



GRUBER

F O U N D A T I O N



FY 2018 Annual Report

July 1, 2017 – June 30, 2018

A supporting organization of **Yale**

A. Sarah Hreha, Executive Director
The Gruber Foundation
October 15, 2018
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Executive Summary

The Gruber Foundation honors individuals in the fields of Cosmology, Genetics, Neuroscience, Justice, and Women's Rights, whose groundbreaking work provides new models that inspire and enable fundamental shifts in knowledge and culture.

The Gruber Foundation is a 509(a)(3) Type 1 supporting organization operated, supervised, or controlled by Yale University and incorporated in 2011 under the 501(c)(3) section of U.S. Corporate Law. It was funded by The Peter and Patricia Gruber Foundation, and Peter and Patricia Gruber were its Co-founders. As President Emeritus, Patricia Gruber has a lifetime seat on the Board.



A. Sarah Hreha, Executive Director

In fall 2017 the Foundation was delighted to award the Cosmology Prize at Yale for the second time, as part of the fourth annual Gruber Cosmology Conference. Sandra Faber was honored for a body of work that has helped establish many foundational principles underlying the modern understanding of the universe on the largest scales. Faber received the Prize in a brief ceremony, followed immediately by her lecture: Our Universe: Past and Future. The conference brought together scientists from Yale and the wider community, students, Yale administrators, and special guests of Dr. Faber and the Foundation. Yale Provost Ben Polak, a Gruber Director, gave attendees a warm welcome and Gruber staff enjoyed holding an event on home turf.

In addition to the annual Global Constitutionalism Seminar, the Gruber Program for Global Justice and Women's Rights held lectures by Kumi Naidoo (Global Justice) and Ai-Jen Poo (Women's Rights). Interestingly, Ai-Jen Poo is the daughter of Gruber Neuroscience Laureate Mu-ming Poo. The Gruber Science Fellowship Program held a third student-organized symposium, a science lecture and provided support to another cohort of exceptional students. The programs are described in more detail in their respective sections.

The Board of Directors of The Gruber Foundation comprises: Peter Salovey, Chairman; Ben Polak, President; Patricia Gruber, President Emeritus; Joan O'Neill; Waring Partridge. The Treasurer is Elizabeth Bilodeau, and the Executive Director is A. Sarah Hreha.

Further information on the Foundation is available online at gruber.yale.edu

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Fiscal Year 2018 Financial Overview

Statement of Financial Position as of June 30, 2018

Assets

Cash and cash equivalents	\$ 232,414
Investments	107,710,958
Beneficial interest in charitable gift annuity	<u>43,428,492</u>
Total assets	<u>151,371,864</u>

Liabilities

Accounts payable	18,711
Total liabilities	<u>18,711</u>

Net assets	<u>\$151,353,153</u>
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PROGRAM SPENDING

Grants to Yale University

The Gruber Foundation provides grants to Yale University for the Gruber Science Fellowship Program and the Gruber Program for Global Justice and Women's Rights. The agreement provides that The Gruber Foundation will distribute for the benefit of the Gruber Science Fellowship Program the greater of \$2.5 million or 1.6% of the net value of The Gruber Foundation's assets as of the beginning of each fiscal year. In addition, the agreement provides for disbursements of \$1.2 million for the benefit of the Global justice and Women's Rights Program.

The following grants have been distributed through June 30:

Gruber Science Fellowship Program	\$2,500,000
Gruber Justice and Women's Rights	<u>\$1,200,000</u>
	\$3,700,000

Gruber Prizes

Gruber Prizes disbursed through June 30, 2018 were as follows:

2017 Cosmology Prize	\$500,000
2017 Genetics Prize	\$500,000
2017 Neuroscience Prize	\$500,000
	\$1,500,000

Gruber International Prize Program

Fiscal year 2018 saw the 2017 Gruber Prizes awarded and the 2018 recipients selected. The program mission statement is: *The International Prize Program honors individuals in the fields of Cosmology, Genetics, and Neuroscience, whose groundbreaking work provides new models that inspire and enable fundamental shifts in knowledge and culture.*

The 2017 Prizes

COSMOLOGY



October 13, 2017

At the 4th annual Gruber Cosmology Conference
Yale University, New Haven

Gruber Lecture: *Our Universe: Past and Future*

2017 Prize Recipient Sandra Faber and Patricia Gruber

Prize Citation:

The Gruber Foundation proudly presents the **2017 Cosmology Prize** to **Sandra Faber** for her groundbreaking studies of the structure, dynamics, and evolution of galaxies. Her research ranges from detailed studies of the stellar populations, masses, dark matter content, and supermassive black holes in nearby galaxies, to surveys of distant galaxies over cosmic time. The results of these investigations have aided and inspired the work of astronomers and cosmologists worldwide.

