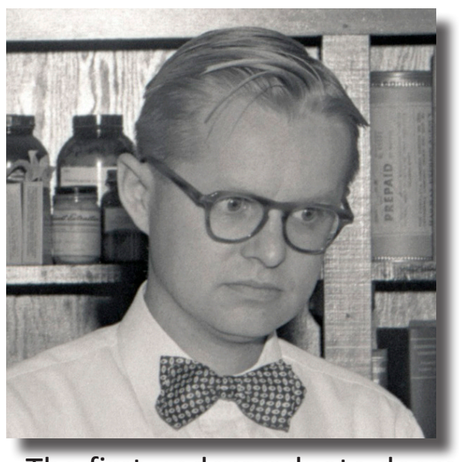
BIOCHEMISTRY & BIOPHYSICS at 50...

Science Research Institute – 1952 to 1966

The rapid growth of interdisciplinary research involving chemistry, biology and physics prompted the establishment in 1952 of the OSU Science Research Institute (SRI) to encourage research that cut across conventional departmental lines. The SRI was thus a center of biochemical research. The director was **Vernon Cheldelin** (1916-1966), whose research area was in comparative biochemistry and carbohydrate and energy metabolism.

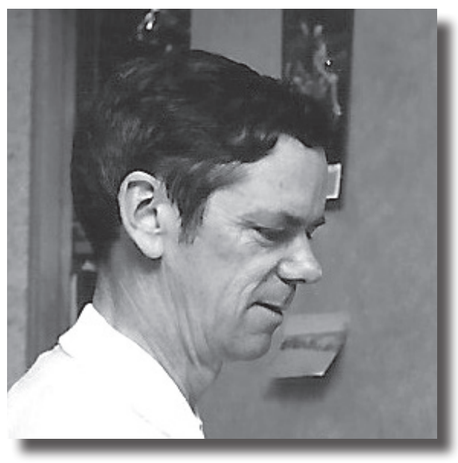
When **Weniger Hall** opened in 1959, the SRI was housed on its top floor. The arrival in the 1960s of five new biochemical faculty – Robert Becker, Wilbert Gamble, Donald McDonald, Donald Reed and Derek Baisted – and two biophysicists – Irv Isenberg and Kensal van Holde – provided critical mass for forming a department.

Department of Biochemistry & Biophysics – 1967 to present

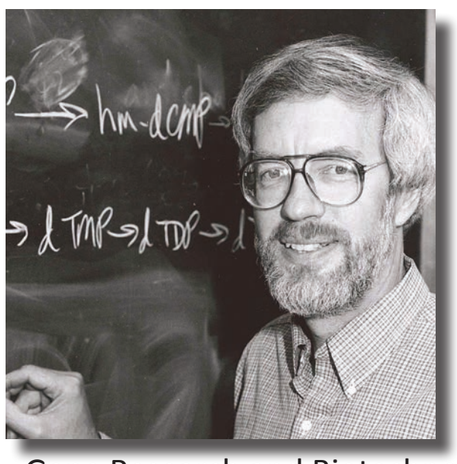


Robert W. Newburgh (1922–) was founding Chair of the department, and led its growth from **1967 – 1976**. His research focused on metabolic changes during development, and much of his work was done with insects. Newburgh originally came to OSU to work with Cheldelin. The department was highly collaborative and the graduate program included many affiliate faculty to broaden opportunities available to doctoral students. The first undergraduate degrees were awarded in 1972.

1992 – Agriculture and Life Sciences Building.

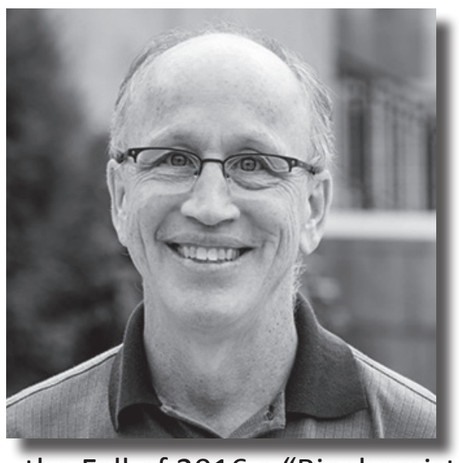


Donald L. MacDonald (1922–2006) served as Acting Chair from **1976 – 78** and again in **1984 – 85** during one of Mathews' sabbatical leaves. MacDonald was a carbohydrate chemist, who joined the OSU faculty in 1962, following service at NIH and the University of California, Berkeley.

