

THE
PEW
CHARITABLE TRUSTS

The Pew-Stewart Scholars for Cancer Research
Annual Report

Prepared for

The Alexander and Margaret Stewart Trust

September 2020

Introduction

Thanks to your generous support, the Pew-Stewart Scholars Program for Cancer Research has advanced groundbreaking research into the causes, diagnosis, and treatment of cancer. The program, now in its seventh year, has helped jumpstart the careers of 37 promising early-career scientists from 21 distinguished nominating institutions. These researchers continue to pursue studies that uncover critical insights in the fields of biomedical engineering, chemical biology, cell biology, immunology, genomics, and metabolism.

While the COVID-19 pandemic has taken an unprecedented toll worldwide, the Pew-Stewart program has remained steadfast in its mission. In 2020, the program graduated its third class, expanding and strengthening the Pew-Stewart alumni group and fostering the next generation of cancer researchers. For example, Richard Possemato ('16) received the Above and Beyond Mentorship award from New York University's Students Advocating for Science, Education, and Medicine. In addition, his lab was awarded an American Cancer Society Research Scholar Grant to study metabolism in cancer cells. This continued progress is a testament to our institutions' shared commitment to accelerating discovery and advancing progress toward a cure for cancer.

In June, Pew announced the seventh class of [Pew-Stewart Scholars](#). For the 2020 cycle, 87 institutions were invited to nominate a candidate, 71 of which did so. The committee reviewed 68 applications: 67 from the Pew-Stewart institutional nomination pool, and one from the scholars' alumni nomination process. A list of the 2020 scholars and their affiliated institutions is provided below. The 2020 class foci include methods to improve early cancer detection, the dysregulation of messenger RNA in the development of breast cancer, and the molecular connection between sugary drinks and the development of colorectal cancer. Previous Pew-Stewart classes and complete biographies of the current class are attached as [Appendix I](#).

Class of 2020 Pew-Stewart Scholars

Shruti Naik, Ph.D., New York University Langone Health
Srinivas Ramachandran, Ph.D., University of Colorado School of Medicine
Mara Sherman, Ph.D., Oregon Health and Science University
Xuebing Wu, Ph.D., Columbia University
Jihye Yun, Ph.D., Baylor College of Medicine

Pew-Stewart Scholars News and Updates

Pew-Stewart Scholars continue to be recognized for their excellence in research. The following notes provide highlights of distinctions achieved by the scholars over the past year.

Class of 2019

[Michel DuPage](#) received the 2019 National Institutes of Health Director's [New Innovator Award](#), which supports unusually high impact research from early career investigators. DuPage received funding for his work to engineer precision cancer immunotherapy.

The Boston 2019 [National Xconomy Awards](#) named [Stefani Spranger](#) as a finalist. The awards honor leading life science innovators, entrepreneurs, executives, investors, and scientists across the Boston region. She is working to examine how the makeup of patients' immune microenvironments contributes to the response to cancer immunotherapy treatment.

Class of 2018

[Rebecca Voorhees](#) used a technique called single-particle cryo-electron microscopy to show the structural details of the cellular organelle endoplasmic reticulum (ER) membrane protein complex for the first time at the atomic level. This work helps researchers look at how proteins are inserted into the membrane, and what happens when these processes go wrong in cancer. [Science](#) magazine published her research in its May 2020 issue. She is also a recipient of the 2019 National Institutes of Health Director's New Innovator Award for her work on the ER membrane protein complex.

The Vilcek Foundation awarded [Kivanc Birsoy](#) the [2020 Vilcek Prize for Creative Promise in Biomedical Science](#) for his research on the regulation of cellular metabolism in the context of cancer and genetic disorders. The award recognizes emerging to mid-career immigrant artists and scientists who have demonstrated exceptional achievements early in their careers.

[Michael Birnbaum](#) received the 2020 [Damon Runyon-Rachleff Innovation Award](#) for his research to decode and reprogram tumor-infiltrating T-cells. The award, presented by the Damon Runyon Cancer Research Foundation, provides funding to extraordinary early career researchers who have an innovative new idea but lack sufficient preliminary data to obtain traditional funding.

