DIVISION OF CHEMISTRY (CHE)

$251,200,000
+$7,350,000 / 3.0%

CHE Funding
(Dollars in Millions)

	FY 2014 Actual	FY 2015 Estimate	FY 2016 Request	Change Over FY 2015 Estimate Amount	Percent
Total, CHE	**$235.18**	**$243.85**	**$251.20**	**$7.35**	**3.0%**
Research	**221.11**	**233.30**	**238.00**	**4.70**	**2.0%**
CAREER	25.53	23.57	24.66	1.09	4.6%
Centers Funding (total)	33.89	30.76	32.25	1.49	4.8%
Centers for Chemical Innovation	33.49	30.51	32.00	1.49	4.9%
Nanoscale Science & Engineering Centers	0.40	0.25	0.25	-	-
Education	**7.45**	**6.25**	**6.01**	**-0.24**	**-3.8%**
Infrastructure	**6.62**	**4.30**	**7.19**	**2.89**	**67.2%**
National High Magnetic Field Laboratory (NHMFL)	3.58	-	1.88	1.88	N/A
National Nanotechnology Coordinated Infrastructure (NNCI)	-	0.30	0.30	-	-
National Nanotechnology Infrastructure Network (NNIN)	0.30	-	-	-	N/A
Research Resources	2.74	4.00	5.01	1.01	25.3%

Totals may not add due to rounding.

CHE supports a large and vibrant research community engaged in fundamental research linked to key national priorities. CHE will enable research in sustainability and clean energy, providing new molecules and tools that are essential to our economy and well-being. Through the development of new methodologies in chemical synthesis, CHE is a natural contributor to advancing manufacturing technology. CHE strongly supports research at the interfaces with biology and materials research, within both experimental and theoretical/computational frameworks. CHE's programs invite research in catalysis for energy capture and storage as well as for the formation of new chemical bonds, appreciation of, and insight into, the chemistry of life processes, new nano-structured materials that will revolutionize electronics and photonics, and better awareness of how nano-size aerosols and particles impact our environment. In addition, CHE supports curiosity-driven research that leads to increased understanding of molecules and their chemical transformations, as well as the development of new instrumentation to study and detect molecules.

In general, 59 percent of the CHE portfolio is available for new research grants and 41 percent goes to continuing grants; the Centers for Chemical Innovation program constitutes 43 percent of continuing grant commitments in FY 2016. Almost 85 percent of CHE's budget is used to support individuals and small groups of researchers, while about 15 percent of the budget supports centers and facilities.

FY 2016 Summary

All funding decreases/increases represent change over the FY 2015 Estimate.

Research

- CAREER (+$1.09 million to a total of $24.66 million): CHE continues its commitment to young investigators. This increase will fund two to three additional awards.
- Centers for Chemical Innovation (+$1.49 million to a total of $32.0 million): This increase in FY 2016 is due to forward funding in FY 2014, which allowed lower level in FY 2015. The last set of Phase I Centers will compete for Phase II awards in FY 2015 with no new Phase I Centers supported until the program is evaluated and redesigned in future years.
- Advanced Manufacturing continues to be important, increasing 8.6 percent, with projects supported through unsolicited individual investigator grants and the Centers for Chemical Innovation program (+$1.33 million to a total of $16.74 million).
- SEES (-$3.0 million to a total of $10.0 million): Plans are being developed to mainstream the SusChEM activities into the CHE individual investigator award programs and thematically-related centers in the Centers for Chemical Innovation program. The SEES Postdoctoral Fellows Program is discontinued in FY 2015 and the funds folded into SusChEM activities.
- CHE begins a new investment ($7.20 million) in sustainability through the NSF-wide program, Innovations at the Nexus of Food, Energy, and Water Systems, via joint solicitations, Dear Colleague Letters, and unsolicited proposals through the Environmental Chemical Sciences and Chemical Measurement and Imaging Programs.
- Understanding the Brain (+$260,000 to a total of $3.80 million): CHE continues to grow investments in this cross-Foundation activity.

Education

- CHE maintains a commitment to Research Experiences for Undergraduates at $5.05 million.
- CHE maintains its commitment to diversity through programs such as ADVANCE at $800,000.
- CHE's overall education investments are down (-$240,000 to a total of $6.01 million) mainly due to the discontinuation of the SEES Postdoctoral Fellows Program and the Office of Multidisciplinary Activities assumption of MPS's commitments to the NRT program.

Infrastructure

- National High Magnetic Field Laboratory (+$1.88 million to a total of $1.88 million): CHE funding for NHMFL supports the maintenance and operation of the recently installed 21-Tesla magnet at the Ion Cyclotron Resonance (ICR) facility. NHMFL was forward-funded in FY 2014 to cover the entire FY 2015 increment; FY 2016 funding returns to the level in the current cooperative agreement.
- National Nanotechnology Coordinated Infrastructure (no change at $300,000): Funds are requested for CHE's contribution to NNCI, the successor to the NNIN.
- Research Resources (+$1.01 million to a total of $5.01 million): This includes support for ChemMatCARS at Argonne National Laboratory (+$270,000 to a total of $970,000), consistent with the renewal award funding level, and adds support for highly meritorious Major Research Instrumentation proposals (+$1.50 million to a total of $3.50 million).