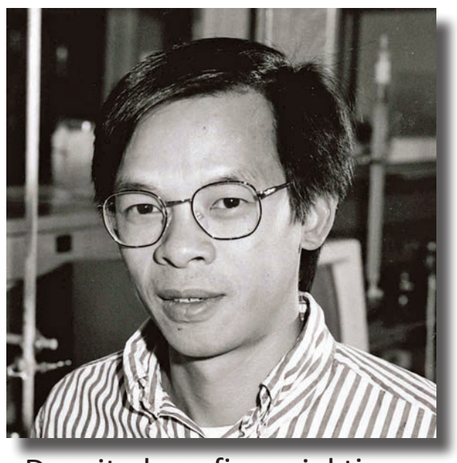


Christopher K. Mathews (1937–) provided strong leadership to the department from **1978 – 2002**. An expert in nucleotide enzymology and bacteriophages, Mathews was recruited as Chair after faculty appointments at University of Arizona and Yale. Notably, he continued his teaching, mentoring and research throughout his long tenure as Chair. He helped found OSU's Center for Gene Research and Biotechnology, and facilitated bringing the Linus Pauling Institute to OSU, both of which brought in exceptional new BB faculty. He and Ken van Holde wrote the still popular textbook Biochemistry, and were among the first faculty at OSU to be recognized as Distinguished Professors. During Mathew's tenure, the department moved in 1992 to the second floor of the new Agriculture and Life Sciences Building.

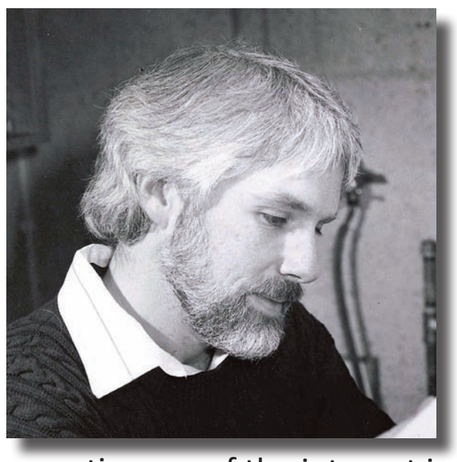
Donald J. Reed (1930–) served as Acting Chair in **1994 – 95** during a Mathews sabbatical. Reed earned his Ph.D. at OSU, and returned in 1962 as Assistant Professor of Chemistry with a research focus on redox biochemistry and toxicology. He also directed the Environmental Health Sciences Center, and was named a Distinguished Professor.



P. Andrew Karplus (1957-) arrived in 1998 from Cornell University where he had established a research program in protein crystallography, and in 2015, became the sixth departmental OSU Distinguished Professor. He led the department from **2007 – 10**, and again from **2015 until now**. Building on earlier efforts to offer a molecular biology major that would interest a wider population of students, in the Fall of 2016 a "Biochemistry and Molecular Biology" major was approved and is already very popular.



P. Shing Ho (1957-) joined OSU in 1987 and rose through the ranks, serving as Chair from **2002 – 07**. After postdoctoral work doing structural studies on the novel Z-form of DNA, he went on to win the Oregon Discovery Award in 2001 for work on Holliday Junctions, and later discovered "halogen bonding" as a hydrogen bond-like interaction useful for drug design and protein engineering. Despite lean financial times and a shrinking faculty, Ho oversaw a 50% growth of the undergraduate program before being recruited to Colorado State University.



Gary Merrill (1951-) was recruited in 1984 to enhance gene research at OSU. His research uses mice and yeast to study regulation of gene expression and metabolism, especially as it pertains to cancer. During his service as Chair from **2011 – 2015**, five new faculty were hired, the Chris and Kate Mathews Graduate Fellowship was endowed, and singing Instructor Kevin Ahern, who pioneered creative use of the internet in teaching and developed Ecampus offerings of our high enrollment courses, was promoted to the rank of Professor.

From its inception, the successes of the department have not been the result of any single strong leader or personality. Instead, they have been due to the working together of the department office staff, the research support staff, the research and teaching faculty and the engaged undergraduate and graduate students and postdocs that have received training while accomplishing much great research. In 2015, the degree programs were externally reviewed and strengths noted included the intellectual rigor and comprehensiveness of the curriculum, the outstanding mentoring and advising, the high morale of the faculty and students. Now, with molecular life sciences continuing to grow in impact and importance, the future of the department is bright.

...the Legacy Continues

Oregon State University
College of Science