Selection Advisory Board: Andrew Fabian, Owen Gingerich (non-voting), Robert Kennicutt (Chair), Sadanori Okamura, Frans Pretorius, Martin Rees (non-voting), Subir Sarkar, Rashid Sunyaev

GENETICS



October 3, 2017

Baylor College of Medicine
Houston, Texas

Gruber Lecture: *Microgenetics: What we can learn
from bits of genes*

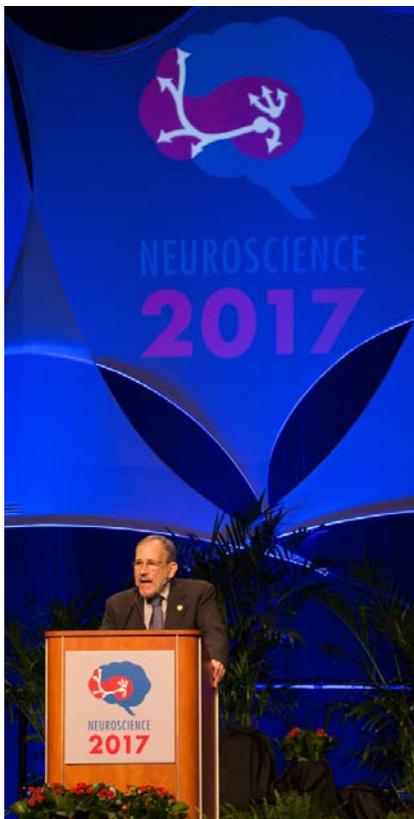
2017 Prize Recipient Stephen Elledge, Patricia Gruber,
Huda Zoghbi

Prize Citation:

The Gruber Foundation proudly presents the **2017 Genetics Prize** to **Stephen Elledge** for discovering and characterizing the molecular mechanisms of the DNA damage response pathway in eukaryotic cells, findings critical for understanding pathogenesis and developing therapies for cancer and other diseases.

Dr. Elledge used clever genetic screens in yeast to identify mechanisms by which cells sense DNA damage and direct effector molecules to initiate efforts to repair the damage and halt progression of the cell cycle until repair is completed. He also showed that this process is conserved in mammals, with orthologous genes playing similar roles. Mutations in many of these genes drive cancer in humans, while others contribute to premature aging or neurological disorders.

Selection Advisory Board: Victor Ambros, Utpal Banerjee, Marlene Belfort, Kay Davies, Helen Hobbs, Richard Lifton, Huda Zoghbi (Chair)

NEUROSCIENCE

2017 Prize recipient Joshua Sanes

November 12, 2017

47th Annual Meeting of the Society for Neuroscience

Washington D.C.

Gruber Lecture: *Assembling neural circuits: cells and synapses*

Prize Citation:

The Gruber Foundation proudly presents the **2017 Neuroscience Prize** to **Joshua Sanes** for his pioneering and inspiring work on synapse formation.

Josh Sanes has used both the neuromuscular junction and more recently the retina to provide fundamental insights into the mechanisms and molecules that drive synapse formation. In now classic experiments, he showed that regenerating muscle fibers can recognize molecules in the extracellular matrix to form synapses at pre-existing sites, even when the muscle is gone. In the retina, his studies have identified the synaptic organization of circuits that form the basis for visual processing.

Sanes's elegant approaches and results have led to seminal and highly influential new ideas about synapse formation and the specificity of connections.

