Preface

In this special volume of *Current Topics in Microbiology and Immunology (CTMI)*, the scientific chapters are focused on current research developments in the fields to which Peter Vogt made preeminent contributions: viruses, genes, and cancer. Several chapters specifically highlight virus-host interactions, the role of infectious agents in human cancer, or HIV-host interactions relevant to pathogenesis and cure. Other chapters review the pivotal role of oncogenes and tumor suppressor genes as major cancer drivers—such as *MYC*, *RAF*, *PI3K*, or *TP53*—or explore the emerging role of microRNAs in tumorigenesis and cancer therapeutics.

Peter Vogt was born on March 10, 1932, in Broumov, a town with a large German-speaking population at that time, located in a region of the former state of Czechoslovakia that is now part of the Czech Republic. In 1950, Peter crossed the border from East to West Germany and moved to the City of Würzburg, where he received a B.S. in biology from the University of Würzburg in 1955. It was in this city that he also took classes with the painter Josef Versl. In 1955, he joined the Max-Planck-Institute for Virus Research (now: MPI for Developmental Biology) in Tübingen for graduate studies, and obtained a Ph.D. degree from the University of Tübingen in 1959. Peter then moved to the United States, to work as a Damon Runyon Cancer Research Fellow in the laboratory of Harry Rubin at the University of California in Berkeley from 1959 through 1962. Peter was Assistant and Associate Professor of Pathology at the University of Colorado School of Medicine at Denver from 1962 to 1967, and Associate Professor and Professor of Microbiology at the University of Washington School of Medicine in Seattle from 1967 to 1971. He then moved to Los Angeles to become Hastings Distinguished Professor of Microbiology and Chairman of the Department of Microbiology at the University of Southern California School of Medicine. Peter has been a Professor in the Department of Molecular and Experimental Medicine (now: Department of Molecular Medicine), The Scripps Research Institute, in La Jolla since 1993, serving as Executive Vice President for Scientific Affairs at this institution from 2012 through 2015. He is a member of several prestigious academies, including the US National Academy of Sciences and the German National Academy of Sciences Leopoldina. He has received numerous awards and prizes, including the Ernst Jung
Prize for Medicine, the Paul-Ehrlich and Ludwig-Darmstaedter Prize, the Pezcoller Foundation-AACR International Award for Cancer Research, and the IHV Lifetime Achievement Award for Scientific Contributions.

Throughout his scientific career, Peter has continued to make outstanding contributions to virology and cancer research. In his early work, he studied mechanisms of virus-host interactions, specifically avian retroviral cell entry, leading to a comprehensive definition of host range determinants. His focus then shifted to the genetics of retroviruses and the mechanisms of virus-induced cell transformation. This work culminated in the determination of the genetic map of Rous sarcoma virus (RSV), in the isolation of temperature-sensitive mutants of RSV, and in the first physical identification of a cancer gene, the oncogenic principle (v-src) of RSV, reported together with Peter Duesberg from the University of California at Berkeley in a seminal 1970 PNAS paper. The search for the origin of v-src led to the landmark discovery of the cellular origin of retroviral oncogenes by Harold Varmus and Mike Bishop from the University of California at San Francisco, in cooperation with Peter, recalled in the accompanying essay. Work in Peter’s lab led to the identification of several retroviral oncogenes whose human cellular homologs (proto-oncogenes) are now recognized as major cancer driver genes, including MYC, JUN, and PI3K. Recent work in Peter’s lab is focused on human cancer genetics, including the definition of tumor-specific mutations in cancer driver genes. Peter’s research is also aimed at the isolation of inhibitors of oncogene protein products, such as MYC, eventually leading to the development of drugs suitable for pharmacological cancer treatment.

We are honored to act as volume editors for this very special issue of CTMI in appreciation of Peter Vogt, an eminent virologist and cancer researcher, and long-time editor of this series. Both of us had the privilege to work as post-doctoral fellows in Peter’s lab in Los Angeles in the nineteen seventies, and we actually overlapped for some time. We vividly recall the exciting spirit, the collaborative atmosphere, and the scientific rigor of the lab at that time. Peter led by example and was at the microscope most mornings reviewing the results of experiments he had planned for that week. Lab meetings held at his home up on the Pasadena Hills were a time for stimulating scientific discussions, great food prepared by Peter, and an introduction to wonderful German wines! We also gladly remember the informal but tremendously stimulating West Coast Meetings of the Vogt, Bishop/Varmus, and Duesberg labs, held alternately in L.A. or San Francisco. Having worked with Peter was formative for our scientific careers, and we are very grateful. He has been a wonderful mentor and friend over the years. We also thank all authors of this volume for their great contributions.

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