[Aaron Ring](#), along with fellow Yale Cancer Center researchers, was awarded [a \\$3.8 million grant](#) from the National Cancer Institute to develop a new cytokine-based immunotherapy for melanoma. He will use the funds to screen hundreds of millions of variants of the cytokine interleukin-18 to identify versions that could retain strong activity deep within the tumor microenvironment. In addition to research funding, the award will establish Ring as a member of the Immuno-Oncology Translational Network, a science network established by the Cancer Moonshot Initiative devoted exclusively to discovering and evaluating novel immune-based approaches to treat and prevent adult cancers.

Class of 2017

[Sabrina Spencer's](#) research group made a landmark discovery that provides insight into how cells know when to divide: the mother cell scans the environment for available growth factors to start duplicating cellular content and divide into daughter cells. These findings are detailed in the June 2020 publication of [Science](#), and could provide more information on why cancer cells are able to bypass growth factor limitations and proliferate uncontrollably.

Program Alumni

St. Baldrick's Foundation named [Paul Northcott \('16\)](#) as the 2020 North America recipient of the [Robert J. Arceci Innovation Award](#). Dr. Northcott will receive \$250,000 a year for three years to support his lab's work to better understand why children develop medulloblastoma, a common and deadly form of brain cancer. Pew-Stewart program support helped him uncover distinct genetic

markers and classify subclasses of this deadly pediatric disease.

The FDA has issued an Emergency Use Authorization for a rapid, single-use SARS-CoV-2 diagnostic test that was developed by [Visby Medical](#), the seven-year-old startup company founded by [Adam de la Zerda \('15\)](#). The test, which is the first single-use test of its kind, can provide COVID-19 test results in less than 30 minutes. FDA-approved laboratories can now use the test in emergency cases.

[Cigall Kadoch \('15\)](#) received the 2020 Award for Outstanding Achievement in Basic Cancer Research from the American Association for Cancer Research (AACR). The [award](#) recognizes an early-career investigator for meritorious achievements in basic cancer research. AACR selected Kadoch for her pioneering research to characterize how chromatin remodeling complexes play an important part in regulating how genes are turned on and off. Her work has important implications for the development of novel therapies, as mutations in these complexes cause errors in gene expression that can lead to the development of multiple cancers and degenerative brain diseases.

Program Highlights

Pew Biomedical Scholars Innovation Fund

On September 15, six pairs of applicants—out of 35 total applicant pairs—were named recipients of the 2020 Innovation Fund Award. The applicant pool for the 2020 award included former advisory members as well as senior level scientists from the scholars program. [Roberto Zoncu \('14\)](#) and Pew Scholar [Shingo Kajimura](#) were among the awardees. They will use cutting-edge technology to study the molecular basis of inter-organelle communication and energy maintenance using adipose tissue, or fat cells, as a model. This work will illuminate the signals between mitochondria and lysosome communication and energy homeostasis, providing a unique opportunity to identify potential factors involved in metabolic disorders such as obesity and diabetes and better understand the roles of cellular organelles in health and disease. Details on the rest of the 2020 class can be found [here](#).

In 2019, Pew-Stewart scholar Agnel Sfeir was selected for her joint project with former Pew advisor Ruth Lehmann for their work examining how mitochondrial DNA is inherited by offspring, which is currently underway.

The 2021 cycle of the Innovation Fund Award launched in mid-September. Alumni of the Pew Scholars, Pew-Stewart Scholars, and Pew Latin American Fellows programs, as well as former program advisors are invited to apply. This year, alumni from the 2014, 2015, and 2016 Pew-Stewart classes will be eligible. Interested applicants must submit a letter of intent and teams selected from the initial review process are invited to submit a full application due in March 2021. The 2021 class will be selected in July 2021 and announced in September 2021.

Pew-Stewart Scholars National Advisory Committee

For the 2021 Pew-Stewart Scholars application cycle, the advisory committee will continue to be chaired by Peter M. Howley, M.D., the Shattuck Professor of Pathological Anatomy at Harvard Medical School. This year, Drs. Lou Staudt and Tony Hunter, who joined at the inception of the

Pew-Stewart program, have rotated off the committee. Drs. Jennifer Pietenpol and Nick Papadopoulos have rejoined the committee to finish out their six-year terms. See [Appendix II](#) for a full list of committee members.