Selection Advisory Board: Susan Amara, Tobias Bonhoeffer, Martin Chalfie, Frances Jensen, Tirin Moore, Erin Schuman, Robert Wurtz (Chair)

More information on the 2017 Gruber Prizes is available at: <http://gruber.yale.edu/gruber-prizes>

Gruber Program for Global Justice and Women's Rights

The Gruber Program for Global Justice and Women's Rights has four core components: 1) the Global Constitutionalism Seminar; 2) the Gruber Distinguished Global Justice and Women's Rights Lectures; 3) the Gruber Global Justice and Women's Rights Fellowships; and 4) the Gruber Project.

Global Constitutionalism Seminar

The Global Constitutionalism Seminar took place September 13-16, 2017, in New Haven, with the theme "Reconstituting Constitutional Orders." The seminar included 22 judges from national and regional courts, including a few new participants. The Faculty Director was Judith Resnik, Liman Professor of Law.

Gruber Distinguished Lectures in Global Justice and Women's Rights

Kumi Naidoo presented "The United States :Friend or Foe of Global Justice" as the Gruber Distinguished Lecture in Global Justice on September 25, 2017. Naidoo is Chair of the Board for Africans Rising for Justice, Peace and Dignity, a pan-African civil society movement. Ai-jen Poo presented "Care and the Future of Work" as the Gruber Distinguished Lecture in Women's Rights on February 26.

Gruber Global Justice and Women's Rights Fellowships

Post-Graduate Fellowships

The sixth class of Gruber Fellows in Global Justice and Women's Rights will have completed their fellowship projects as of fall 2018.

Nicole Collins (Yale School of Public Health '17, **WR**) is partnering with the Rosebud Sioux Tribe's Tribal Health Administration to help restructure its maternal and child health (MCH) program.

Edwin Garcia (Yale School of Forestry and Environmental Studies '17, **J**) is collaborating with Fundación Cordillera Tropical (FTC) and the Ecuadorian Ministry of Environment to develop an environmentally sound management plan for a "green" highway to benefit the Huangras, an indigenous community living in the Sangay National Park

Olivia Horton (Yale Law School '17, **WR**) is providing legal assistance to pregnant and parenting youth seeking welfare benefits, including cash, nutrition, and child care. She is hosted by Greater Boston Legal Services' Welfare Law Unit and collaborates with local social service providers.

Scout Katovich (Yale Law School '17, **WR**) works with the New York Civil Liberties Union to help rescind nuisance ordinances across New York state that have the effect of harming domestic violence survivors by exacerbating survivors' housing insecurities.

Zain Rizvi (Yale Law School '17, **J**) works with SECTION27 to support the health and human rights movement in Johannesburg, South Africa, with legal advocacy and other strategies against a provincial health department for its failure to provide emergency medical services.

The Gruber Committee selected 5 post-graduate 2017-2018 Peter and Patricia Gruber Fellows in Global Justice and Women's Rights, from a pool of 22 applications received from Yale graduate students and alumni from the Law School, the School of Forestry and Environmental Studies, the School of Public Health, the Divinity School, the School of Nursing, the School of Management, the School of Drama, and the Jackson Institute for Global Affairs.

Faculty Fellowships

The Gruber Constitutionalism Faculty Fellows for 2017-18 are Justices Aharon Barak (Israel) and Dieter Grimm (Germany). Daria Roithmayr was the Peter and Patricia Fellow in Global Justice to Yale Law School, enhancing and broadening curricular offerings focused on global justice.

Gruber Project

The Gruber Project provides support for clinical and experiential learning initiatives, and supports four initiatives in 2017-2018: (i) the Asylum Seekers Assistance Project; (ii) the Global Health Justice Partnership; (iii) the International Refugee Assistance Project (IRAP) and (iv) the Domestic Violence Clinic.

2017-2018 Gruber Committee

The Gruber Committee is appointed by the Yale Law School Dean and is responsible for selecting Fellows and the Gruber Distinguished Lecturers. The 2017-2018 Gruber Committee includes: **Reva Siegel**, Chair (Nicholas deB. Katzenbach Professor of Law); **Ann Kurth**, (Dean and Linda Koch Lorimer Professor, School of Nursing); **Kaveh Khoshnood** (Associate Professor of Epidemiology, School of Public Health) **Anika Singh Lemar**, Fall term (Clinical Associate Professor of Law); Douglas NeJaime (Professor of Law) Spring term; **Judith Resnik** (Arthur Liman Professor of Law); **Heather Gerken** (Dean and Sol & Lillian Goldman Professor of Law) (ex officio); **Sara Lulo** (Assistant Dean) (ex officio) and **Mindy Jane Roseman** (Director, Gruber Program for Global Justice and Women's Rights, ex officio).

