CHEMICAL HERITAGE FOUNDATION

GEORGE A. O'TOOLE

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

David J. Caruso

at

Dartmouth Medical School
Hanover, New Hampshire

on

16 and 17 January 2008
(With Subsequent Corrections and Additions)

George A. O’Toole

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GEORGE A. O'TOOLE

1966	Born in Port Jefferson, New York on 16 May

Education

1988	B.S., Cornell University
1994	Ph.D., Microbiology, University of Wisconsin

Professional Experience

	University of Wisconsin
1994-1995	Post-doctoral Research, Bacteriology
	Harvard Medical School
1995-1999	Post-doctoral Research, Microbiology & Molecular Genetics
	Dartmouth College
1999-2005	Adjunct Assistant Professor, Department of Biology
2005-present	Adjunct Associate Professor, Department of Biology
	Dartmouth Medical School
1999-2005	Assistant Professor, Department of Microbiology & Immunology
2005-present	Associate Professor, Department of Microbiology & Immunology

Honors

1989-1990	Cell & Molecular Biology Training Grant Fellow
1990-1991	Biotechnology Training Grant Fellow
1993	Sigrid Liermo Memorial Award, recognizing scientific mentorship
1995-1998	Runyon-Winchell Cancer Research Post-doctoral Fellowship
1998-1999	Medical Foundation Senior Post-doctoral Fellowship
2000	DuPont Young Professor Award
2000-2004	Pew Biomedical Scholar Award
2000-2005	NSF Early Career Development Award (CAREER)
2003	Dean's Award in Basic Science, Dartmouth Medical School
2007	Full Member, Dartmouth Chapter of Sigma Xi

ABSTRACT

George A. O'Toole grew up in rural eastern Long Island, New York heavily influenced by his parents and their Irish and Italian immigrant families. Throughout his youth, his parents, both in education, stressed the importance of school and attending college. In high school he was especially encouraged by a science teacher who praised O'Toole's interests in science oriented shows like *Nova* and *Nature*. O'Toole participated in a research program for high school students at Catholic University of America in Washington D.C., where he was first exposed to cell biology. Deciding he wanted to pursue biology, O'Toole matriculated at Cornell University where he earned a position in the Cornell Tradition scholarship program. Throughout his time at Cornell he balanced his studies with his work in the Noyes dining hall. Early on O'Toole engaged in extra laboratory research and had a paper accepted to the *Cornell Undergraduate Journal of Science*. He worked as a dishwasher in the microbiology research laboratory of Steven H. Zinder, though ultimately conducting research on methanogenic archaea.

After graduating from Cornell, O'Toole began his graduate research as Jorge C. Escalante-Semerena's first graduate student at the University of Wisconsin, focusing his research on the genetics and biosynthesis of Vitamin B_{12}; during what little free time he had, O'Toole became active in political campaigns. In the small Vitamin B_{12} field, he published nine papers, learning the process of writing a scientific paper directly from Escalante-Semerena. Upon finishing his Ph.D., O'Toole undertook his post-doctoral research with Roberto Kolter at Harvard Medical School, where he began his work in biofilms. While in the Kolter laboratory, O'Toole took advantage of the inquisitive scientific atmosphere and intellectual freedom fostered in the group to make his mark in this field.

Although he considered working in biotechnology companies, O'Toole accepted a position at Dartmouth Medical School and opted to work as a consultant for his friend's company, Microbia. As soon as he started his lab, O'Toole immediately began efforts to create an environment that fostered success and creativity in his students. Shortly after arriving at Dartmouth, O'Toole received a Pew Scholar in the Biomedical Sciences award from which have come numerous collaborations and a networking system. Throughout the interview O'Toole discusses the current climate of funding, mentoring, scientific ethics, and the importance of translational research with regard to scientific responsibility.

INTERVIEWER

David J. Caruso earned a B.A. in the History of Science, Medicine, and Technology from the Johns Hopkins University in 2001 and a Ph.D. in Science and Technology Studies from Cornell University in 2008. His graduate work focused on the interaction of American military and medical personnel from the Spanish-American War through World War I and the institutional transformations that resulted in the development of American military medicine as a unique form of knowledge and practice. David is currently the Program Manager for Oral History at the CHF. His current research interest focuses on the discipline formation of biomedical science in 20th-century America and the organizational structures that have contributed to such formation.

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