gilula recalls, "because everyone could understand its importance." Their work would help lead to understanding that gap junctions provide the pathway for synchronizing cells in organs such as the heart.

Following graduate school, Gilula went to Harvard as a Postdoc to study with Don Fawcett, Dan Goodenough and Morris Karnovsky. Gilula's then-wife-to-be, Bessie Huang, whom he had met at Berkeley, also went to Harvard for post-doctoral studies. While in Boston, Gilula did seminal work on gap junctions. Goodenough, who says he was more a colleague than an advisor to Gilula, explains that the two entered the field right when the study of gap junctions was becoming pivotal. Gilula's 1972 paper in this area with Ray Reeves and Alan Steinbach provided cell biological and genetic evidence for the gap junction as the pathway for electrical and metabolic communication between cells, and it remains an important citation in the field. Goodenough describes Gilula as someone who is "very good at generating excitement for his work. He has an inspiring ability to retain information and uses his abilities to do the right experiment at the right time." To this day, the two remain close colleagues and the best of friends.

In the fall of 1972, Gilula and Huang moved to New York City to pursue post-doctoral studies at the Rockefeller University, Gilula working with George Palade, and Huang with the late David Luck. A year later, when Palade moved to Yale, Gilula elected to remain at Rockefeller as an Assistant Professor. It was in the 1970's that Gilula became involved with the ASCB. He recalls that at that time "the ASCB was very small and was going through a bit of an identity crisis; biochemists were at the forefront of science, and they chose not to become involved in the ASCB." Gilula never questioned his own intellectual allegiance, serving on the ASCB Council in 1978 and as Chair of the Nominating Committee in 1988. In 1982, he became Editor-in-Chief of the Journal of Cell Biology, published by the Rockefeller University Press. Among his proudest accomplishments as JCB Editor-in-Chief has been contributing to the development of a relationship between the ASCB and the journal that made it possible to select the members of the Editorial Board cooperatively.

After several years on the faculty at Rockefeller, Gilula and Huang left the city and accepted appointments in the Department of Cell Biology at the Baylor College of Medicine. The move to Houston provided the opportunity to get their two young and rambunctious sons, Jonathan and Daniel, out of the confines of an apartment into a house with a yard and room to run wild. Following five productive years at Baylor, Gilula and Huang were recruited by Richard Lerner to Scripps.

Gilula was persuaded to go to Scripps by "resources to build an outstanding team of researchers." Shortly after arriving there, a nucleus of talented young cell biologists were recruited to the institution. They included Ron Milligan, Sandi Schmid, Larry Gerace, Velia Fowler, and Bill Balch. A Department of Cell Biology was then formed with Gilula as Chairman. The Department currently has 28 faculty members. Gilula believes that the strength of Scripps' environment is its interdisciplinary approach to science, where chemists and cellular, molecular and structural biologists work together, allowing each to appreciate problems from a unique perspective. In 1989, Scripps inaugurated an interdisciplinary Ph.D. graduate program in structure, chemistry, and biology, with Gilula as the Dean of Graduate Studies. The program quickly matured to receive full accreditation and has since graduated 61 students. William Beers, a Vice President at Scripps, credits Gilula with helping to get the graduate program off the ground, noting in particular the breadth of his scientific understanding and his ability to maintain a world-class research lab while devoting himself to his students. Gilula is known for his devotion to his students; when two married each other this summer they asked Gilula to perform the ceremony.

Gilula's research continues to focus on cell-cell communication that is mediated by gap junctions. He reports that, "we have recently created the first animal model for a form of cataracts. This has led us to consider the clinical treatment of cataracts, which," he adds with characteristic enthusiasm, "is what it's all about." In addition, Gilula and his colleagues have identified a bioactive lipid that blocks gap junction channels and is involved in sleep properties. Recalling his father's care of coal mining families, Gilula seems most excited about the clinical applications of his recent work.

Two years ago, Gilula and Huang's nest emptied when their younger son, Daniel, enrolled at the University of Southern California. Jonathan, their oldest, graduated this year from Princeton. At this time neither son is interested in pursuing a career in science. Jonathan, an avid sports enthusiast who was captain for two years of the men's varsity tennis team at Princeton, is presently working for the San Diego Padres. Daniel aspires to a career in the music industry. Bernie Gilula continues to enjoy an active sports life himself, playing both tennis and golf, when he is not being a scientist, chairman, dean, or editor-in-chief.