RESEARCH ON THE RISE

College of Science and Technology
Board of Visitors
April 21, 2016

Michele Masucci
Vice President
TEMPLE’S WORLD CLASS FACULTY LEAD
TEMPLE’S WORLD CLASS FACULTY LEAD EXCELLENCE IN BASIC DISCOVERY
TEMPLE’S WORLD CLASS FACULTY LEAD

CROSSCUTTING AND INTERDISCIPLINARY RESEARCH
TEMPLE’S WORLD CLASS FACULTY LEAD
RESEARCH THAT MATTERS FOR SOCIETY
RESEARCH ACCOLADES PUT TEMPLE IN THE SPOTLIGHT
TOP 100 UNIVERSITIES IN RESEARCH EXPENDITURES
The Carnegie Classification of Institutions of Higher Education ™

FY 2013 and 2014: $230M
FY 2015: $242M
88th overall in federal research expenditures
TOP 100 UNIVERSITIES IN RESEARCH EXPENDITURES

- 57th among public universities
- Highest growth among $100M research institutions from FY 2004-2013
- $998,598,405 in requests for FY 2015, 21% increase from FY 2014
RANKED 115 IN US NEWS AND WORLD REPORT

# 1 Online Business
# 13 in International Business
# 21 in Best Hospitals - Fox Chase
# 22 in graduation rate performance
TOP 29 IN GOOGLE CITATIONS WORLDWIDE

- 848,538 citations in Google Scholar for top 10
- 1,069,239 citations for top 20
- 4 Top 100 most cited papers (Nature Magazine)
CST Tops the Temple List

10 of TU Top 20

- Nei – 238K
- Perdew – 170K
- Kumar – 106K
- Klein – 62K
- Sun – 34K

- Surrow – 33K
- Giordano – 25K
- Dikin – 24K
- Yang – 23K
- Hedges – 19K
HIGHEST RESEARCH ACTIVITY DESIGNATION

Top 4% in US
INSIDE CST: 2\textsuperscript{nd} in Awards by College at Temple

- FY 2014 - $16.9 M
- FY 2015 - $27.8 M
- FY 2016 - $17.6 M *

<table>
<thead>
<tr>
<th>Department</th>
<th>Name</th>
<th>Awards</th>
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INSIDE CST:
Rise in NSF Early Career Grants

Awardees

Hsieh – Biology
Matskika – Chemistry
Wuest – Chemistry
Ling – CIS
Davatzes – EES
Rider – Math
INSIDE CST: Expenditures Fy 2014-16
BOARD OF TRUSTEES R&D FUND
$50M SINCE 2012*
$5.4 M Allocated to CST

2010  $147M  30 Disclosures
2011  $166M  44 Disclosures
2012  $160M  51 Disclosures
2013  $230M  60 Disclosures

2014  $236M  60 Disclosures
2015  $242M  115 Disclosures

TEMPLE RESEARCH EXPENDITURES REPORTED TO NSF
*4.4M Allocated in FY 2012 by AP Englert
Launch of TU Ventures – Powered by BFTDSEP

- $1 M fund for early stage start ups

DOD top line funding for Ballistics & TBI

- $20 M Line managed by Temple, $5-9M for TU research for FY 2016-17
- $40 M request for FY 2017
INNOVATION BASED ON RESEARCH SUCCESS

**REVENUE**
$15M in licensing revenue in past 5 years, highest level in past two decades

**INVENTIONS**
171 new inventions in the past 5 years
71% increase over prior 5 years

**PATENTS**
83 new patent filings in past 5 years, 52% of total

**START UPS**
13 startups in the past 5 years, equal to past 2 decades
# PARTNERSHIPS FOR SUCCESS

## UNIVERSITY CITY SCIENCE CENTER
- QED Program
- Phase 1 Ventures
- Scientific Advisory Board

## BEN FRANKLIN TECHNOLOGY PARTNERS
- TU Ventures
- Individual project support
  - BFTDA Board Participation

## COMCAST, SAMSUNG, JANSSEN, GE
- WET Center
- Phage Tech
- Innovation Hub

## NATIONAL ACADEMIES
- FDP Leadership
- Participation in GUIRR
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