Dr. Eula Bingham

A Brief Biography by Ashton Czech and Samuel Mangold-Lenett

Dr. Eula Bingham is a retired professor from the University of Cincinnati. She is widely known for her work in occupational safety. Specializing in chemical carcinogenesis, Dr. Bingham performed extensive research on various chemical compounds to determine their effects on human health. Due to her experience in the field and relationships with leaders of national labor unions, she served as the Director of the Occupational Safety and Health Administration (OSHA) in the administration of President Jimmy Carter. To this day, she continues to work in occupational health and safety fields, but she no longer conducts independent research. Dr. Bingham’s life is one defined by improving the lives of both workers and students.

Eula Bingham was born on July 9th, 1929 in Covington, Kentucky to parents Arthur and Frieda Bingham.1 Arthur Bingham was a railroad worker near the time of Eula’s birth, but lost his job during the Great Depression and opted to become a farmer.2 Growing up, she lived on her parents’ farm where they grew and raised much of their own food.3 Although the family lived on a modest income, Dr. Bingham said that she never felt deprived of anything.4 During her high-school years, Ms. Bingham worked in retail. After high-school she planned to work full-time for

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1 Biographical Questionnaire completed by Eula Bingham
2 "Bingham, Eula." In American Environmental Leaders: From Colonial Times to the Present, by Anne Becher, and Joseph Richey. 2nd ed. Grey House Publishing, 2008. Specifically, the 1930 U.S. census listed Arthur Bingham as a railway switchman for the Railway Mail Service. In the oral interview, Dr. Bingham indicated that her uncle had been a railway worker as well.
3 Dr. Eula Bingham Oral History Interview, conducted by Ashton Czech and Samuel Mangold-Lenett. February 7, 2018. Index in Possession of authors. Part 1, timestamp [02:45]. Henceforth, all citations for the interview will only contain the video part number and timestamp.
4 Oral Interview Part 1 – [03:50]
the company “Proctor”. Her father, however, insisted that she enroll in college instead, and at his behest, Eula Bingham attended Eastern Kentucky University where she majored in Biology and Chemistry.

After graduating from EKU in 1951, Ms. Bingham began working for the Hilton-Davis Chemical Company in Cincinnati, Ohio. This facility introduced her to the dangers that some workers in the American labor force faced daily and exposed her to worker safety, a topic to which she would later dedicate her professional life. The plant experienced frequent fires and safety hazards that endangered workers and exposed them to dangerous chemicals. Benzene, a substance now known to cause leukemia, was one such chemical. After spending some time working for the Hilton-Davis Chemical Company, one of Ms. Bingham’s coworkers suggested that she go to the University of Cincinnati (UC) for graduate school. After discussing the opportunity with her parents, she decided to apply, and UC accepted her application. Her family was always very supportive of her in the efforts to further pursue her education. In total, Ms. Bingham spent one year working at the Hilton-Davis Chemical Company as an analytical chemist before beginning her post-graduate education in Cincinnati.

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5 Oral Interview Part 1 – [04:25]. Dr. Bingham only referred to the company as “Proctor”, but it may have been Proctor and Gamble.
6 Oral Interview Part 1 – [04:17]
7 Biographical Questionnaire
8 Oral Interview Part 1 – [07:58]
9 Oral Interview Part 1 – [07:58]. While Dr. Bingham did not specifically state that her experiences at the Hilton-Davis Chemical Company drove her to pursue a career in occupational health and safety, she did refer to it as an “eye-opener” so it likely influenced her.
10 Oral Interview Part 1 – [09:34]. Dr. Bingham’s coworker stated that it caused leukemia.
11 Oral Interview Part 1 – [10:00-10:45]
12 Oral Interview Part 1 - [05:24]
For the first three years at UC, Ms. Bingham was the only female graduate student in her department. She spent a considerable amount of time teaching anatomy labs and performing animal dissections. Her fellow graduate students, however, decided that she couldn’t teach labs with the name "Eula Lee" due to the southern sounding nature of her name, so they called her "Max" instead. This nickname referenced a humorous book by Max Shulman in which all characters were named Max. Soon enough, most of her colleagues and students began to refer to her as Max. Dr. Bingham noted that this was their way of helping her fit in as “one of the boys.”

