

Frances and Thomas Gambino Professor of Hematology/Oncology

Prepared for the Gambino Medical & Science Foundation

In collaboration with

Jeffrey M. Lipton, MD, PhD

Chair Hematology/Oncology and Stem Cell Transplantation

Cohen Children's Medical Center

Frances and Thomas Gambino Professor of Hematology/Oncology

Donald and Barbara Zucker School of Medicine at Hofstra/Northwell

IMPACT REPORT

Current projects

Jeffrey M. Lipton, MD, PhD, continues to study and identify the cancer predisposition in Diamond Blackfan Anemia (DBA), a rare childhood disease which impacts the production of red blood cells. Patients suffering from DBA do not create red blood cells and require medical intervention to avoid developing potentially fatal anemia. While bone marrow transplants performed in the Gambino Medical & Science Foundation Stem Cell Transplant Unit and other medical procedures aid in managing the disease, Dr. Lipton and his team aim to further understand the causes and early indicators of DBA.

In 2021, Dr. Lipton's lab conducted a small clinical trial with the amino acid leucine, which produced a scientifically significant response that will allow us to conduct a larger trial that will examine the potential role of additional amino acids. The research also found a strong correlation between patients with DBA and a predisposition to colorectal cancer. As part of a collaborative effort with epidemiologists, Dr. Lipton and his team have embarked on a larger project to learn more about the progression of colorectal cancer — specifically, what molecular changes cause polyps to turn into cancer. This study is particularly insightful as pediatric patients are typically outside the range of individuals diagnosed with colorectal cancer and fall well below the routine screening age of 45. Uncovering how and why these patients are predisposed will have a great impact and provide a greater understanding of the disease in patients of all ages. Currently, Dr. Lipton and his team are creating new models for these diseases through mouse models and plan to develop organoids to explore the biology of colorectal cancer in DBA.

Funds from the endowment were used to support lab members working on all aspects of the clinical trial and to secure time for the epidemiologists Dr. Lipton partnered with on the colorectal project. Additionally, your support allowed Dr. Lipton's lab to engage the help of a biostatistician and a data manager to oversee the Diamond Blackfan Anemia Registry (DBAR), which generates epidemiologic data to determine cancer risk.

Select publications

- Lipton JM, Molmenti CLS, Desai P, Lipton A, Ellis SR, Vlachos A. Early Onset Colorectal Cancer: An Emerging Cancer Risk in Patients with Diamond Blackfan Anemia. *Genes (Basel)*. 2021 Dec 26;13(1):56. doi: 10.3390/genes13010056. PMID: 35052397; PMCID: PMC8774389.
- Chilamakuri R, Rouse DC, Yu Y, Kabir AS, Muth A, Yang J, Lipton JM, Agarwal S. BX-795 inhibits neuroblastoma growth and enhances sensitivity towards chemotherapy. *Transl Oncol*. 2022 Jan;15(1):101272. doi: 10.1016/j.tranon.2021.101272. Epub 2021 Nov 22. PMID: 34823094; PMCID: PMC8626612.
- Lipton JM, Molmenti CLS, Hussain M, Desai P, Florento M, Atsidaftos E, Vlachos A. Colorectal cancer screening and surveillance strategy for patients with Diamond Blackfan anemia: Preliminary recommendations from the Diamond Blackfan Anemia Registry. *Pediatr Blood Cancer*. 2021 Aug;68(8):e28984. doi: 10.1002/pbc.28984. Epub 2021 Jun 5. PMID: 34089224.
- Vlachos A, Atsidaftos E, Lababidi ML, Muir E, Rogers ZR, Alhushki W, Bernstein J, Glader B, Gruner B, Hartung H, Knoll C, Loew T, Nalepa G, Narla A, Panigrahi AR, Sieff CA, Walkovich K, Farrar JE, Lipton JM. L-leucine improves anemia and growth in patients with transfusion-dependent Diamond-Blackfan anemia: Results from a multicenter pilot phase I/II study from the Diamond-Blackfan Anemia Registry. *Pediatric Blood Cancer*. 2020 Dec;67(12):e28748. doi: 10.1002/pbc.28748. Epub 2020 Oct 6. PMID: 33025707; PMCID: PMC8273758.

Future goals

Dr. Lipton hopes to grow the DBAR internationally. His lab will continue its study of colorectal cancer using material from colonoscopies and hopes to embark on an additional clinical trial with their collaborators at the NIH. His long-term goals also include developing organoids that will further guide his research.

“Thank you. Your support gives me the resources to tackle topics that are important — furthering our ability to make an even greater impact by taking big risks, and making big discoveries. I am grateful for the trust you have placed in me to explore these critical areas.”