Annual Meetings and other Convenings

The 2020 annual meeting, which was scheduled for March 8-13, 2020 at the Fairmount Southampton in Bermuda, was cancelled this year due to the COVID-19 pandemic. The program team quickly pivoted to hold a virtual selection meeting with advisors to carry out the selection of the 2020 class of Pew-Stewart Scholars.

As the pandemic evolves, we are evaluating new ways to engage virtually with our community. In July, we held a virtual meet-and-greet for the 2019 Pew-Stewart and Pew Scholars classes since the annual meeting would have served as their first chance to meet. Individuals submitted a research summary consisting of slides with a voiceover for others to review in their own time. The 90-minute virtual introductory event was a success and we plan to hold another event in fall 2020 with Pew-Stewart scholars, advisors, and Stewart Trustees as a breakout group.

The Biomedical Scholars 35th Reunion in Miami, Florida, scheduled to be held in October 2020, was also cancelled due to the pandemic. The 2014 and 2015 Pew-Stewart Scholars and former Pew Scholars were among the alumni invited to attend. In its place, the biomedical programs team will host a virtual event on October 21 for all Pew and Pew-Stewart alumni to mark the anniversary. The special event will feature remarks by Sue Urahn, Pew's new president and CEO, a short video featuring alumni of the biomedical programs, and a keynote talk by 1999 Pew scholar Rebecca Heald.

The next annual meeting of Pew's biomedical programs is scheduled to take place in Costa Rica in March 2021. We are currently monitoring the pandemic and will pivot to a virtual event if it is impossible to safely gather in person.

Class of 2021 Selection Process

The application process for the 2021 Pew-Stewart Scholar awards has commenced. In early May, Pew invited 90 cancer research centers and institutions to nominate a candidate for the award. Nominees were submitted by 70 institutions, and 63 of the nominees applied. Three new institutions were added to the list of institutions invited to submit a nominee this year: University of Texas at Austin, University of California, Santa Cruz, and the Winthrop P. Rockefeller Cancer Center at the University of Arkansas for Medical Sciences. The institutional participation list is attached as [Appendix III](#). Application reviews are now underway, and the class of 2021 will be chosen in March 2021. As in previous years, applicants from the Pew alumni nomination process and from Pew Scholars institution nominations will also be considered for the Pew-Stewart Scholars program. These applications are examined on a case-by-case basis for cancer relevance and will be evaluated by both the Pew and Pew-Stewart advisory committees.

Pew-Stewart Program Trends

From the inception of the program in 2014 to the announcement of the new class in 2020, the partnership between the Pew Charitable Trusts and The Alexander and Margaret Stewart Trust has supported 37 stellar early-career cancer investigators. Last year we provided you with initial trends and data based on the first several years of classes. Below is an updated look at several aspects of the program.

Nomination Process

Applicants for the inaugural class in 2014 were drawn from the Pew Biomedical Scholars pool. The following year, the program developed its own list of nominating institutions based on a list of cancer centers designated by the National Cancer Institute (NCI). Since its establishment, our list of nominating institutions has grown from 71 institutions to 90, and we continue to update it as new additions are made to the NCI list. Additionally, each year, the advisory committee reviews requests from institutions asking to be added to the nominating list and selects those with strong cancer research programs to join.

Awarded Institutions

Pew-Stewart Scholars and alumni come from 21 distinct institutions. The top three institutions which have produced the highest number of awardees—the Massachusetts Institute of Technology, University of California, Berkeley, and University of California, San Francisco—remain unchanged from 2020. The full list of represented institutions can be found in [Appendix IV](#).