Gruber Science Fellowship Program

The purpose of the Gruber Science Fellowship is to recruit and support the very best graduate students to pursue doctoral studies in the life sciences, cosmology and astrophysics at Yale's Graduate School of Arts and Sciences.



Peter Salovey, Richard Sleight, Lynn Cooley, Patricia Gruber, and Sarah Hreha pose with the 2017 cohort of Gruber Science Fellows at Yale.

2017 Gruber science fellows:

Myles Alderman, Molecular Cell Biology, Genetics, and Development

Jillian Armstrong, Epidemiology of Microbial Diseases

Luke Batty, Molecular Cell Biology, Genetics, and Development

Mike Blazanin, Ecology and Evolutionary Biology

Siyuan (Lily) Cheng, Molecular Cell Biology, Genetics, and Development

Jack Collora, Microbiology

Can Cui, Immunobiology

Siddhartha Dhakal, Molecular Cell Biology, Genetics, and Development

Austin Draycott, Molecular Cell Biology, Genetics, and Development

Scott Gigante, Computational Biology and Bioinformatics

Kavita Israni-Winger, Immunobiology

Minsoo Khang, Biomedical Engineering

Feimei Liu, Biomedical Engineering

Timothy Miller, Astronomy

Sarah Mohr, Neuroscience

Mitchell Morton, Neuroscience

Damir Musaeu, Molecular Cell Biology, Genetics, and Development

Nicole Sonnert, Microbiology

Ryosuke Tanaka, Neuroscience

Iris van Alderweralt van Rosenburgh, Molecular Medicine, Physiology and Pharmacology

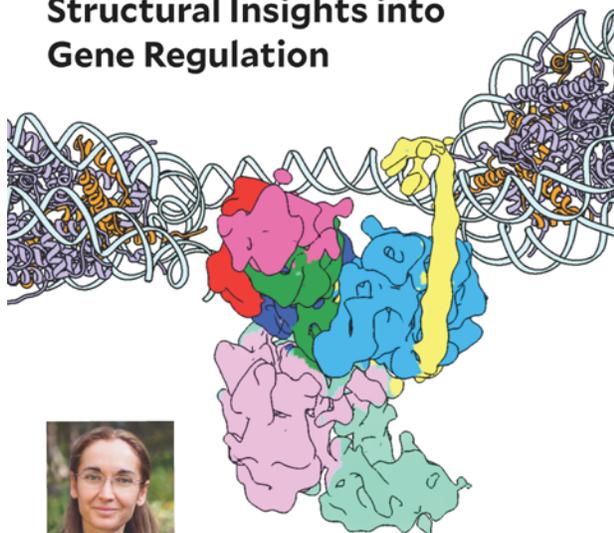
Orr-El Weizman, Immunobiology

Kathy Zhang, Neuroscience

Gruber Science Fellowship Lecture

Yale University Graduate School of Arts and Sciences
2018 GRUBER SCIENCE FELLOWSHIP LECTURE

Structural Insights into Gene Regulation



Eva Nogales
*Professor of Biochemistry,
Biophysics and Structural
Biology, Molecular and
Cell Biology Department,
University of California at
Berkeley*

Tuesday, May 15, 2018
4:00 p.m.
**The Anlyan Center
Auditorium**
300 Cedar Street

Reception to follow in
The Anlyan Center Auditorium Lobby

Eva Nogales, Professor of Biochemistry, Biophysics and Structural Biology, Molecular and Cell Biology Department, University of California at Berkeley, delivered the Gruber Science Fellowship Lecture on May 15, 2018.

Her lecture was titled “**Structural Insights into Gene Regulation**”

Yale

The Gruber Science Fellowship Lectures bring renowned scientists to campus to speak about the current state of knowledge in their fields. All lectures are free and open to the public.