

## Stewart Sell

Research Physician, Wadsworth Center, [Diagnostic Oncology](#)  
Senior Scientist, [Ordway Research Institute, Inc.](#)  
Professor, University at Albany, School of Public Health,  
[Biomedical Sciences](#)

B.S. College of William and Mary in Virginia, 1956

M.D. University of Pittsburgh, 1960

Residency in Pathology, Massachusetts General Hospital

## Ongoing Research

- Cancer: To determine if bone marrow derived stem cells can give rise to breast or liver cancer in animals. If so, it may be possible to block development of cancer by treating the cells in the bone marrow before they become cancer.
- Cancer: To isolate, culture and characterize breast cancer stem cells from transgenic mice.
- Cancer: To determine if proliferation of breast cancer stem cells can be specifically blocked by small molecular inhibitors or inhibitory RNA. This is a critical step to preventing re-growth of breast cancer after chemotherapy or radiation therapy.
- Aging: To determine if aging is dependent on loss of stem cells in the bone marrow that circulate and replenish progenitor cells in other organs as they are depleted as a result of normal tissue renewal. If this hypothesis is proven it may be possible to delay aging by bone marrow transplantation; for example by giving cord blood bone marrow cells back to aging adults.
- Tissue Renewal: To characterize a cell line derived from fetal tissue stem cells (STO cells) that is able to repopulate adult organs and to survive transplantation to immune-incompatible individuals, in other words, a cell line that could be a "universal donor".

## Honors and Awards

- Listed in Current Contents as one of 1,000 most quoted scientists, 1981
- Paper listed as "Citation Classic" by Current Contents, 1984
- Philip S. Hench Distinguished Alumnus Award, U. Pittsburgh School of Medicine, 1988
- Distinguished Scientist Award, International Academy of Tumor Marker Oncology, 1998
- Gary J. Miller Memorial Award for excellence in teaching, AACR, 2002
- Rudolph L. K. Virchow Award, LeadershipMedica, ITALY, 2005
- Legacy Laureate, University of Pittsburgh (Highest Honor for Alumni), 2005.
- Paper cited as Scientific Landmark in Cancer Research by the American Association for Cancer Research, 2007
- Abbott Award of the International Society for Oncodevelopmental Biology and Medicine, 2007
- Keynote Speaker, International Academy of Pathology, Athens, Greece, 2008

Selected Publications:



Sell, S. and Gell, P.G.H. Studies on rabbit lymphocytes *in vitro*. I. Stimulation of blast transformation with an antiallotype serum. J. Exp. Med. 122:423-441, 1965.

**A CURRENT CONTENTS CITATION CLASSIC**

Sell, S. and Pierce, G. B. Biology of Disease: Maturation arrest of stem cell differentiation is a common pathway for the cellular origin of teratocarcinomas and epithelial cancers. Lab. Invest. 70:6-21, 1994. **AN AACR SCIENTIFIC LANDMARK**

Sell S. Stem cell origin of cancer and differentiation therapy. Crit. Rev. Oncology and Hematology, 52:1-28, 2004.

Sell S. Cancer stem cells and differentiation therapy. Tumor Biology 27:59-70, 2006

Koch KS, Son K-W, Maehr R, Pellicciotta I, Ploegh, HL, Sanetti M, Sell S, Leffert HL. Immune-privileged embryonic Swiss mouse STO and STO cell-derived progenitor cells: MHC and cell differentiation antigen expression resemble those of human embryonic stem cell lines. Immunology. 119:98-115, 2006.

Crawford, DR, Ostrowski S, Vakharia D, Ilic, Z, Sell S. Separate evolution of hepatitis B virus negative foci and hepatocellular carcinomas in transgenic HBsAg (*alb/psx*) mice. Am. J. Pathology, 169:223-232, 2006

Sell S. Potential gene therapy for cancer stem cells. Current Gene Therapy. 6:579-591, 2006

Sell S. Stem cells in hepatocarcinogenesis. Cell Science Reviews, ISN NO. 1742-8130, 2006.

Sell S. Cancer and Stem Cell Signaling: A Guide to Preventive and Therapeutic Strategies for Cancer Stem Cells. Stem Cell Reviews, 3:1-6, 2007.

Sell S, Leffert HL. Liver Cancer Stem Cells. J. Clin. Oncology.26::2800-2805, 2008.

Sell, S. Alpha-fetoprotein, Stem Cells, and Cancer. The Abbot Award Lecture. Tumor Biology, 29:161-180, 2008.