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GEORGE VANDE WOUDE BIOGRAPHY

George F. Vande Woude, Ph.D.

Dr. George F. Vande Woude received his M.S. (1962) and Ph.D (1964) from Rutgers University. From 1964-1972, he served first as a postdoctoral research associate, then as a research virologist for the US Department of Agriculture at Plum Island Animal Disease Center. In 1972, he joined the National Cancer Institute as Head of the Human Tumor Studies and Virus Tumor Biochemistry Sections. In 1980, he was appointed Chief of the Laboratory of Molecular Oncology and, in 1983, he was selected to be Director of the Advanced Bioscience Laboratories-Basic Research Program at the National Cancer Institute, Frederick, MD, a position he held until 1998. From 1995-1998, Dr. Vande Woude was Special Advisor to the Director of the National Cancer Institute and served to reorganize the intramural basic science at NCI. In 1999, he was selected to be the first Director of the newly created Van Andel Research Institute in Grand Rapids, Michigan.

Dr. Vande Woude was first to use recombinant DNA technology to isolate integrated forms of acute transforming retroviruses and compare their oncogenes to cellular protooncogenes. He was first to determine the structure and sequence of proviral long terminal repeats (LTR), to demonstrate their enhancer function of the LTR promoter, and to show the utility of LTR expression vectors in eukaryotic cells. His laboratory was first to demonstrate that a normal cellular protooncogene could be activated as an oncogene. These findings provided a foundation for the search for active oncogenes in tumors. His studies of the *mos* oncogene have continued for almost two decades and led to the discovery that the normal *mos* product regulates vertebrate meiotic maturation and is responsible for the production of an unfertilized egg. The MPF results provided the first



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direct connection between oncogene function and the cyclin dependent kinases that regulate cell cycle.

Still another important contribution was Dr. Vande Woude's discovery of the human *met* oncogene, a member of the tyrosine kinase growth factor receptor family that is ubiquitously expressed in mammalian tissues. The Vande Woude lab, together with the laboratory of Dr. Stuart Aaronson, discovered that the Met ligand is a hepatocyte growth factor (HGF). This connection significantly expanded the importance of this ligand-receptor pair in the mitogenic, motogenic, and morphogenic behavior of epithelial cells. His laboratory was first to show that inappropriate Met expression renders cells tumorigenic and occurs in human tumors. His laboratory demonstrated that cells inappropriately expressing HGF/Met autocrine signaling display potent metastatic activity *in vivo*. This tyrosine kinase growth factor receptor pathway displays all of the phenotypes essential for malignant growth.

In 2006, Dr. Vande Woude was elected a Fellow in the American Academy of Arts and Sciences. He is the recipient of the National Institutes of Health Merit Award, the Robert J. and Claire Pasarow Foundation Award for Cancer Research, and a Lifetime Achievement Award in Technology Transfer from the National Aeronautics and Space Administration. In 1993, he was elected to the National Academy of Sciences. He served on the Award Assembly of the General Motors Cancer Research Foundation (1990-1994) and serves on the scientific advisory boards of Jefferson Medical College, Thomas Jefferson University (1995-); Karmanos Cancer Institute & Prentis Comprehensive Cancer Center at Wayne State University (2001-); US Military Cancer Institute (2001-); Scientific Advisory Panel, North Shore-Long Island Jewish Research Institute (2002-). Dr. Vande Woude is a member of the National Dialogue for Cancer (now C-Change) (2001-), served as a member of the Board of Directors for the American Association of Cancer Research (2001-2004), and served on the National Cancer



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Legislation Advisory Committee (2000-2001). From 2002-2004, Dr. Vande Woude was awarded the Alice Hogge and Arthur A. Baer Professorship and served as Visiting Professor, Department of Radiation and Cellular Oncology, University of Chicago.

Dr. Vande Woude is a member of the American Chemical Society, the American Association for the Advancement of Science, the American Academy of Microbiology, and the American Association for Cancer Research. He is the founder and President of the Foundation for Advanced Cancer Studies (1985-), which sponsors annual meetings on Oncogenes and Cancer Genetics and Tumor Suppressor Genes that are designed to accommodate and encourage participation by young cancer research investigators.

Dr. Vande Woude is the author of over 240 scientific research articles and over 60 articles in books or monographs. He has served as Editor of *Journal of Virology* and as an Editorial Board Member of *Cell*, *Cancer Research*, and *Journal of Virology* and is currently an Editorial Board Member of *Oncogene*, *Molecular Imaging*, *Cell Cycle* and *Molecular Cancer Research*. Dr. Vande Woude was Founding Editor of *Cell Growth and Differentiation* and, since 1989, has been Co-editor (with George Klein) of *Advances in Cancer Research*.