After graduating with a Master’s and PhD in 1958, Dr. Bingham obtained a position in the University of Cincinnati’s Kettering Laboratory where she continued to conduct research pertaining to occupational health and safety. Chemical companies would often send samples to the Kettering Lab to test for carcinogenic effects of chemicals. One such case began during her first year at the Laboratory and involved a manufacturer of benzene-based dyes. Two members of a twenty-six person unit developed bladder cancer, and this prompted the laboratory to

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14 Oral Interview Part 1 – [10:45-12:48]
15 Oral Interview Part 1 – [10:45-12:48]
18 BINGHAM, E. L. (1958). A Chemical And Histochemical Study Of The Effects Of Certain Hormones On The Preputial Glands Of The White Rat (Order No. 5803062). Available from Dissertations & Theses @ University of Cincinnati; ProQuest Dissertations & Theses A&I; ProQuest Dissertations & Theses Global. (301935660). Retrieved from https://search.proquest-com.proxy.libraries.uc.edu/docview/301935660?accountid=2909
19 Oral Interview Part 1 – [17:28]
20 Oral Interview Part 1 – [19:19]
examine the rest of the workers to determine if any others had cancer. After conducting examinations and performing blood-work, the lab determined that almost half of the workers had some form of bladder cancer. Dr. Bingham affirmed that this was one of the experiences which led her to believe in the importance of research on carcinogenesis.

In another case the lab studied the effects of a cutting fluid used at a manufacturing facility in Cleveland, Ohio. This cutting fluid often came into contact with workers’ skin as they performed machining operations, and several had developed skin cancer on their arms. The workers sued the company on the basis that the fluid was causing cancer. To resolve the lawsuit, the presiding judge had samples sent to the lab so they could determine if the cutting fluid could cause cancer. Dr. Bingham was personally in charge of this assignment and tested the fluid by swabbing mice in the lab with it. After only a few months of testing, the mice began to exhibit tumors and the lab determined that the cutting fluid was carcinogenic. This experience gave Dr. Bingham a greater appreciation of conducting such bioassay examinations and taught her to always be careful when conducting tests.
As she continued to work at the Kettering Laboratory, Dr. Bingham became involved in numerous lawsuits pertaining to worker safety. This work led to her gaining increasing credibility as a consultant for occupational safety. This helped to build her expertise beyond her background in research. Through working to better the lives and experiences of American laborers, Dr. Bingham began to attract the attention of numerous workers’ unions across the United States.\(^{27}\) Once she had built up a reputation and became more familiar with the needs of and work done by labor unions, Dr. Bingham began appearing on various workers’ safety advisory committees for the government.\(^ {28}\) One such committee that she appeared on was the Department of Labor Standards Advisory Committee on Carcinogens in 1973, which recommended controls to prevent workplace cancer.\(^ {29}\) In 1975 she went on to chair the Federal Research Standards Advisory Committee on Coke Ovens Emissions.\(^ {30}\) When President Carter was elected, he asked labor unions to nominate individuals to be considered for the role of OSHA director. Due to their familiarity with and respect for Dr. Bingham, several unions nominated her.\(^ {31}\) After interviewing with Secretary of Labor Ray Marshall and President Carter, Dr. Bingham was chosen to fill the role. Thus, she became the director for the Occupational Safety and Health Administration, housed within the United States Department of Labor, on March 11\(^ {st}\), 1977.\(^ {32}\)
As the Director of OSHA, Dr. Bingham earned the reputation as a “strong woman” member of the Carter administration. She believed that the government needed to “wield a big stick” in order to keep the workers of America safe. Although she felt OSHA should be influential and proactive, she also maintained a stance that was friendly to businesses and entrepreneurs by eliminating many of what she identified as “nit-picking” regulations imposed upon businesses. In her own words, Dr. Bingham felt, “The Department of Labor has more important things to do than hang employers up on silly little rules.”\textsuperscript{33} This allowed OSHA to prioritize issues that affected worker safety while also improving the department’s relationship to businesses and private enterprise across the United States. Additionally, this helped raise morale within the administration. Since they were now able to focus more of their efforts on directly improving the lives of workers, OSHA employees felt more satisfied in their work under Dr. Bingham.\textsuperscript{34}

