

Going for the Gold

MCNAIR PROMISING PRACTICES INSTITUTE

John Mateja, PhD
President
Goldwater Scholarship Foundation

My History



BS (1972, physics), PhD (1976, nuclear physics), University of Notre Dame

Faculty Member – Tennessee Technological University

Senior Program Leader, Division of Education Programs – Argonne National Laboratory

Program Manager, Office of Basic Energy Sciences – Department of Energy

Program Officer, Division of Undergraduate Education – National Science Foundation

Dean/UR Office Founding Director/**McNair Director (11 years)** – Murray State University

President – Goldwater Scholarship and Excellence in Education Foundation

Council on Undergraduate Research (President, Councilor – 32+ years)

National Conference on Undergraduate Research (Chair, Board Member – 10+ years)

Fellow – American Physical Society and Council on Undergraduate Research

Presentation Overview

Rethinking How We Use National Scholarship Competitions

Competing for a Goldwater Scholarship

Mission

The Scholarship

Statistics

2019 Competition

Secrets to Winning a Goldwater Scholarship

Questions/Contact Information

"The Goldwater application was my first research proposal.

I learned that that science is a truly creative endeavor:

I was limited only by my imagination and the laws of physics."

Christina Chang, Chemistry

Princeton University

2011 Goldwater Scholar

Rethinking How We Use National Scholarship Competitions

National Scholarship Application Strategy

Culminating Activity

- Student begins to think about award when starting to fill out an application
- Money and recognition

“Roadmap to Success”

- Student reviews award criteria EARLY in academic program & plans accordingly
 - Sciences: Goldwater, NSF GRF, Churchill, Hertz
 - Other Areas: Fulbright, Rhodes, Truman, many others
 - What will they find they need: research, interaction with faculty, 3 letters of recommendation, good grades, and carefully considered career plan.

From a McNair Program Perspective

The “Roadmap to Success”:

- tells your students you hold them in high regard and have high expectations of them,
- identifies a pathway to success for them,
- provides a benchmark against which students can check their progress, and
- sets the bar for students and mentors.

Winning national awards/scholarships raises the profile of your program!

Example – Goldwater Scholarship

Questions asked on Goldwater application:

1. Describe your career goals and professional aspirations.
 - Describe which STEM areas you are considering pursuing in your research career and specify how your current academic program and overall educational plans will assist you in achieving your goals.
2. Describe an activity or experience that has been important in helping shape your desire to pursue a STEM research career.
3. (Optional) Describe any social and/or economic impacts you have personally experienced that have influenced your education – positively or negatively – and describe how you dealt with them.
4. Research project (Start/stop date; hours/week; description; mentors; publications; presentations)

Example – Goldwater Scholarship (cont.)

Questions asked on Goldwater application:

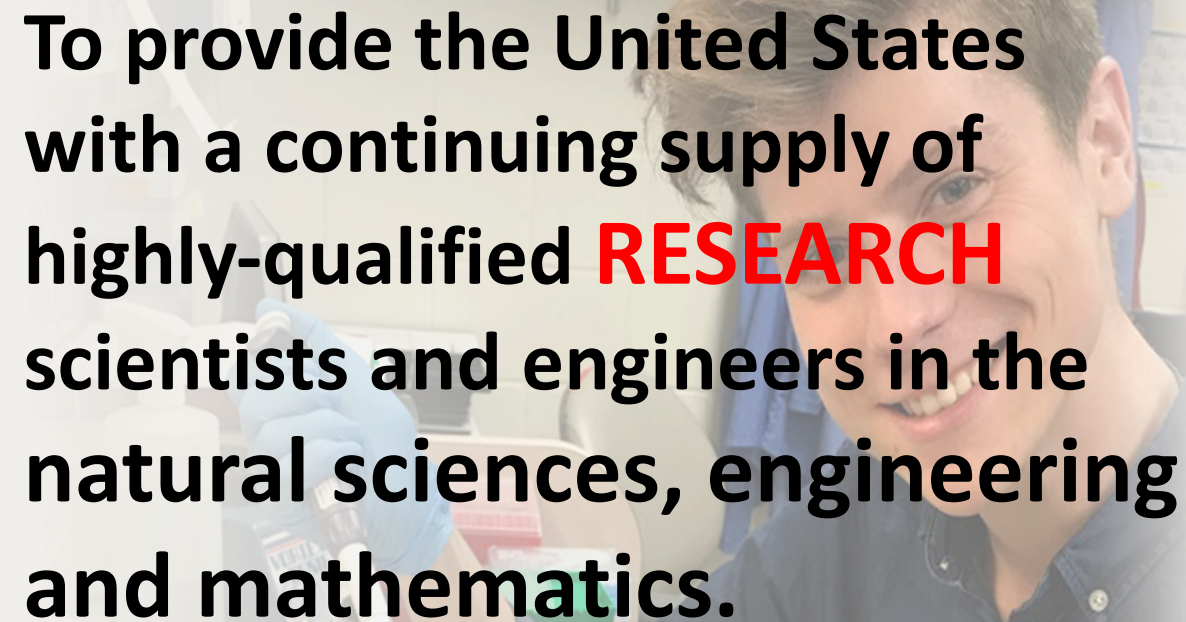
5. Activities/Accomplishments (Organization, Scope of activity [international, national etc]; Leadership position, Length of Involvement).
6. Recognitions (Describe recognition, Type [international, national, etc], Award year)
7. Academic Record (GPA; Courses taken and anticipated; anticipated credit hours at graduation; transcripts)
8. Letters of Recommendation – 3 (letters that talk about potential to become a STEM researcher)
9. Research Essay (Extensive description of a research project describing student's role/contributions to the project)

