The David J. Hart Lectures at Ohio State University

This bio was revised to include his High School days at Okemos. Dr. David Hart became a world famous Professor of Chemistry.

David J. Hart was born in Lansing, Michigan on May 15, 1948. He graduated from Okemos High School in 1966...



Not pictured is Dave Hart, Vice President.



Student Parliament Officers are Marilyn Cheney, Secretary; D. J. Drake, President; Cathy Foster, Treasurer; and Advisors Joesph Walbridge and Betty Goldstein. Not pictured is Dave Hart, Vice President.



French Club, Row 1: S. Ralston, T. Fossum, M. Warner, C. Wang, K. McGowan, C. Foster, C. Sonnemann, S. Henry D. Johnson, R. Olstrom, F. Nosow, S. Salmonson. Row 2: J. Lapham, E. Drury, J. Edmondson, C. Giacoletto, T. Meyer, T. Kissee, M. Cheney, D. Oberst, D. Taylor, S. Hause, J. Finney, C. Stoll. Row 3: S. Bauer, S. Taylor, K. Yelvington, C. Wood, N. Britt, D. Hart, M. Willett, M. Dortch, M. Sala, S. Wood, L. Rudolph, sponsor, Mrs. Betty Goldstein, Row 4: B. Dahnke, M. Fox, D. Lewis, K. Jamison, S. Meyer, B. Conley, J. Gaa, M. Johnson, C. Henderson, M. Nestor, J. Hirt. Row 5: J. Whitmore, M. Neifert, D. Hohl, T. Gaa, T. Caldewey, M. Mott, B. Oxender, G. Michel, B. Boyd, J. Hinz, C. Peisner, K. Leverett. Row 6: D. Opdyke, B. Marmon, L. Ahti, F. Firnhaber, S. Tomber, B. Fishel, R. Moffitt, D. Oberst, T. Schirmer, P. Sonnemann, D. Weaver, S. Marshall.

It's not easy to get a High School picture of David, and when you do, it's usually in a group!



Row 1: C. Stoll, B. Dahnke, I. Sturk, K. Jamison, R. Olstrom, D. Hart, N. Britt, M. Ellis, J. Severance, N. Fischer, S. Hause. Row 2: D. Skinner, B. Parsons, J. Slocum, S. Henry, D. Hartman, A. McNitt, D. Kyle, J. Olstrom, C. Bidwell, R. Lott, P. Gulliver, G. Peterson, D. Carpenter, L. Southwell, S. Stine, D. Hart, V. Meyer, S. Ralston, Terry Fossum, Row 3: R. Schaberg, S. Stevens, D. Lantz, D. Bowers, M. Ames, J. Coe, T. Peets, D. Heerdt, S. Vaughn, B. Gray, G. Lorencen, M. Premer, S. Rogers, B. Britt, J. Chiesa, B. Kennedy, F. Burghy, B. Rutherford, R. Schofield, J. Powell, K. Beck. Row 4: R. Heiser, R. Federau, J. Nichols, T. Tunks, J. Binkner, D. Johnson, T. Pearson, J. Meyers, C. Caldewey, B. Lakey, S. Meyer, B. Schirmer, C. Chaffee, R. Moffit, A. Steffel, C. Pearce, R. Wardlow, D. DeYoung, P. Sonnemann, G. Harrington.



Cast members: Judy Axline, child; Diane Oberst, nurse; Wrenn Slocum, maid; Bruce Skidmore, Dr. Rank; Jana Edmondson, Nora Helmer; Crs. Caldewey, Torvald Hel-

mer; David Hart, Nils Krogstad; Jacquie Caul, Mrs. Linde; and Randy Axline, the porter.



Baseball team. First row: Dave Hart, Mike Guthrie, Jeff Ramsey, Ed Yunck, Rudy Horr Dick Vary, Larry Wheeler, Tom Burke. Standing: Steve Premer.

David was a terrific athlete and oboe player. Dave was on a top baseball team with the Allstar Dick Vary.



Dave Hart and Dick Vary leave the locker room at the beginning of a practice session

...and attended Antioch College in Yellow Springs, Ohio from 1966-1967. During the Vietnam War era he was drafted and served as a conscientious objector from 1967-1969. He then returned to undergraduate school at the University of Michigan where he received his BS degree in chemistry in 1972 with support from a Moses Gomberg Fellowship. He received his B.S. from the University of California at Berkeley in 1976 where he studied with William G. Dauben. After two years as an NIH postdoctoral fellow at the California Institute of Technology with David A. Evans, he joined the Department of Chemistry at The Ohio State University in 1978. He was promoted to Associate Professor in 1983 and Professor in 1988.

Hart became interested in organic synthesis during his undergraduate days and was particularly influenced by a course he took from Richard Lawton at the University of Michigan. His research has focused on the development of synthetic methods and their application to problems in the field of natural products synthesis. His research group is perhaps best known for their contributions to the field of free radical chemistry, but has also contributed to the development of N-trimethylsilylimines as synthetic intermediates, stereochemical aspects of N-acyliminium ion chemistry, synthetic and mechanistic aspects of ester enolate-imine condensation reactions, and several other



topics relevant to the field of organic chemistry. His interest in natural products synthesis has included work on alkaloids, terpenoids, β -lactam antibiotics and carbohydrates.

