

research fast facts

What: As there are few means of preventing or early screening for most blood cancers, the LLS research agenda is focused on finding cures. LLS drives research in areas of unmet medical need, and helps to bridge the gap between academic discovery and drug development. LLS identifies and funds the most promising blood cancer research projects around the world, and forges partnerships with academic institutions, biotechnology and pharmaceutical companies to accelerate the development of new therapies.

Why: LLS's investment in research has played a critical role in advancing many of today's life-saving therapies for blood cancer patients.

Since LLS first started investing in research more than 60 years ago, cures for many patients with acute lymphocytic leukemia (ALL) and Hodgkin lymphoma have been achieved.

Survival rates for many blood cancer patients have doubled, tripled and even quadrupled since 1960.

From 2001 through 2013, nearly 40% of new anti-cancer treatments were FDA-approved for blood cancer patients, more first approvals than for any other group of cancer patients.

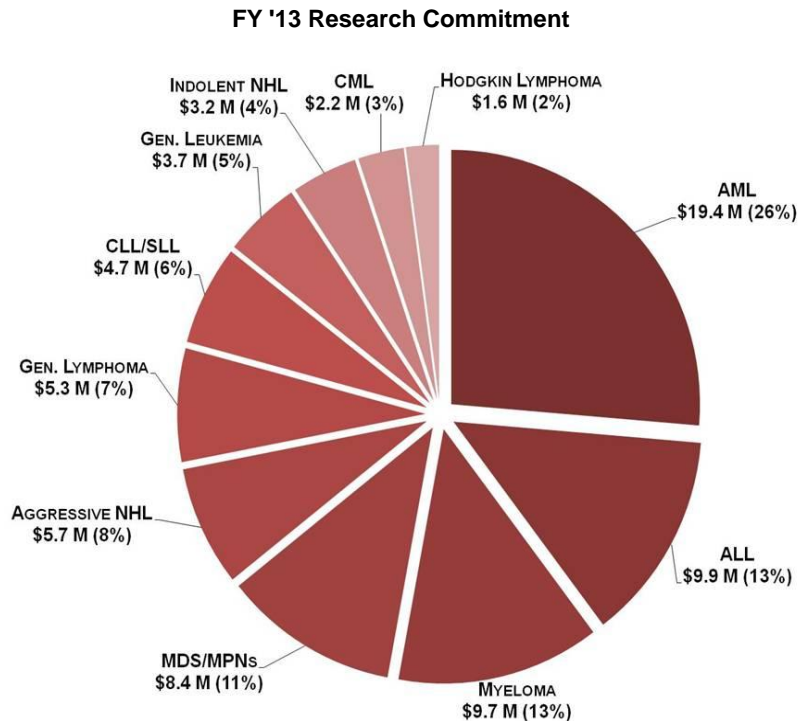
LLS research grants have funded many important advances, including targeted and immunotherapies. Some therapies LLS helped advance include imatinib, bortezomib, lenalidomide, rituximab and ibrutinib.

Some highlights:

- **Immunotherapy** – LLS-funded research teams at multiple institutions are testing different approaches to activate the immune system to kill cancer cells. Remarkable results have recently been achieved with one type of genetically engineered immune cell for the treatment of adults and children with acute lymphoblastic leukemia who are resistant to other therapies. FDA has granted this therapy “breakthrough” status which is expected to accelerate its approval and development.
- **New therapies for CLL** – LLS has funded the development of many new therapies that are expected to markedly improve survival for chronic lymphocytic leukemia (CLL) patients. This includes teams that have helped advance new oral medications designed to inhibit molecular pathways that drive tumor growth, including ibrutinib, which was approved by the FDA in February 2014, and idelalisib, whose Phase III trial was concluded based on positive findings. These therapies, along with the recently approved obinituzumab and other promising agents in clinical trials, as well as combinations of therapies, hold great promise for long term control of CLL.
- **“Beat AML”** – LLS recognizes that new therapies for acute myelogenous leukemia (AML) are urgently needed. In collaboration with Oregon Health & Science University, we are advancing technologies to identify and target the molecular abnormalities that cause the disease. Beyond this, over 25% of our grant portfolio is directed at seeking a more complete molecular understanding of the disease which is expected to lead to new therapies.
- **Rituximab for B-cell cancers:** LLS-funded researchers helped advance rituximab, an antibody that helps boost the immune system to attack cancer cells in patients with lymphoma and CLL patients.
- **Advances in myeloma therapy:** LLS-funded researchers played roles in advancing several therapies for patients with myeloma over the past decade that have vastly improved five-year survival rates for this blood cancer, including pomalidomide, bortezomib and thalidomide.

How: LLS has invested more than \$1 billion to date in research to find cures for blood cancer patients. In Fiscal Year 2013 alone:

- \$73.8 million commitment in grant funding
- 328 grants
- 26 partnerships and supported projects through the Therapy Acceleration Program (TAP)
- \$6 million in direct pediatric research (8%)



LLS funds research across the continuum from basic and translational research through clinical trials, from bench to bedside. Our research agenda includes funding a variety of **academic grants**, and our **Therapy Acceleration Program® (TAP)** is a strategic initiative to build partnerships with universities and biotechnology companies that can rapidly turn promising research into critically needed therapies. We form other strategic partnerships through our **Targets, Leads and Candidates Program**, an initiative to identify and fund priority research areas with support from biotechnology and pharmaceutical partners.

Who we are: LLS's research team comprises doctorate level experts who oversee our research agenda and programs.. All grant applications and partnership agreements are reviewed and awarded with advisory input from recognized biomedical research experts.

For additional information, visit <http://www.lls.org/#!/researchershealthcareprofessionals/>

About The Leukemia & Lymphoma Society

The Leukemia & Lymphoma Society® (LLS) is the world's largest voluntary health agency dedicated to blood cancer. The LLS mission: Cure leukemia, lymphoma, multiple myeloma, and improve the quality of life of patients and their families. LLS funds lifesaving blood cancer research around the world, provides free information and support services, and is the voice for all blood cancer patients seeking access to quality, affordable, coordinated care.

Founded in 1949 and headquartered in White Plains, NY, LLS has chapters throughout the United States and Canada. To learn more, visit www.LLS.org. Patients should contact the Information Resource Center at (800) 955-4572, Monday through Friday, 9 a.m. to 9 p.m. ET.