Where's the Gold?

The **GOLD** in Goldwater
is going through process!
(or any other national scholarship)

Competing for a Goldwater Scholarship

Goldwater Mission



To provide the United States with a continuing supply of highly-qualified **RESEARCH** scientists and engineers in the natural sciences, engineering and mathematics.

"At nearly every graduate school interview, the Goldwater scholarship was a major talking point. It seemed that every faculty member immediately knew I was passionate about pursuing a career in science and in research."

Jonathan Sens, Biochemistry/Biology
University of Dayton
2015 Goldwater Scholar

The Scholarship

A student in a wheelchair is shown on a paved path next to a brick wall. The student is wearing a patterned shirt and khaki pants, and is smiling. The background shows a clear blue sky and some campus buildings.

Sophomore

- Up to \$7,500 in each of a student's Junior and Senior years

Junior

- Up to \$7,500 in a student's Senior year

"I really enjoy helping students with their studies and conveying my passion for research, I find it to be a very rewarding experience."

Sean Thatcher, Biology
City University of New York: College of Staten Island
2015 Goldwater Scholar

Statistics – Past Goldwater Recipients

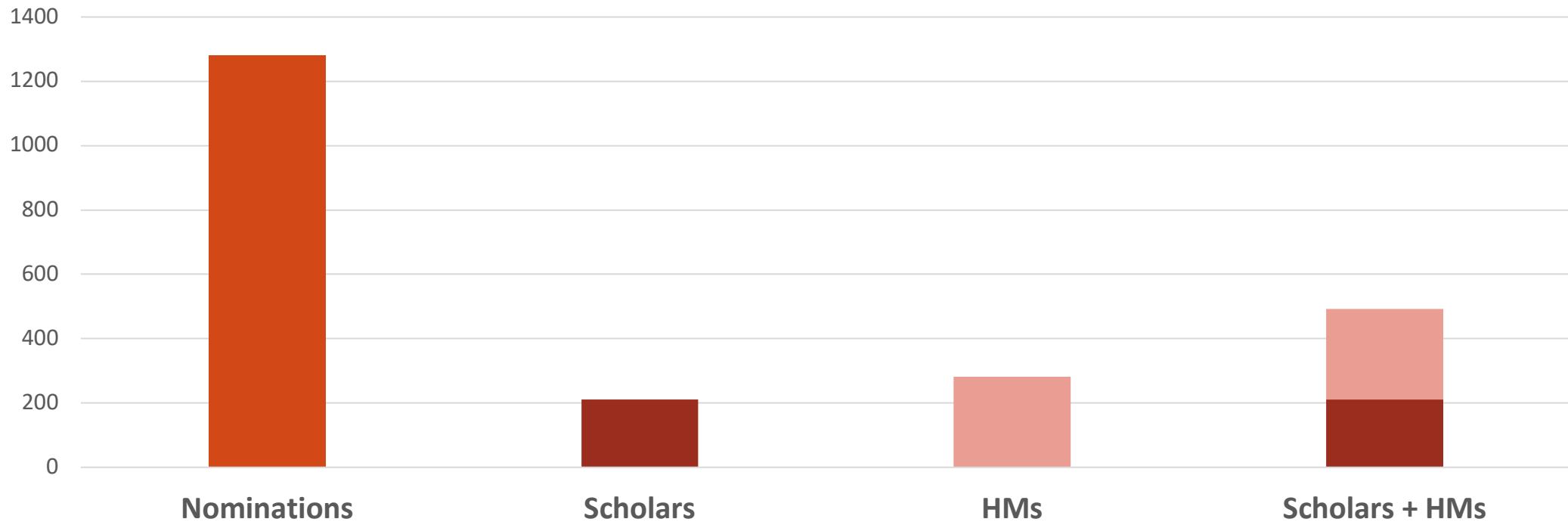
Total number of scholarships (1989 - 2018) = 8130

