

THE CONTRIBUTIONS OF DR. ARNOLD G. WEDUM TO THE VIRUS CANCER PROGRAM OF THE NATIONAL CANCER INSTITUTE

W. Emmett Barkley, Ph.D.
HHMI, Chevy Chase, Maryland

The National Cancer Institute (NCI), with the support and encouragement of both Congress and the scientific community, embarked on a major national initiative in 1964 to intensify research on the hypothesis that viruses cause human leukemia and other neoplasia. The NCI established the Special Virus Leukemia Program (SVLP) to carry out this national mandate. From the outset, it was recognized that biosafety would be an integral part of the SVLP. The NCI established the Biohazards Control and Containment Advisory Committee, also in 1964, to provide guidance on the development of the biosafety component of the SVLP. Dr. Arnold G. Wedum was the first biosafety expert to be appointed as a member of this important Advisory Committee.

The Advisory Committee would address three major challenges: risk assessment, containment, and training. These challenges were unusually difficult. How do you assess the risks associated with research activities involving a virus that has not been identified, or may not exist? Do you establish containment criteria on the presumption that the research program will be successful in isolating a human leukemia virus, a virus that could cause a lethal infection? How does a group of talented cancer scientists who have no training or experience in infectious diseases quickly develop proficiency in prudent practices for safely handling infectious agents? These daunting tasks were tackled with enthusiasm and great skill by the Advisory Committee. Dr. Wedum provided the leadership, experience, and wisdom that assured the biosafety component of the SVLP was a valued resource for the cancer scientists.

Dr. Wedum became a full-time consultant to the NCI in 1971 when President Richard M. Nixon established the Frederick Cancer Research Facility as part of the nation's strategic plan to fight "America's number one enemy." And it was fitting that the war on cancer would be conducted in the sophisticated biocontainment facilities of Fort Detrick, which were now dedicated to humanitarian purposes.

Dr. Wedum intensified his involvement in risk assessment and training. He prepared a comprehensive report on risk assessment which was widely shared among cancer scientists and eventually published (West, 1980). But it was training that captured Dr. Wedum's deep interest to share his experience with NCI. It was most important to him that the cancer scientists and their technical staffs who were working at the bench acquire the skills and habits they needed to protect themselves from the potential risks of laboratory-acquired cancer.

The SVLP's biosafety activities focused heavily on developing a training course that would be presented throughout the nation at major centers of virus cancer research. A contract was awarded to the University of Minnesota to conduct the training program. Dr. Donald Vesley

served as the principal investigator and course director. In the first series of courses, Dr. Wedum presented the keynote lecture in which he made the history of biosafety relevant to the contemporary needs of the SVLP. His lecture eloquently framed his early thoughts about the risks of laboratory-acquired cancer. He addressed this subject with vigor and authority and with respect for the intelligence of the audience.

Dr. Wedum wrote out his lecture in December of 1973 so that it would be available to others who may be called upon in the future to address the history and epidemiology of laboratory-acquired infections. The accompanying paper is that manuscript in its entirety. Most biosafety professionals will be familiar with its factual content. The new student of biosafety should gain a wealth of information from reading it. All will likely be enlightened by Dr. Wedum's thoughtful perspective, his comments on how certain events contributed to creating a safer environment in which to conduct potentially hazardous research, and the clarity and power of his concluding remarks.

There is a prophetic message as well which we would be wise never to forget. Although the search for a human leukemia virus was unsuccessful, the discovery of the human immunodeficiency virus provides a compelling example for why biosafety should be an integral part of medical research. The emergence of HIV brought with it the unfortunate consequence of occupationally-acquired HIV infection for 35 laboratory workers (CDC, 1996). The lessons from history that Dr. Wedum shared in his lecture are applicable today for those who work with the HIV and for future generations of laboratory workers who will be involved in research with new infectious agents which predictably will arise.

REFERENCES

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