Early in his career at OSU, Hart was named an Eli Lilly Fellow (1982-1984), Alfred P. Sloan Fellow (1983), OSU Distinguished Scholar (1983-1987), and received the Zeneca Award for Excellence in Chemical Research (1986). More recently he received the Columbus ACS Section Award (2000), and the OSU Alumni Association Distinguished Teaching Award (2001). In 2007 he was named Melvin S. Newman Professor of Chemistry. Hart served on the Editorial Boards of the Journal of Organic Chemistry (1986-1990) and Organic Syntheses (1992-2000), as a section editor for the Encyclopedia of Reagents for Organic Synthesis (1993-1995), as chairman of the 1991 Gordon Research Conference on Heterocyclic Compounds, and as a member of the NIH Medicinal Chemistry Study Section (1992-1996). He also served for three years as a member of the Executive Committee of the ACS Division of Organic Chemistry (1999-2001) and was the Vice Chair for Graduate Studies at OSU from 2002-2005. He was also a visiting professor at Harvard University (1987), UC Berkeley (1988), the Kyoto Institute of Technology (2000), and was a National Science Council of Taiwan lecturer in 1995.

Hart served as advisor to over 40 PhD students, 25 MS students,

15 postdoctoral fellows, and numerous undergraduate and high school students. He has published over 130 papers presented over 170 invited lectures describing their work.

Hart seems to have a genetic connection to chemistry. His grandfather (David Hart) was an inorganic chemist and his father (Harold Hart) was an organic chemist on the faculty at Michigan State University for 41 years. His mother (Geraldine) is not a chemist, but his older sister (Leslie) teaches general and organic chemistry at Central Connecticut State University. Hart has two more sisters (Ariel and Diana) and they are not chemists, although they both are teachers. Hart has been married to Rose (a mathematics teacher at OSU-Newark) for 17 years, is stepfather to Lyla and Nick (both OSU graduates), and grandfather to Ruben. Hart is a dedicated Detroit Tiger fan and likes to play golf.



David Hart

Emeritus Professor Emeritus Faculty

Bio

David J. Hart received his B.S. from the University of Michigan (1972) and Ph.D. from the University of California at Berkeley, working with William G.Dauben (1976). After two years as an NIH postdoctoral fellow at the California Institute of Technology with David A. Evans, he moved to the Department of Chemistry at The Ohio State University, being promoted to Associate Professor in 1983 and Professor in 1988. He has been named an Eli Lilly Fellow, Alfred P. Sloan Fellow , OSU Distinguished Scholar, and received the Stuart Pharmaceuticals Award for Excellence in Chemical Research(1986), the Columbus ACS Section Award (2000), and the OSU Alumi Association Distinguished Teaching Award (2001). Hart has also served on the Editorial Boards of the Journal of Organic Chemistry and Organic Syntheses, and served for three years as a member of the Executive Committee of the ACS Division of Organic Chemistry.

Research Overview

Areas of research interest in the Hart group include synthetic and mechanistic organic chemistry. Students are involved with the development of new and old reactions for use in organic synthesis. Once developed, these reactions are applied to the synthesis of structurally and biologically interesting natural products. Areas of currently under investigation are free radical reactions,N-acyliminium ion chemistry, oxonium-ion mediated cyclization reactions, and lipid chemistry. Examples of natural products currently serving as targets for synthesis in the Hart group include alkaloids (cylindrospermopsin), terpenoids (polyandranes), and macrolides (lasonolide A).

Recent Publications

Misquitta, Yohann; Cherezov, Vadim; Havas, Fabien; Patterson, Suzanne; Mohan, Jakkam M.; Wells, Angela J.; Hart, David J.; Caffrey, Martin. **Rational design of lipid for membrane protein crystallization.** Journal of Structural Biology (2004), 148(2), 169-175.

Coleman, Bridgett E.; Cwynar, Valerie; Hart, David J.; Havas, Fabien; Mohan, Jakkam Madan; Patterson, Suzanne; Ridenour, Sam; Schmidt, Michael; Smith, Eboney; Wells, Angela J. **Modular approach to the synthesis of unsaturated 1-monoacyl glycerols.** Synlett (2004), (8), 1339-1342.

Donahue, Matthew G.; Hart, David J.. **C19 quassinoid model studies: preparation of trans-perhydroindans via a vinylogous Mukaiyama aldol - free-radical cyclization route.** Canadian Journal of Chemistry (2004), 82(2), 314-317. Hart, David J.; Patterson, Suzanne; Unch, James P. **Lasonolide A: Synthesis of A and B rings via a cycloetherification strategy.** Synlett (2003), (9), 1334-1338.

Hart, David J.; Bennett, Chad E. Acid-Promoted Prins Cyclizations of Enol Ethers To Form Tetrahydropyrans. Organic Letters (2003), 5(9), 1499-1502