President Carter and the Secretary of Labor, Ray Marshall, both held the same opinion that OSHA needed to focus on larger safety issues, along with improving efforts regarding worker protection.\textsuperscript{35} Through collaborating with Dr. Bingham, they decided to redirect OSHA to focus on what they identified as “Common Sense Priorities.”\textsuperscript{36} These priorities had three parts: to

increase efforts to tackle major health and safety issues, help teach small businesses how to comply with the regulations of OSHA, and to simplify and clarify safety regulations.37

In the pursuit of identifying and removing major health and safety issues, OSHA - under Dr. Bingham - divided its resources so that at least ninety-five percent of inspections conducted would investigate industries with the most serious health problems.38 To meet the resource requirements for holding so many investigations, OSHA leadership increased the number of health inspectors employed by the organization. Moreover, the administration strived to hire health inspectors with different specialties to increase its range of expertise.39 OSHA also worked to speed up the process of adopting new health standards.40

Although Dr. Bingham was passionate about pursuing the causes of serious health problems, she also understood that strict regulations could hurt small business owners and negatively affect the way President Carter's administration interacted with the American people. Dr. Bingham commented, “Our task is to make life safer for employees, not make life harder for employers.”41 As such, she made efforts to ensure that health inspectors would be helpful and proactive when inspecting small businesses. Additionally, Dr. Bingham acted to increase OSHA support of programs that served to educate workers and employers on workplace safety. Under her leadership, the New Directions Training Institute program began its mission to train workers

on how to lower their risk of exposure to harmful chemicals and hazardous substances.\textsuperscript{42} Dr. Bingham argued, “[t]he keystone of a successful…program is knowledgeable workers and employers who can find and solve their own health and safety problems.”\textsuperscript{43} Dr. Bingham, being deeply dedicated to and passionate about this cause, worked to secure a $1.5 million increase in federal funds for safety trainings as well as educational resources for workers across the country.\textsuperscript{44}

Most of Dr. Bingham’s efforts as head of OSHA were to fulfill her top priority of identifying and remedi ing serious health and safety issues. Under her direction, health inspectors increased efforts to search for dangers to worker health and imposed greater fines for health safety violations.\textsuperscript{45} The primary focus of these health endeavors was to discover and ban carcinogenic chemicals and materials, along with other hazardous materials that could cause severe maladies. Under Dr. Bingham, OSHA established new standards for the regulation of dust, lead, and benzene.\textsuperscript{46}

While serving as the head of the Occupational Health and Safety Administration, Dr. Bingham played a crucial role in developing regulatory processes in a number of industries and occupational fields across the country. Her leadership in the administration was crucial in the implementation and passage of “Right to Know” regulations. These regulations mandated that

\textsuperscript{44} Oral Interview Part 1 - [33:30]
workers would be informed of the dangers of chemicals they may work with. More specifically, she directly oversaw the implementation of a new labeling standard that made it mandatory to list the hazards and name of a chemical on its container.\footnote{Oral Interview Part 1 - [43:12]} Much to Dr. Bingham's dismay, when her tenure as the director of OSHA ended many of the regulatory measures she instated were reversed by the Reagan administration. However, these regulatory rollbacks did not put an end to Dr. Bingham's mission. She worked with state legislators, national labor unions, and other special interest groups to implement similar regulations at state and local levels.\footnote{Dunn, Mary Lee, Polly Hoppin, and Beth Rosenberg. "Eula Bingham—Experience Bares “The Real World” and Smart Politics Saves Lives." NEW SOLUTIONS: A Journal of Environmental and Occupational Health Policy 19, no. 1 (2009): 81-93. Accessed March 15, 2018. doi:10.2190/NS.19.1.F.}