Gender

According to the [National Academy of Sciences](#), women earned 52% of doctorates in the life sciences in 2009, but as of 2014 only 36% of assistant professors and 18% of full professors in biology-related fields were women. Over the seven years of the program, the number of female applicants has ranged from 27-37%, and the total percentage of female awardees stands at 32% (12 out of a total of 37 awards). For the 2020 cycle 32% of the applicants were women, and three women were awarded in a class of five, the most represented in a given award year. We are committed to supporting the careers of female scientists and improving diversity, equity, and inclusion in our programs by selecting a diverse group of grantees, encouraging diverse nominees from nominating institutions, and providing an inclusive and family friendly environment at the annual meetings.

Research Focus

The Pew-Stewart Scholars Program uses a multi-disciplinary lens when it comes to selecting promising early career scientists. Whether through the field of biomedical engineering, chemical biology, cell biology, immunology, genomics, or metabolism, an early analysis of scholar research demonstrates a strong focus on understanding cancer etiology, the tumor microenvironment, and the pathways that govern cancer progression. Additionally, since the beginning of the program scholars have shown a sustained interest in cancer cell biology.

As we reported last year, scholars have been increasingly interested in studying cancer immunology, reflecting the field's growing optimism about the ability to develop effective immunotherapies to combat cancer. Of the 37 funded applications since 2014, nine are in this area. Two out of the five scholars in the 2020 class are in the field of cancer cell biology, while the remaining three are studying cancer immunology, gene regulation, and genomics. We are thrilled to see the Pew-Stewart program evolving alongside evolutions in cancer research; a chart showing funded research fields over time is attached as [Appendix V](#).

Cancer research in the Pew Scholars Program

The Pew Scholars program continues to stand alongside the Pew-Stewart Scholars program in supporting cancer research. The number of cancer-focused Pew Scholars remains unaffected by the Pew-Stewart Scholars program, ranging from 1-3 every year between 2007-2020. Since 2015, the Pew Scholars program has funded 13 researchers to pursue funded projects in the cancer research field.

Conclusion

The COVID-19 pandemic has tested our community of Pew-Stewart scholars. Over the past several months, their labs have been closed and many are just now resuming operations. With your support, we are collaborating closely with our scholar community to provide additional resources to ensure that each of them can resume their important work. They have proven their resilience in the face of these novel challenges and their steadfast dedication to the Stewart Trust's cause.

The Stewart Trusts's philanthropy continues to build and foster a collaborative community of promising early-career scientists united by the common purpose to seek cures for cancer. Your leadership has given 37 promising early-career scientists integral resources and support to help them on their paths to cutting-edge discoveries, and we remain honored by this ongoing commitment to this critical partnership. Thank you.

APPENDIX I: 2020 Pew-Stewart Scholars for Cancer Research

Shruti Naik, Ph.D. The Naik lab will explore whether prior inflammatory reactions can predispose tissues to becoming more susceptible to cancer. The skin, for example, routinely encounters inflammation-inducing stressors and is a common site of tumorigenesis. However, there is a dearth of information on how acute inflammatory events alter the skin's microenvironment in the long term and consequently its vulnerability to carcinogens. We found that even after skin inflammation has completely subsided, carcinogen exposure results in five times more tumors than in skin without a prior history of inflammation. Now, using a mouse model of squamous cell carcinoma coupled with high-resolution single-cell sequencing techniques, we will trace the evolution of tumor-forming cells and their microenvironment following resolution from a range of inflammatory attacks. These studies will uncover the factors that help provide a growth advantage to tumorigenic cells in inflammation-primed tissues and identify potential biomarkers for predicting cancer risk.

Srinivas Ramachandran, Ph.D. The Ramachandran lab will improve methods for early cancer detection using cell-free DNA (cfDNA). These are pieces of DNA present outside the cell in the blood and include fragments that are released from tumors upon cell death and have recently emerged as noninvasive markers for cancer detection, monitoring, and prognosis. Inside the cell, DNA is packaged around histone proteins, forming a structure called the nucleosome. When cells die, parts of the genome are chewed up, while fragments shielded within the nucleosome remain intact. These lingering fragments, detected as cfDNA, can provide a snapshot of the state of gene activity of a cell and thus provide information on cell origin (i.e., tumor versus noncancerous cell). Using molecular sequencing approaches, we will develop a method to enrich cfDNA sequences for identifying abnormal patterns of gene activity that are associated with cancer. My work could help devise a more sensitive and cheaper blood test for early cancer detection and also allow for noninvasive tracking of cancer during treatment.

