New Recruits
Helene Langevin, M.D.
Director, National Center for Complementary and Integrative Health

Sworn in on November 26, 2018
Bruce Tromberg, Ph.D.
Incoming Director
National Institute of Biomedical Imaging and Bioengineering
Representative Ro Khanna
July 30, 2018
Rep. Andy Harris
GOP Doctors Caucus, September 5, 2018
2018 Albany Medical Center Prize in Medicine
Steven A. Rosenberg, Carl June, James Allison
September 26, 2018
NIH-Funded Nobel Prize Winners

Chemistry

Frances H. Arnold
George P. Smith

Medicine or Physiology

James Allison
SPECIAL EVENTS
Backstage with The Edge and Patients from the Children’s Inn
June 18, 2018
Music and the Mind 2nd Annual Concert/Workshop
September 7, 2018
Grand Opening: Clinical Center’s Hospice Suites
July 10, 2018
NIH researcher presents encouraging results for gene therapy for severe sickle cell disease

NIH greatly expands investment in BRAIN Initiative
NIH announces new round of awards for cutting-edge brain research.

Ibrutinib plus rituximab superior to standard treatment for some patients with chronic leukemia

Daily low-dose aspirin found to have no effect on healthy life span in older people
Large NIH-funded study examined outcomes in United States and Australia

Clinical trial of investigational Ebola treatments begins in the Democratic Republic of the Congo

Methadone and buprenorphine reduce risk of death after opioid overdose
NIH research confirms effective treatments for opioid use disorder are underutilized.

NIH-funded genome centers to accelerate precision medicine discoveries
Part of the All of Us Research Program, centers will sequence 1 million genomes.
Cure Sickle Cell Initiative

**Patient Engagement**
Establish community of patients, caregivers, advocates

**Public-Private Partnership**
Leverage networks to accelerate cures

**Patient Outcomes**
Perform clinical and economic impact analysis as a resource

**Data Management**
Develop robust systems for patients and researchers

**Clinical Strategies**
Support promising research; develop meaningful endpoints for GT trials

**Biomanufacturing**
Reagent manufacturing, biospecimen, regulatory resources for researchers

**CURE SICKLE CELL.**
NIH needs your innovative research ideas through our newly announced NIH HEAL Initiative funding opportunities

NIH leadership from across the agency has been working diligently over the past several months to identify areas of greatest opportunity for research to address the national opioid crisis. The result is more than 30 new funding opportunity announcements (FOAs) to solicit the best and brightest research ideas through the NIH HEAL (Helping to End Addiction Long-term℠) Initiative.

Through these and other investments, NIH plans to award more than $850 million in support of HEAL Initiative research in fiscal year (FY) 2019 (from funds appropriated in FY 2018 and FY 2019). This adds to a substantial investment made by NIH Institutes and Centers (ICs) in the areas of pain, addiction, complementary medicine, and much more.
Global Health Issues
KEEP CALM AND COMPLY WITH GDPR
In Memoriam
Remembering NCI’s Alan Rabson
October 30, 2018
Remembering President George H. W. Bush
June 12, 1924 – November 30, 2018

Opening of the NIH Children’s Inn
June 21, 1990

Bernadine Healy’s Swearing-In
June 24, 1991
Overview of genomic data

HIV Carrier → HIV Negative → ICSI & Cas9-gRNA Injection → Blastocysts → Pregnancy → Lulu, Nana

Peripheral Blood Genomic DNA → 3-5 Cells Biopsy for PGD

12 Weeks, 19 Weeks, 24 Weeks

Cell Free DNA → Cord Blood, Umbilical Cord Tissue, Placenta

Sanger Sequencing → 30X WGS → Parental Genomes Enable Calling De Novo Indels, Haplotype to Increase Sensitivity, and Personalized Off-Target Hotspot Risk Pool

MiSeq Targeted Sequencing → 609 Cancer Genes Ultra Deep Sequencing (40,000X) → Screen for Whole Genome On-Target and Off-Target Activity + Large Deletions

Assess Off-Target Activity, Oncogene Status, CRISPR Editing → Assess Effects of Editing Across Sample Types

one 6kb deletion at on-target site
“Lest there be any doubt, and as we have stated previously, NIH does not support the use of gene-editing technologies in human embryos.”
NIH’s Somatic Cell Genome Editing Program

- Launched December 10-11, 2018
- New program to speed development of safe, effective editing tools for *in vivo* applications in human patients
- Awarding $190M over six years to:
  - Develop new technologies for improving *in vivo* delivery of genome editing tools
  - Improve safety and efficacy testing
  - Make tools, data widely available