

[Quick Links](#)

Research Areas

- [Biological Sciences](#)
- [Computer & Information Science & Engineering](#)
- [Education and Human Resources](#)
- [Engineering](#)
- [Environmental Research & Education](#)
- [Geosciences](#)
- [International & Integrative Activities](#)
- [Mathematical & Physical Sciences](#)
- [Social, Behavioral & Economic Sciences](#)

Learning Resources

- [Film, TV, Exhibits & More!](#)
- [Slideshows & Photo Galleries](#)
- [Classroom Resources](#)
- [Funding for Research on Learning in Formal & Informal Settings](#)

Funding & Awards



National Science Foundation
WHERE DISCOVERIES BEGIN

Funding Info

- [Search Funding Opportunities](#)
- [Browse Funding Opportunities A-Z](#)
- [Recent Funding Opportunities](#)
- [How to Prepare a Funding Proposal](#)
- [Grant Proposal Guide](#)
- [Submit a Proposal to FastLane](#)

Award Info

- [Managing Awards](#)
- [Award & Administration Guide](#)
- [Search Awards](#)
- [Award Statistics \(Budget Internet Info System\)](#)

News & Discoveries

- [Recent News](#)
- [Recent Discoveries](#)
- [Multimedia Gallery](#)
- [Special Reports](#)

Contact Us

- [Staff Directory](#)
- [Organization List](#)
- [Visit NSF](#)
- [Work at NSF](#)
- [Do Business with NSF](#)
- [Press](#)

- [Inspector General Hotline](#)
- [How Do I...?](#)

The National Science Foundation

4201 Wilson Boulevard,
Arlington,
Virginia 22230, USA

Tel: (703) 292-5111
FIRS: (800) 877-8339
TDD: (800) 281-8749

- [Home](#)
- [Funding](#)
 - [Search Funding Opportunities](#)
 - [Browse Opportunities A-Z](#)
 - [Recent Opportunities](#)
 - [Due Dates](#)
 - [Preparing Proposals](#)
 - [Policies & Procedures](#)
 - [Merit Review](#)
 - [Interdisciplinary Research](#)
 - [Transformative Research](#)
 - [About Funding](#)
- [Awards](#)
 - [About Awards](#)
 - [Managing Awards](#)
 - [Policies & Procedures](#)
 - [Award Conditions](#)
 - [Search Awards](#)
 - [Presidential & Honorary Awards](#)
 - [Award Statistics \(Budget Internet Info System\)](#)
- [Discoveries](#)
 - [Discoveries Home](#)
 - [Arctic & Antarctic](#)
 - [Astronomy & Space](#)
 - [Biology](#)
 - [Chemistry & Materials](#)
 - [Computing](#)
 - [Earth & Environmental Science](#)

- [Education](#)
- [Engineering](#)
- [Mathematics](#)
- [Nanoscience](#)
- [People & Society](#)
- [Physics](#)
- [Search Discoveries](#)
- [About Discoveries](#)
- [News](#)
 - [News Home](#)
 - [For News Media](#)
 - [Multimedia Gallery](#)
 - [Special Reports](#)
 - [News from the Field](#)
 - [Research Overviews](#)
 - [Speeches & Lectures](#)
 - [NSF Current Newsletter](#)
 - [NSF-Wide Investments](#)
 - [News Archive](#)
 - [Search News](#)
- [Publications](#)
 - [Publications Home](#)
 - [Search Publications](#)
 - [Obtaining Publications](#)
- [Statistics](#)
 - [NCSES Home](#)
 - [NCSES Data](#)
 - [NCSES Publications](#)
 - [NCSES Surveys](#)
 - [NCSES Topics](#)
 - [Search NCSES](#)
 - [About NCSES](#)
- [About NSF](#)
 - [About NSF](#)
 - [History](#)
 - [Visit NSF](#)
 - [Contact NSF](#)
 - [Staff Directory](#)
 - [Organization List](#)
 - [Career Opportunities](#)
 - [Contracting Opportunities](#)
 - [NSF & Congress](#)
 - [Budget](#)
 - [Performance Assessment Info](#)

- [Partners](#)
- [Broadening Participation/Diversity](#)
- [Office of Diversity & Inclusion](#)
- [Fastlane](#)

[News](#)



Email  Print 

News From the Field

Nanomotors are controlled, for the first time inside living cells

February 10, 2014



For the first time, a team of chemists and engineers at Penn State University have placed tiny synthetic motors inside live human cells, propelled them with ultrasonic waves and steered them magnetically. This research is a vivid demonstration that it may be possible to use synthetic nanomotors to study cell biology in new ways, such as treating cancer and other diseases.

[Full Story](#)

Source

Penn State

The National Science Foundation (NSF) is an independent federal agency that supports fundamental research and education across all fields of science and engineering. In fiscal year (FY) 2014, its budget is \$7.2 billion. NSF funds reach all 50 states through grants to nearly 2,000 colleges, universities and other institutions. Each year, NSF receives about 50,000 competitive requests for funding, and makes about 11,500 new funding awards. NSF also awards about \$593 million in professional and service contracts yearly.

[Get News Updates by Email](#)

Useful NSF Web Sites:

NSF Home Page: <http://www.nsf.gov>

NSF News: <http://www.nsf.gov/news/>

For the News Media: <http://www.nsf.gov/news/newsroom.jsp>

[News](#)

[News From the Field](#)

[For the News Media](#)

[Special Reports](#)

[Research Overviews](#)

[NSF-Wide](#)

[Investments](#)

[Speeches & Lectures](#)

[NSF Current](#)

[Newsletter](#)

[Multimedia Gallery](#)

[News Archive](#)

News by Research Area

[Arctic & Antarctic](#)

[Astronomy & Space](#)

[Biology](#)

[Chemistry &](#)

[Materials](#)

[Computing](#)

[Earth & Environment](#)

[Education](#)

[Engineering](#)

[Mathematics](#)

[Nanoscience](#)

[People & Society](#)

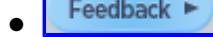
[Physics](#)

Science and Engineering Statistics:

<http://www.nsf.gov/statistics/>

Awards Searches: <http://www.nsf.gov/awardsearch/>

Email  Print 



[Take our Customer Satisfaction Survey](#)

[↑ Top](#)

- [Funding](#)
- [Awards](#)
- [Discoveries](#)
- [News](#)
- [Publications](#)
- [Statistics](#)
- [About NSF](#)
- [Fastlane](#)

- [Research.gov](#)
- [USA.gov](#)
- [National Science Board](#)
- [Recovery Act](#)
- [Budget and Performance](#)
- [Annual Financial Report](#)

- [Web Policies and Important Links](#)
- [Privacy](#)
- [FOIA](#)
- [NO FEAR Act](#)
- [Inspector General](#)

- [Webmaster Contact](#)
- [Site Map](#)



The National Science Foundation, 4201 Wilson Boulevard, Arlington, Virginia 22230,
USA Tel: (703) 292-5111, FIRS: (800) 877-8339 | TDD: (800) 281-8749

- [Text Only Version](#)
- [View Mobile Site](#)