Mara Sherman, Ph.D. The Sherman lab will investigate the role of stroma—the supportive tissue surrounding a tumor—in the evolution of pancreatic ductal adenocarcinoma (PDAC). PDAC is a unique cancer in which 50% to 90% of the tumor volume is occupied by dense stroma, the development of which is driven by cancer-associated fibroblasts. Recent research suggests that pancreatic stellate cells (PSCs) are the originators of these cancer-associated fibroblasts important for driving tumor progression. We will use a novel mouse model to track how PSCs may give rise to cancer-associated fibroblasts and determine how they subsequently contribute to the progression of PDAC. These efforts will shed light on the importance of the stroma in PDAC and the potential for stroma-based therapeutic development.

Xuebing Wu, Ph.D. The Wu lab will investigate the dysregulation of messenger RNA structure in the development of breast cancer. mRNA is a genetic material that carries the blueprint for making proteins based on the information encoded in our DNA, and lack of mRNA regulation can have dire consequences for the cell. For instance, RNA helicases are enzymes critical for correctly facilitating the folding of RNA structures, and mutations in these proteins have been found in several cancer types, including breast cancer. Previously, I developed a sequencing-based chemical probe to map out structural changes in RNA. We will now adapt this technology along with cutting-edge computational tools to capture and compare RNA folding in different stages of

breast cancer, reveal how these changes affect gene expression, and identify structural changes that are associated with growth, invasion, and the spread of breast cancer. Additionally, we will use gene-editing strategies to examine the role of mutant helicases on RNA remodeling in breast cancer. Findings by the Wu lab will provide key insights into an unfamiliar area of gene regulation with the potential to uncover new therapeutic targets in breast cancer.

Jihye Yun, Ph.D. The Yun lab will decode the molecular connection between sugary drinks and the development of colorectal cancer (CRC). Sugary drinks are sweetened mainly with high-fructose corn syrup (HFCS), which consists of half glucose and half fructose. Initial work by my lab found that the chronic intake of a modest amount of HFCS that mimics one can of soda in humans directly increased the size and number of tumors in a mouse model of CRC. My group also found that HFCS increased the population of certain gut microbes and activated molecular pathways tied to CRC. Now we will tease out the tumorigenic effects of HFCS on CRC in mice harboring a human gut microbiome. Using this model, I will assess the impact of HFCS on the size, number, and grade of colon tumors formed. Additionally, I will analyze how HFCS alters the composition of gut microbes and their metabolism, and how these changes lead to CRC. Work from this study will untangle the complex relationship between diet and gut health and identify innovative biomarkers for the prevention and treatment of CRC.

Previous Classes of Pew-Stewart Scholars

Class of 2019 Pew-Stewart Scholars

Michel DuPage, Ph.D., University of California, Berkeley
Luke Gilbert, Ph.D., University of California, San Francisco
Diana Hargreaves, Ph.D., The Salk Institute for Biological Studies
Piro Lito, M.D., Ph.D., Memorial Sloan Kettering Cancer Center
Chao Lu, Ph.D., Herbert Irving Comprehensive Cancer Center, Columbia University
Stefani Spranger, Ph.D., Massachusetts Institute of Technology
Gabriel Victora, Ph.D., The Rockefeller University

Class of 2018 Pew-Stewart Scholars

Michael Birnbaum, Ph.D., Massachusetts Institute of Technology
Kivanç Birsoy, Ph.D., The Rockefeller University
Aaron M. Ring, M.D., Ph.D., Yale University
Alex K. Shalek, Ph.D., Massachusetts Institute of Technology
Rebecca M. Voorhees, Ph.D., California Institute of Technology

Class of 2017 Pew-Stewart Scholars

Daniel A. Bachovchin, Ph.D., Memorial Sloan Kettering Cancer Center
Nadya Dimitrova, Ph.D., Yale University
Charles Y. Lin, Ph.D., Baylor College of Medicine
Robert K. McGinty, M.D., Ph.D., University of North Carolina, Chapel Hill
Sabrina L. Spencer, Ph.D., University of Colorado, Boulder

