

**George N. Pavlakis**, M.D., Ph.D., Chief, Human Retrovirus Section, Vaccine Branch, Center for Cancer Research, National Cancer Institute, USA

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Dr. Pavlakis received his M.D. from the University of Athens, Greece, and his Ph.D. from Syracuse University, New York. He moved to the National Cancer Institute in 1980 and is currently Chief of the Human Retrovirus Section. He has directed both basic research and clinical development projects based on his pioneering research achievements. Dr. Pavlakis has extensive research and development experience in molecular biology, virology, and immunology. He is credited with the first production of mature human hormones in mammalian cells by recombinant DNA technologies. This methodology is still in commercial production (human Growth Hormone). He continues this work by the development of new production methods and clinical application of heterodimeric IL-15 (hetIL-15), a cytokine presently in clinical trials for cancer immunotherapy.

Dr. Pavlakis co-developed codon/RNA optimization methods that have found wide applications in biotechnology, gene therapy protocols and DNA vaccines. He developed DNA vaccines for HIV and showed they provide strong and long-lasting immunity. He developed strong fluorescent GFP mutants that are in wide use in biology. He studied the molecular biology, genetic organization and expression strategy of HIV and discovered important functions of its regulatory factors Tat and Rev. He described the first transcriptional activator on oncoretroviruses, the Tax protein of HTLV-I and the first posttranscriptional regulatory factor controlling mRNA export from the nucleus, the Rev protein of HIV-1. His studies have provided new insights on the biology of several viruses; and have aided the development of diagnostic and therapeutic procedures. His work has also led to the development of innovative biotechnology drugs and gene therapy procedures.

Dr. Pavlakis is member of several professional societies, including the American Society for Clinical Investigation and the American Association of Physicians. He is a highly cited researcher, has authored more than 250 publications and is inventor of more than 70 US and International patents licensed to more than 30 pharmaceutical and biotechnology companies, including Novartis, Wyeth, Merck, Pfizer, Sigma. Due to his patented technologies and innovations, he has been elected Fellow of the National Academy of Inventors.

#### **Introduction of Dr. George N. Pavlakis**

- MD, University of Athens Medical School, 1976
- PhD, Syracuse University 1980
- Fellow of the National Academy of Inventors
- Member, American Society for Clinical Investigation and American Association of Physicians
- Chief, Human Retrovirus Section, National Cancer Institute

The views expressed by Dr. Pavlakis are strictly his own and do not reflect official policies of DHHS