Profile of Dr. Mike Rappé

Dr. Michael Rappé works in the field of marine microbiology in Hawaii, although his research takes him around the world. He is working in a rather new and exciting field of microbiology.

Rappé grew up on a small farm in Oregon’s Willamette Valley, a fairly rural place with lots of wildlife and opportunities for outdoor activities. He spent a good deal of time fishing and hunting and became interested in biology and ecology early on because there was so much of it around him. The more he learned about biology, the more he thought he wanted to go into medicine and become a doctor.

Rappé was accepted into Washington State University and began taking premed courses his junior year. He also volunteered at the Veterinary Medicine lab in Environmental Wildlife. His senior year was spent trying to figure out whether medicine was really for him. He ended up doing his senior project on salmon genetics in a lab where he was exposed to molecular biology and its applications in biology, ecology, and environmental science. He did so well with this project that he was offered a graduate assistant position in the lab.

Rappé decided to take a year off after graduating from college and reevaluate things. He worked with the Hanford Nuclear Organization in Washington and became interested in Dr. Jo-Ann Leong’s and Dr. George Bailey’s work at Oregon State University in genetics. This is where he learned about Dr. Steve Kaattari’s research in fish immunology and disease.

Rappé was accepted into a graduate program at Oregon State University, where Leong, Bailey, and Kaattari were doing their research. His first position was as a rotating graduate student in Kaattari’s immunology lab. He then moved over to Dr. Steve Giovannoni’s lab, where he undertook a new area of research, marine bacteriology. It was here that Rappé found his niche and sequenced the DNA of a tiny bacterium discovered in the Sargasso Sea, SAR 202, which led to a prestigious publication in the Proceedings of the National Academy of Sciences. Very few papers were being published in this field, so it was an exciting time for marine bacterial research and the field was wide open. New technologies were emerging every day and Giovannoni’s lab was leading the way in the field of microbial ecology.

How did Rappé get to this point in his career from high school? He had always excelled at math and science, but still managed only a B in biology, which was his major interest, proof that a passion for science can overcome grades. Rappé’s biology and chemistry teachers both had high expectations for him, and they were known to push their students to excel yet to be supportive. Mike Rappé is an example of a student interested in science who found an area that excited and motivated him.

Rappé now studies marine bacterioplankton in the sea. His research focuses on developing new ways to cultivate these organisms in the laboratory so that we can learn more about their ecology and genetic diversity. He also studies how and where bacteria in the marine environment fit into their large and distinctly different families, and he develops new techniques to help him find answers to his research questions. He also attends conferences around the world and develops collaborations with other labs and researchers. He currently resides in Kailua, Hawaii, on the island of O‘ahu with his daughter and works at the University of Hawaii’s marine lab on Coconut Island in Kaneohe Bay on the windward side of O‘ahu. His advice for high school students interested in marine science and research is to not be afraid to explore and reevaluate your goals. “It’s important that students ‘go for it’ and immerse themselves in science,” he says. “Only in this way will you find your passion.”

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