Class of 2016 Pew-Stewart Scholars

Stephanie Dougan, Ph.D., Dana Farber Cancer Institute, Harvard University
Dirk Hockemeyer, Ph.D., University of California, Berkeley
Paul Northcott, Ph.D., St. Jude Children's Research Hospital
Richard L. Possemato, Ph.D., Perlmutter Cancer Center, NYU School of Medicine
Ömer H. Yilmaz, M.D., Ph.D., Koch Institute for Integrative Cancer Research at MIT

Class of 2015 Pew-Stewart Scholars

Trever Bivona, M.D., Ph.D., University of California, San Francisco
Adam de la Zerda, Ph.D., Stanford University
Mitchell Guttman, Ph.D., California Institute of Technology
Cigall Kadoch, Ph.D., Dana-Farber Cancer Institute and Harvard Medical School
Min Yu, M.D., Ph.D., University of Southern California

Class of 2014 Pew-Stewart Scholars

Arvin Dar, Ph.D., Icahn School of Medicine at Mt. Sinai
Shawn M. Douglas, Ph.D., University of California, San Francisco
Andrew J. Holland, Ph.D., Johns Hopkins University, School of Medicine
Agnel Sfeir, Ph.D., New York University School of Medicine
Roberto Zoncu, Ph.D., University of California, Berkeley

APPENDIX II: The Pew-Stewart National Advisory Committee

Peter M. Howley, M.D. (chair)

Shattuck Professor of Pathological Anatomy
Department of Microbiology and Immunobiology
Harvard Medical School

Susan Kaech, Ph.D.

Professor and Director
Nomis Foundation Chair
Nomis Center for Immunobiology and Microbial Pathogenesis
The Salk Institute for Biological Studies

Nickolas Papadopoulos, Ph.D.

Professor, Department of Oncology
Director of Translational Genetics
Ludwig Center for Cancer Genetics & Therapeutics
Sidney Kimmel Comprehensive Cancer Center

Jennifer A. Pietenpol, Ph.D.

Director, Vanderbilt-Ingram Cancer Center
B.F. Byrd Jr. Professor of Oncology
Professor of Biochemistry, Cancer Biology and Otolaryngology
Vanderbilt University

Helen Piwnica-Worms, Ph.D.*

Professor of Experimental Radiation Oncology
MD Anderson Cancer Center

*Also serves as an advisor on the Innovation Fund National Advisory Committee

APPENDIX III: 2021 Institutional Nominations

Institutions that nominated a candidate:

1. Abramson Cancer Center, University of Pennsylvania
2. Alvin J. Siteman Cancer Center, Washington University School of Medicine and Barnes-Jewish Hospital
3. Anderson Center for Cancer Research, The Rockefeller University
4. Arizona Cancer Center, University of Arizona
5. California Institute of Technology
6. Cancer Center at Illinois, University of Illinois at Urbana-Champaign
7. Case Comprehensive Cancer Center, Case Western Reserve University
8. Cedars Sinai Medical Center
9. Chao Family Comprehensive Cancer Center, University of California, Irvine
10. City of Hope Comprehensive Cancer Center
11. Cold Spring Harbor Laboratory Cancer Center
12. Dan L. Duncan Cancer Center, Baylor College of Medicine
13. Dana Farber/ Harvard Cancer Center, Harvard University
14. David H. Koch Institute for Integrative Cancer Research at MIT, Massachusetts Institute of Technology
15. Duke Cancer Institute, Duke University Medical Center
16. Fox Chase Cancer Center
17. Fred Hutchinson/University of Washington Cancer Consortium
18. Harold C. Simmons Cancer Center, University of Texas Southwestern Medical Center
19. Herbert Irving Comprehensive Cancer Center, Columbia University
20. Holden Comprehensive Cancer Center, University of Iowa
21. Hollings Cancer Center, Medical University of South Carolina
22. Huntsman Cancer Institute, University of Utah
23. Indiana University Melvin and Bren Simon Cancer Center, Indiana University
24. Jonsson Comprehensive Cancer Center, University of California, Los Angeles
25. Knight Cancer Institute, Oregon Health and Science University
26. Laura and Isaac Perlmutter Cancer Center at NYU Langone, NYU Langone Medical Center
27. Markey Cancer Center, University of Kentucky
28. Massey Cancer Center, Virginia Commonwealth University
29. Mays Cancer Center, University of Texas Health San Antonio
30. Memorial Sloan-Kettering Cancer Center
31. Moffitt Cancer Center
32. Norris Cotton Cancer Center at Dartmouth, Dartmouth-Hitchcock Medical Center
33. Penn State Cancer Institute, Pennsylvania State University
34. Robert H. Lurie Comprehensive Cancer Center, Northwestern University
35. Roswell Park Cancer Institute
36. Salk Institute Cancer Center