At the conclusion of President Carter’s term, Dr. Bingham returned to the University of Cincinnati where she became the Vice President and Dean of Graduate Studies and Research on July 1\textsuperscript{st}, 1981.\footnote{Hand, Greg. 1981. "??" UC News. Office of Information Services, June 10. 30. – Article taken from UC News, Edition unknown. I believe it is on page 30?} Although initially intending to focus solely upon her research, Dr. Bingham stepped into the role Vice President's role with optimism.\footnote{Oral Interview Part 1 - [40:26]} She found working with the various faculty members at UC to be rewarding, and she also took great pride in the helping students embark on their own journeys as researchers.\footnote{Oral Interview Part 2 - [11:48]} Prior to stepping into this role, her experience in academia was heavily teaching- and research-based. Nonetheless, Dr. Bingham took on the responsibility of the role, as Vice President and Dean of Graduate Studies and Research. Dedicated to serving her community and helping young academics develop, Dr. Bingham continued to help people to the best of her ability regardless of the position she held.
Although she largely worked as an administrator and researcher at UC, Dr. Bingham did teach classes to graduate and medical students. Dr. Bingham often found teaching challenging as students of the contemporary era were different from those of her undergraduate days and she often had difficulty connecting with them. When Dr. Bingham wanted to conduct class discussions, many students were engrossed in “their cell phones and their Blackberries.”\textsuperscript{52} Additionally, most of her students did not express much interest in the labor movement or worker safety.\textsuperscript{53} As Dr. Bingham’s life work was heavily involved in worker safety and health, it is understandable that such a lack of interest could affect her desire to teach.

In addition to teaching students of the University, Dr. Bingham also worked to educate the masses. In 2000, Dr. Bingham collaborated with Dr. Susan E. Vandale to develop a curriculum to educate the public on environmental genetics.\textsuperscript{54} Specifically, the purpose of the curriculum was to teach the average citizen about the fields of environmental genetics and genetic testing. The curriculum also aimed to inform their students of relevant governmental and policy issues pertaining to these fields. The curriculum material was intended to be taught through discussions and lectures, along with interactive group exercises. The curriculum was based on the Learning Exchange for Genetic and Environmental Disease Solutions (LEGENDS) program, which was established by the University of Cincinnati Department of Environmental Health in 1998.\textsuperscript{55}

\textsuperscript{52} Dunn, Mary Lee, Polly Hoppin, and Beth Rosenberg.
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As she grew older, Dr. Bingham also worried about the effects of chemical pollution. Throughout her career, Dr. Bingham directly observed the effects of minimal chemical doses. Her research experience taught her that even small exposure to a dangerous chemical can lead to health-damaging effects. She worried that modern companies dumped so many toxic chemicals that it would eventually render Earth uninhabitable. Even if chemical pollution didn’t cause cancer, it could still have other harmful - and possibly irreversible - effects on humans. For example, Dr. Bingham believed that chemical pollution and use of hormones in agriculture might be linked to early physical maturity in girls. Her concerns about pollution led her to write a paper on global pollution, which was published in the Toxicology and Industrial Health journal.

After returning to the University of Cincinnati, Dr. Bingham continued to work in the field of occupational health and safety. On March 24th, 1989, the oil tanker Exxon Valdez ran aground in Valdez, Alaska and spilled 10 million gallons of oil. Once cleanup efforts were underway, Dr. Bingham traveled to the spill site at the request of the Governor of Alaska to make sure workers experienced the proper training and had the equipment necessary to deal with the hazards they faced. When Dr. Bingham arrived, she described the cleanup site as chaotic and

56 Dunn, Mary Lee, Polly Hoppin, and Beth Rosenberg.
Due to the location of the spill, workers toiled in subzero conditions and had to deal with noxious fumes from the spilt oil. The oil was also capable of causing a harmful reaction when it came into contact with the eyes or skin of workers. Along with providing further training for the workers themselves on the safety hazards, Dr. Bingham also helped train their supervisors on how to handle medical emergencies that might arise.

Dr. Bingham was also involved in several projects with the intention to determine whether Department of Energy (DOE) construction workers had been exposed to dangerous chemicals or radiation while building production sites for nuclear weapons. Due to the nature of the work, the DOE kept details about construction and working conditions secret to preserve American interests and national security. Dr. Bingham was one of the first scientists to become involved in the workers’ health and safety. The first group of workers she studied were members of the Carpenters Union who worked at the Oak Ridge Site. Due to the level of secrecy maintained by the DOE and the fact that many of the workers did not receive medical screenings while employed, there wasn’t much information readily available on the workers’ health. Dr. Bingham had to develop a way to determine their exposure to hazardous materials based on each workers' personal recollection of their work. She conducted interviews with workers to determine where they spent most of their time in the plant, and then compared this against plant