— Jeffrey M. Lipton, MD, PhD
Frances and Thomas Gambino Professor of Hematology/Oncology



NORTHWELL HEALTH ENDOWMENT PERFORMANCE

As of December 31, 2021

Endowment overview and spending policy

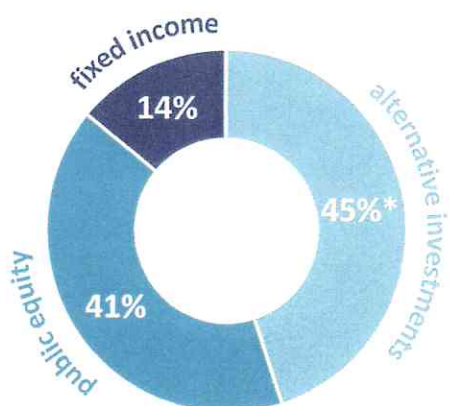
Northwell Health endowments are overseen by the Investment Subcommittee of the Finance Committee of the Board of Trustees, in conjunction with the organization’s treasury department and investment consultants. The Investment Subcommittee regularly reviews the asset allocation of the endowment portfolios in relation to diversification and spending objectives and tracks the performance of each investment manager against an appropriate benchmark index.

The endowment portfolios are invested with a long-term growth objective and to meet the expense and income needs of the projects they support. The goal of the portfolio design is to invest in a diversified set of investment strategies in order to generate good returns while minimizing risk and volatility over the portfolio’s time horizon.

The spendable interest credited annually to all endowment funds will be based upon a rolling average of the return on the Northwell Health Endowment Portfolio over the prior five years, calculated annually on or about June 30 of each calendar year, and will not exceed 7%. For the calendar year ending December 31, 2021, the spendable interest credited to all endowment funds was 6%.

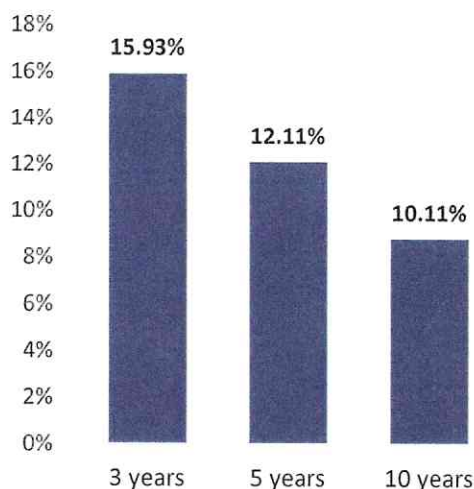
Asset allocation as of December 31, 2021

Long term % targets



* 16% hedge funds | 24% private equity/real estate | 5% private credit

Historic endowment performance



Investment committee as of December 31, 2021

Jeffrey S. Maurer, Co-Chair
 Robert D. Rosenthal, Co-Chair □
 Marvin L. Appel

Steven M. Cohen
 Gershon Distenfeld
 Michael Fisch
 William H. Frazier

Clifford H. Friedman
 Beth Hammack
 Venu Krishna
 Jeffrey B. Lane

William L. Mack ●◇
 Patrick F. McDermott
 Richard B. Nye
 Lewis S. Ranieri ●

Robert A. Rosen
 Michael I. Schwartz
 Richard C. Zogheb

□ Treasurer, Board of Trustees

● Asset Class Subcommittee Member

◇ Vice Chairman, Board of Trustees



ACCOUNT ACTIVITY REPORT

| | | As of December 31, 2021 |
|---|--|-------------------------------|
| Corpus | | \$ 1,229,000 |
| The amount that has been donated to the endowment, is permanently restricted and required to be held in perpetuity. | | |
| Market value | | \$ 1,527,765 |
| The value of the investments that support this endowment on the date specified. This figure includes both the corpus and earnings, but not the spendable interest, and fluctuates with the financial markets. | | |
| Previous interest balance (as of December 31, 2020) | | \$ 187,068 |
| The portion of investment return available for spending at the beginning of the calendar year. | | |
| Spendable interest earned for reporting period | | \$ 48,960 |
| Interest that can be spent for the endowed purpose. Begins to accrue at the start of the calendar year after endowment reaches minimum gift amount. | | |
| Interest spent for reporting period | | \$ (100) |
| Expenses incurred by the holder during the calendar year. | | |
| Additional 2021 Contribution from Lawrence Golf Club | | \$ 1,000 |
| Spendable interest balance | | \$ 236,928 |
| The portion of investment return made available for spending in accordance with the purpose of the endowment, net of expenditures made to date. | | |