37. Sandra and Edward Meyer Cancer Center, Weill Cornell Medical College
38. Sidney Kimmel Comprehensive Cancer Center of the Johns Hopkins University School of Medicine
39. Sidney Kimmel Cancer Center, Thomas Jefferson University
40. St. Jude Children's Research Hospital
41. Stanford Cancer Institute, Stanford University
42. Stephenson Cancer Center, University of Oklahoma
43. Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine
44. The Jackson Laboratory Cancer Center
45. The Tisch Cancer Institute, Icahn School of Medicine at Mount Sinai
46. The University of Chicago Comprehensive Cancer Center
47. The University of Kansas Cancer Center
48. The University of Texas at Austin*
49. The University of Texas MD Anderson Cancer Center
50. The University of Texas Medical Branch
51. UAB Comprehensive Cancer Center, University of Alabama at Birmingham
52. University of California, Davis Comprehensive Cancer Center
53. University of California, San Diego Moores Cancer Center
54. University of California, San Francisco Helen Diller Family Comprehensive Cancer Center
55. University of California, Santa Cruz*
56. University of Colorado Cancer Center
57. University of Florida Health Cancer Center
58. University of Hawaii Cancer Center
59. University of Illinois Cancer Center, University of Illinois at Chicago
60. University of Michigan Rogel Cancer Center
61. University of Pittsburgh Medical Center Hillman Cancer Center
62. University of Virginia Cancer Center
63. University of Wisconsin Carbone Cancer Center
64. University of Southern California Norris Comprehensive Cancer Center
65. Wake Forest Baptist Comprehensive Cancer Center
66. Vanderbilt-Ingram Cancer Center
67. Wilmot Cancer Institute, University of Rochester
68. Winship Cancer Institute, Emory University
69. Winthrop P. Rockefeller Cancer Institute, University of Arkansas for Medical Sciences*
70. Yale Cancer Center, Yale University School of Medicine

