CHEMICAL HERITAGE FOUNDATION

HAROLD M. MCNAIR

Transcript of Interviews
Conducted by

Michael A. Grayson

at

Blacksburg, Virginia

on

6 and 7 November 2011

(With Subsequent Corrections and Additions)

CHEMICAL HERITAGE FOUNDATION
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FINAL RELEASE FORM

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HAROLD M. MCNAIR

1933	Born in Miami, Arizona, on 31 May

Education

1955	BS, University of Arizona, Chemistry
1957	MS, Purdue University, Analytical Chemistry
1959	PhD, Purdue University, Analytical Chemistry

Professional Experience

	Eindhoven Technical University, Eindhoven, The Netherlands
1960	Fulbright Postdoctoral Fellow
	Esso Research and Engineering, Linden, NJ
1960	Research Chemist
	F&M Scientific Division of Hewlett-Packard, Amsterdam, Holland
1961-1964	Technical Director, General Manager
	Aerograph Division of Varian Associates, Walnut Creek, California
1967-1971	Director of International Operations
	Virginia Polytechnic Institute and State University, Blacksburg, Virginia
1968-1971	Associate Professor of Chemistry
1971-2002	Professor of Chemistry
1990-1992	Department Head, Chemistry Department
2002-present	Professor Emeritus

Honors

1951-1955	University of Arizona, Phelps Dodge Scholarship
1951-1955	University of Arizona, Dean's List
1955	University of Arizona, Freeman Medal (Outstanding Male Graduate, 1955)
1955	University of Arizona, President's Scholarship Cup
1955	University of Arizona, Merck Chemistry Award
1955-1959	Purdue University, President, Phi Lambda Upsilon, member Sigma Xi; Procter and Gamble Research Fellowship
1960	Perkin-Elmer Fellowship, Eindhoven Technical University Fellowship.
1972	Honorary Membership, O.D.K., Va. Tech Chapter
1975	I.R.-100 Award Winner; Co-inventor of Cira GC/IR System
1976	Fisk Medal, Fisk University for ten years' service in teaching short courses at Fisk
1976	Fellowship from "Troisième Cycle" of Swiss Universities for a Visiting Professorship at the University of Neuchatel, Neuchatel, Switzerland

1977	One joint paper with former student received NASA Langley Research Center H.J.E. Reid Award for NASA research recognition (more than four hundred reprint requests).
1979	Chosen United National Consultant to Graduate Programs in Analytical Chemistry in Brazilian Academy of Sciences Committee to Review Analytical Chemistry Programs at NBS (three years)
1981	Philips Electronics Fellowship for research study leave, Eindhoven Technical University, Eindhoven, The Netherlands
1982	Certificate of Appreciation from The American Industrial Hygiene Association for support of training programs, A.I.H. Conference
1983	VaTech Alumni Teaching Award: Outstanding Undergraduate Teacher First awardee (out of 1200 faculty members)
1986	Colacro Gold Medal for outstanding contributions to Chromatography in Latin America, Rio de Janeiro
1989	Eastern Analytical Symposium Award in Chromatography
1990	HP Corporate Gift, for Chromatographic Research
1990	Science Advisor, Research Labs, R. J. Reynolds, Winston Salem, NC
1991	K. P. Dimick Award in Chromatography
1991	Special Achievement Award, ACS, 25 years of short courses
1993	Twsett Medal of Chromatography, Russian Academy of Sciences, Riva del Garde
1994	Honorary Faculty Member, School of Pharmacy, University of Concepción, Concepción, Chile
1997	"Merit Award In Chromatography" from the Chicago Chromatography Discussion Group
1998	Invited by the Swedish Academy of Sciences to nominate for the Nobel Prize in Chemistry
2000	Analytical Division of ACS, J.C. Giddings for Outstanding Contributions to Education
2001	Stephen Dal Nogare Award, Pittsburgh Conference, March 2001, Outstanding Contributions to Separation Science
2003	Horváth Medal, Connecticut Separation Science Council
2004	Easter Analytical Society, Award in Analytical Chemistry
2008	Outstanding Alumni Award, Dept. of Chemistry, University of Arizona
2009	Lifetime Achievement Award in Chromatography, LC/GC Magazine, Pittsburgh Conference

ABSTRACT

Harold McNair grew up in Miami, Arizona, one of two sons. His parents worked in the local copper mines; they were not highly educated, but they valued education and encouraged Harold. He did well in school but also loved sports, playing tennis especially well. He won a tennis scholarship, Elks Club award, and a Phelps Dodge Scholarship to the University of Arizona where he majored in chemistry and minored in physics. He found his professors very challenging and interested in their students. McNair won more honors, including being a Rhodes Scholar alternate. McNair entered Purdue University's PhD program and continued to work in industry during the summers. Fascinated by instrumentation, he met A. J. P. Martin at Amoco and cemented his interest in gas chromatography (GC). At a GC meeting J. J. Van Deemter encouraged him to build Purdue's first gas chromatograph. McNair's next stop was Eindhoven, the Netherlands, for a Fulbright Scholarship, working with A. I. M. Keulemans. In addition to learning a great deal he met his future wife. He returned to the United States to a job at Esso, studying rocket fuels for the US Department of Defense. In addition to his regular duties McNair wrote *Basic Gas Chromatography.* After a year he left Esso for F&M Scientific, and they moved back to Amsterdam. There they had three successful years before McNair went to Varian, Inc., to be director of European operations. The next four years were spent in California, with frequent travel to Europe, now with three children.

McNair was recruited by two of his former Purdue professors to take a professorship at Virginia Polytechnic Institute and State University (Virginia Tech). While continuing his regular teaching and research, he expanded the short course program he had begun at Varian. The quality of life and science at Virginia Tech persuaded him to remain there rather than return to industry as he had originally planned. With some of his students McNair established COLACRO (Congress in Latin America about Chromatography), which has taught short courses and introduced GC into almost all of the countries in Latin America. Although he is retired now he continues to teach an occasional short course and to do some work on bomb residues for the FBI. He is also interested in food science and is working on a study of the relationship between cows' diets and milk.

McNair remains extremely enthusiastic about separation science, especially GC, which he says is still an important tool of analysis, especially in the biomedical and health fields. He discusses the evolution of instrumentation in GC, talks about liquid chromatography, and praises both his mentors and his students. He gives his wife much credit for her help, especially with foreign students. He is proudest of his supernetwork, "McNair's Mafia," from undergraduates through colleagues. He believes that his most significant contribution is his *Basic Gas Chromatography.* He says that among the pioneers of GC, A. J. P. Martin, Steve Dal Nogare, and A. I. M. Keulemans were his most important mentors; they taught him chemistry but also how to live and laugh.

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