The Andrew H. Weinberg Symposium (1995-2015)

James S. Weinberg, Ph.D.

Despite major therapeutic advancements in pediatric cancer care over the last several decades, cancer remains one of the most common causes of childhood death. In 1994, my family experienced the anguish of having a son diagnosed with rhabdomyosarcoma, a rare form of muscle tumor. Despite aggressive treatment at Dana-Farber, my son Andrew passed away shortly before his third birthday. The tragedy my family faced is relived daily around the world and mandates that we, as a society and as physicians and scientists, do better. The Dana-Farber Cancer Institute and Children's Hospital Boston have been leaders in the fight against childhood cancer since the first pediatric leukemia and kidney tumor remissions were achieved by Sidney Farber in the late 1940s. The same vision for translating laboratory findings into clinical breakthroughs continues to this day.

With the generous support of family and friends, the Medicinal Chemistry Group of the Northeastern section of the American Chemical Society, and the Dana-Farber Cancer Institute, a fund was created in 1995 and endowed in 2001. The Andrew H. Weinberg Memorial Endowment Fund is dedicated to bringing researchers together from the field of chemotherapy development with those in the biomedical research and clinical care communities at large, helping to foster an environment for synergy and originality in cancer research.

The main support for the last 20 years has come from Members of Team Andrew Weinberg Boston Marathon Jimmy Fund Walk.

At the Symposium's first lecture in 1995, Peter Ho, M.D., Ph.D. indicated that from 1953-94 only 14 chemotherapeutic drugs were labeled by the FDA for pediatric use. Since the last lecture in 2014 (the last sixty-one years) about 25 have been approved - a 2.4 year interval per drug. Most of those drugs have horrific side effects.

We still have a long way to go!!!

Below is a list/timeline of drugs approved.

The success of the Weinberg Symposium is evidenced by the large and enthusiastic turnout for past speakers, which have included:

Peter C. Adamson, M.D.
Ken Bair, Ph.D.
Bruce Chabner, M.D.
Nicholas Dean, Ph.D.
Luis Alberto Diaz, Jr., M.D
James R. Downing, M.D.
Stephen W. Fesik, Ph.D
Judah Folkman, M.D.
Stephen H. Friend, M.D., Ph.D.
Lee J. Helman, M.D.
Peter Ho, M.D., Ph.D.
John Hohnecker, M.D.
Leroy Hood, M.D., Ph.D.
Peter Houghton, Ph.D.
Michael Jensen, M.D.
Richard Klausner, M.D.
Senator Edward M. Kennedy
David A. Kessler, M.D., J.D.
David Parkinson, M.D.
Charles Pratt, M.D., Ph.D.
Malcolm Smith, MD, Ph.D.
Daniel Von Hoff, M.D.
Steven Weitman, M.D., Ph.D.
Randolf F. Wykoff, M.D.

Regulatory Approved Oncologic Drugs for Pediatric Use with Pediatric Dosing

Drug	
1953-2003[1]	**Fifteen Oncology Drugs Approved**
	Indication
L-Asparaginase	Leukemias
Cyclophosphamide	Leukemias, lymphomas, neuroblastoma, retinoblastoma
Cytarabine	Acute nonlymphocytic leukemia in adults and children
Dactinomycin	Wilms tumor, rhabdomyosarcoma, choriocarcinoma, testicular carcinoma, Ewing sarcoma, sarcoma botyroides
Daunorubicin	Acute lymphocytic leukemia in adults and children
Doxorubicin	Wilms tumor, neuroblastoma, soft tissue sarcomas, Hodgkin lymphoma, other malignant lymphomas, acute lymphocytic leukemia, acute myelogenous leukemia
Lomustine	Brain tumors, Hodgkin lymphoma
Mercaptopurine	Acute lymphocytic leukemia in adults and children
Methotrexate	Acute lymphocytic leukemia, meningeal leukemia, osteosarcoma, non-Hodgkin lymphomas
Pegaspargase	For patients with hypersentivity to native E.coli asparaginase
Procarbazine	Hodgkin's lymphomas
Thioguanine	Acute Non-lymphocytic leukemia
Teniposide	Refractory childhood acute lymphocytic leukemia
Tretinoin	Acute promyelocytic leukemia
Vinblastine	Histiocytoses, testicular germ cell carcinomas, Hodgkin's lymphoma
Vincristine	Acute leukemias, lymphomas, Wilms tumor, rhabdomyosarcoma
[1]Steven Hirschfeld, Peter T.C. Ho, Malcolm Smith, and Richard Pazdur, Regulatory Approvals of Pediatric Oncology Drugs: Previous Experience and New Initiatives, Journal of Clinical Oncology, Vol 21, No 6 (March 15), 2003: pp 1066-1073	
2004-2011[2]	**Four Oncology Drugs Approved**
	Indication
Clofarabine	Acute lymphoblastic leukemia

Nelarabine	T-cell acute lymphoblastic leukemia
(Pegaspargase)	First line- acute lymphoblastic leukemia
Imatinib	Philadelphia(+) chronic myeloid leukemia
[2]Communication: Peter T.C. Ho, MD, PhD	
2011-2014[3]	**Five Oncology Drugs Approved**
	Indication
Levoleucovorin	For rescue of high-dose methotrexate for patients with Osteosarcoma and acute lymphocytic leukemia
Erwinia asparaginase	For patients with acute lymphocytic leukemia and hypersensitivity to E.coli derived asparaginase
Everolimus	Subependymal giant cell astrocytoma
Purixan™ (mercaptopurine oral suspension)	Acute lymphocytic leukemia in adults and children
Denosumab	Giant cell tumor of bone in skeletally mature adolescent
(Imatinib)	Ph+ acute lymphocytic leukemia in children
[3]Comunication: Malcolm A. Smith, M.D., Ph.D. and Gregory H. Reaman, M.D.	