

## **Biosketch: Paula Jacobs, Ph.D.**

Paula M. Jacobs, Ph.D. is Deputy Associate Director, Cancer Imaging Program in the Division of Cancer Therapeutics and Diagnostics at the National Cancer Institute. She came to work at the NCI after 30 years in the pharmaceutical and medical device industries where she was a key developer of ultrasmall superparamagnetic iron oxides as magnetic resonance imaging agents and iron replacement therapeutics. Her effort for the NCI is primarily focused on lowering the logistical and regulatory barriers to investigational use of PET radiopharmaceuticals for therapeutic drug development by facilitating access to IND filings and by research to develop labeled drugs for clinical and pre-clinical use.

Dr. Jacobs received her undergraduate degree in chemistry at the Massachusetts Institute of Technology and graduate degrees at Tufts University and Northeastern University. Her post-doctoral training was at Northeastern University, Massachusetts Institute of Technology, and Peter Bent Brigham Hospital/Harvard Medical School.

Her industrial experience began at Clinical Assays, a division of Baxter Travenol that manufactured *in vitro* radioimmunoassays, where she rose to the position of Director of Scientific Operations. She was responsible for process improvements in radioactive tracer synthesis, technical product maintenance, product and process improvements, and manufacturing of all reagents used in the company's products.

She then joined Seragen, a small biotechnology firm, as Director of Production, then General Manager, with P&L responsibility for a division that developed, manufactured, and marketed prostaglandin, leukotriene, and small protein immunoassays. Sales were increased by 46%; profitability from highly negative to positive 11% in two years and gross margin from 42% to 68%.

She became Vice President of Development in 1986 at Advanced Magnetics, to help chart a new course for this small biomedical products company. At various times over her 20-year career with the company, she was responsible for manufacturing, clinical development, quality control, and pre-clinical development, and international liaison. She was responsible for development of iron oxide magnetic contrast agents from laboratory synthesis through IND submissions, including designing pharmacology, toxicology, and clinical studies. She established initial cGMP manufacturing compliance and the departments of Production, Quality Control, and Clinical Research. She served as international liaison for technology transfer to licensees and worked with independent physicians in the US and abroad to develop physician IND trials in MR imaging. She collaborated with outside researchers in a variety of pre-clinical investigations.

She is author on 29 peer-reviewed papers, two book chapters, and 38 presentations in the areas of organic chemistry, inorganic chemistry, magnetic resonance imaging, neuro-oncology and nephrology.

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