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blueprints to determine what they had been exposed to. Dr. Bingham’s work eventually persuaded the DOE to establish the Former Worker Medical Screening Program (FWP).68

Established in 1993, the FWP is still operational today.69 The main function of the program is to provide free medical screenings to former DOE workers who may have been exposed to hazardous materials and are at risk of developing occupational diseases. Although the program was created in 1993, the actual medical screenings did not begin until 1996.70 The purpose of the medical screenings was to identify possible diseases in workers before they began showing symptoms. By identifying disease at an early stage, the workers could receive more effective medical treatment. Although the FWP paid for the medical screenings, they did not fund further medical care upon discovery of a disease.71 The medical screenings were specifically designed to identify health effects related to: radiation, beryllium, asbestos, lasers, silica, lead, cadmium, chromium, and noise.72 One of the institutions responsible for conducting the FWP is the Center to Protect Workers’ Rights (CPWR).73 Dr. Bingham served on the

Technical Advisory Board for CPWR from 1992 to 2015, and continues to advise the center in present day.\textsuperscript{74}

A common theme throughout Dr. Bingham’s life was inclusion. Her being a woman and excelling in a number of male-dominated fields speaks to her tenacity as an individual. One may think that she faced much discrimination because of her gender; in actuality, she has said that she often felt included throughout her career.\textsuperscript{75} Additionally, her being a woman was a factor that, coupled with the quality of her work, attracted attention from a number of labor unions.\textsuperscript{76} Her gender identity also motivated her to pursue risky career moves such as becoming the Director of OSHA\textsuperscript{77}. Dr. Bingham asserts that her being a woman is empowering, and that when she commits herself to act she is making a statement solely by being a woman.\textsuperscript{78}

Dr. Eula Bingham’s life is one of dedication to service and the pursuit of her passions. It did not matter whether she was teaching graduate level courses for future physicians or overseeing the Occupational Safety and Health Administration in Washington, D.C, Dr. Bingham was dedicated to accomplishing all and anything that she set her sights upon. Some of the highlights from her life include: pursuing her education from a humble upbringing, fighting for the safety and health of the American workforce, and enabling graduate students at the University of Cincinnati to pursue their own passions through independent research. In recognition of her efforts, Dr. Bingham received many prestigious awards such as the Rockefeller Foundation Public Service Award in 1980 and the William Lloyd Award for

\textsuperscript{75} Oral Interview Part 2 - [12:44]
\textsuperscript{76} Oral Interview Part 1 - [24:34]
\textsuperscript{77} Oral Interview Part 1 - [31:00]
\textsuperscript{78} Oral Interview Part 2 - [17:30]
As seen through her life of service, Dr. Bingham is an example of what one can achieve when their passion and dedication combine. In her own words, she believes that, “People ought to be encouraged to give back.”

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80 Oral Interview Part 2 – [30:00]
Awards and Honors

- 1979 - Doctor of Sciences (Honorary), Eastern Kentucky University, Richmond, KY
- 1980 - Homer N. Calver Award, American Public Health Association
- 1980 - Julia Jones Award, New York Lung Association, American Lung Association
- 1980 - Rockefeller Foundation Public Service Award
- 1981 - Doctor of Law (Honorary), College of Mt. St. Joseph
- 1981 – Phil Hart Award, Urban Environment Conference
- 1983 – Inducted into Ohio Women’s Hall of Fame
- 1984 - Alice Hamilton Award, American Public Health Association
- 1984 - First Recipient of the William Lloyd Award for Occupational Safety, United Steel Workers
- 1989 - Jerry F. Stara Award, U.S. Environmental Protection Agency, Cincinnati, OH
- 1989 - Member, Institute of Medicine, National Academy of Sciences
- 1994 - William Steiger Award, American Conference of Governmental Industrial Hygienists
- 1995 - American Industrial Hygiene Association’s Hamilton Award
- 1998 - Henry Smythe, Jr., Toxicologist Award, American Academy of Industrial Hygiene
- 1999 - Mary O. Amdur Award, New York University
- 2000 - Ramazzini Award for Science and Policy, Collegium Ramazzini
- 2000 - David P. Rall Award for Advocacy in Public Health, American Public Health Association
- 2004 - Roy E. Albert Award for Translational Research in Environmental Health, University of Cincinnati

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