*New institutions for the 2021 cycle

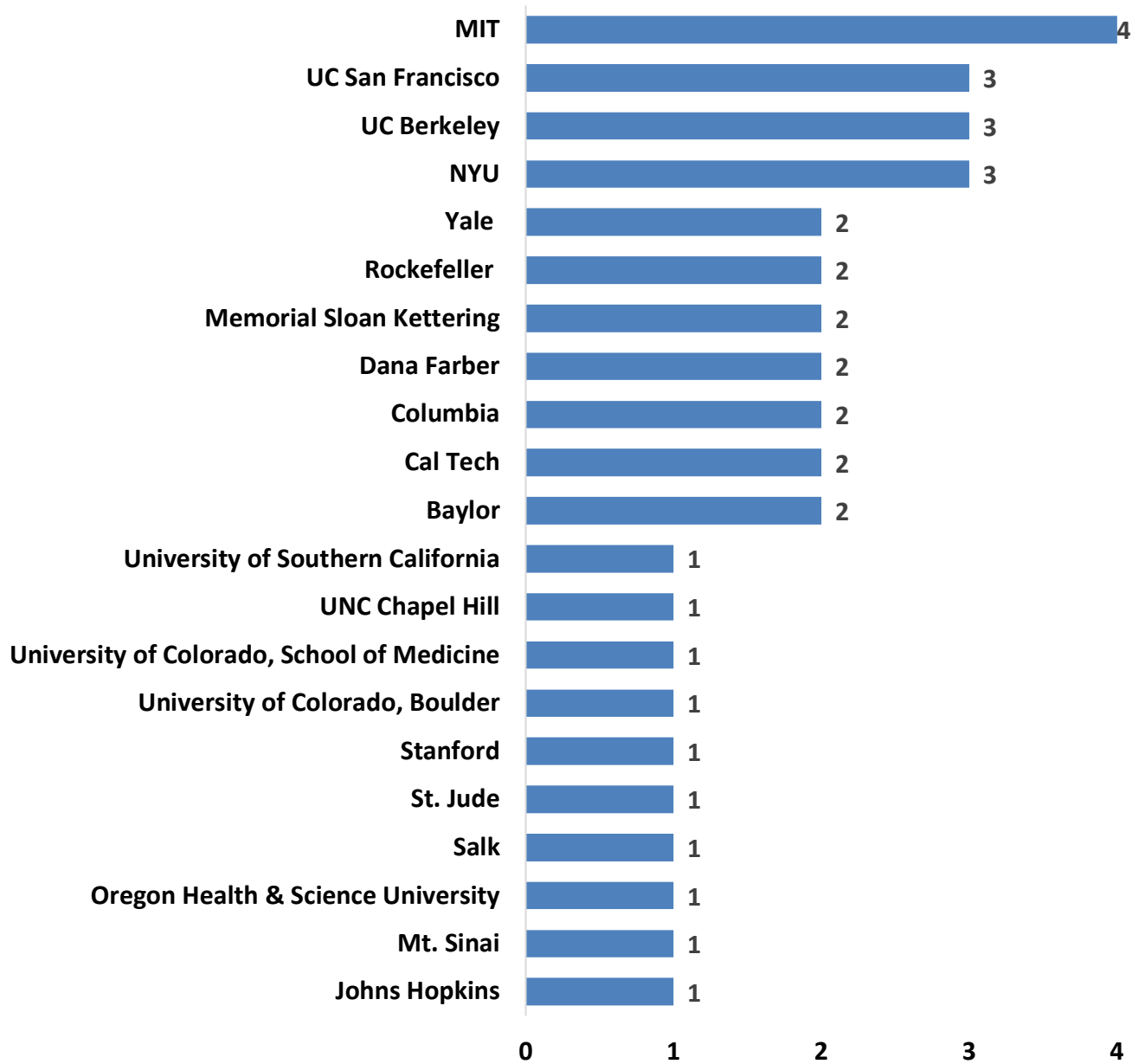
Institutions that did not submit a candidate:

1. Albert Einstein Cancer Center, Yeshiva University
2. Fred and Pamela Buffett Cancer Center, University of Nebraska Medical Center
3. Georgetown Lombardi Comprehensive Cancer Center, Georgetown University

4. Marlene and Stewart Greenebaum Cancer Center, University of Maryland, Baltimore
5. Masonic Cancer Center, University of Minnesota
6. Mayo Clinic Cancer Center
7. National Cancer Institute
8. Purdue University Center for Cancer Research, Purdue University
9. Sanford Burnham Prebys Medical Discovery Institute
10. Stowers Institute for Medical Research
11. The Barbara Ann Karmanos Cancer Institute, Wayne State University School of Medicine
12. The Cancer Institute of New Jersey, Rutgers University
13. The Children's Hospital of Philadelphia
14. The Ohio State University Comprehensive Cancer Center
15. The Wistar Institute Cancer Center
16. University of California, Berkeley
17. University of Massachusetts Cancer Center
18. University of New Mexico Cancer Center
19. University of North Carolina Lineberger Comprehensive Cancer Center
20. Van Andel Research Institute

Appendix IV: Awards by Academic Institution

**Number of Awards per Institution
(2014 - 2020)**



Appendix V: Funded Research Fields Over Time

This chart represents the scope of research fields conducted by 37 Pew-Stewart scholars between 2014-2020. Seven separate research areas are represented. Each class consists of five awardees, except in 2019, where seven were awarded.