Amount awarded (1989 - 2018) – Over \$65 M

2014 survey of all awardees (1989 - 2013)

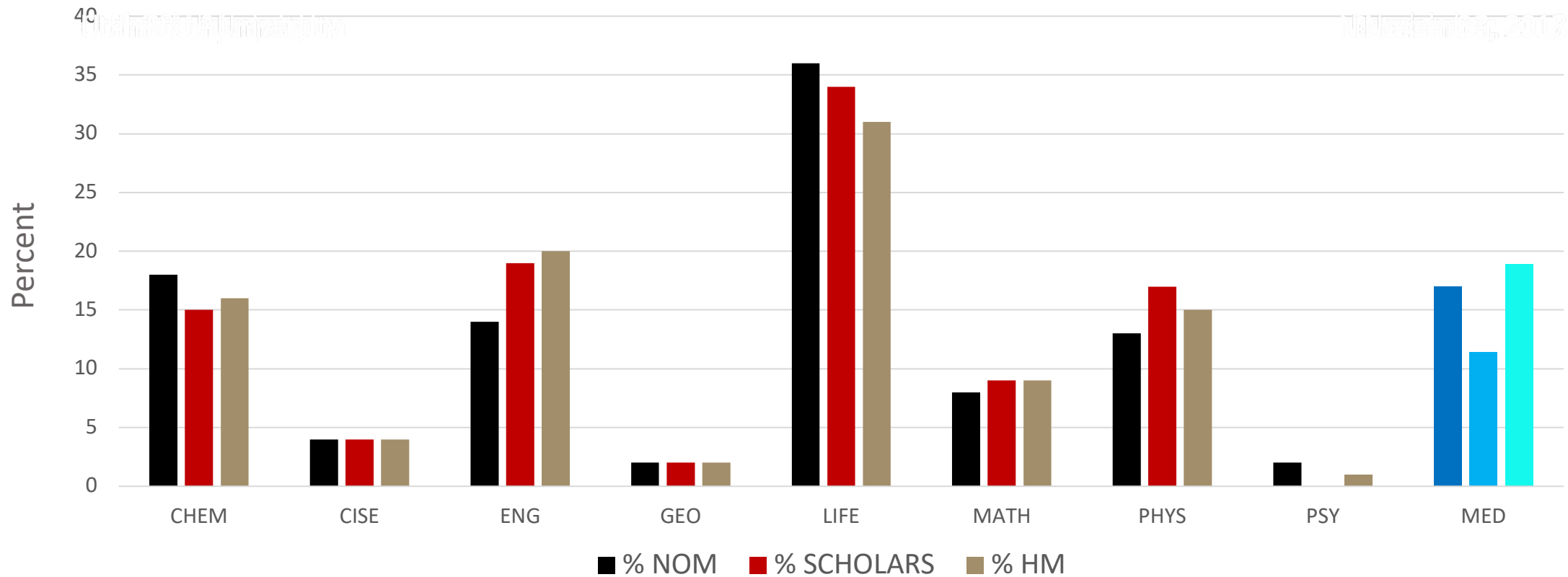
- 99% have at least one degree
- 49% have earned a Ph.D. in science, math or engineering
- 20% still working on a Ph.D. (Bringing total PhDs to ~70%)
- 8% have completed “other” doctoral degrees (e.g., M.D., J.D.)
- 72% report current involvement in research

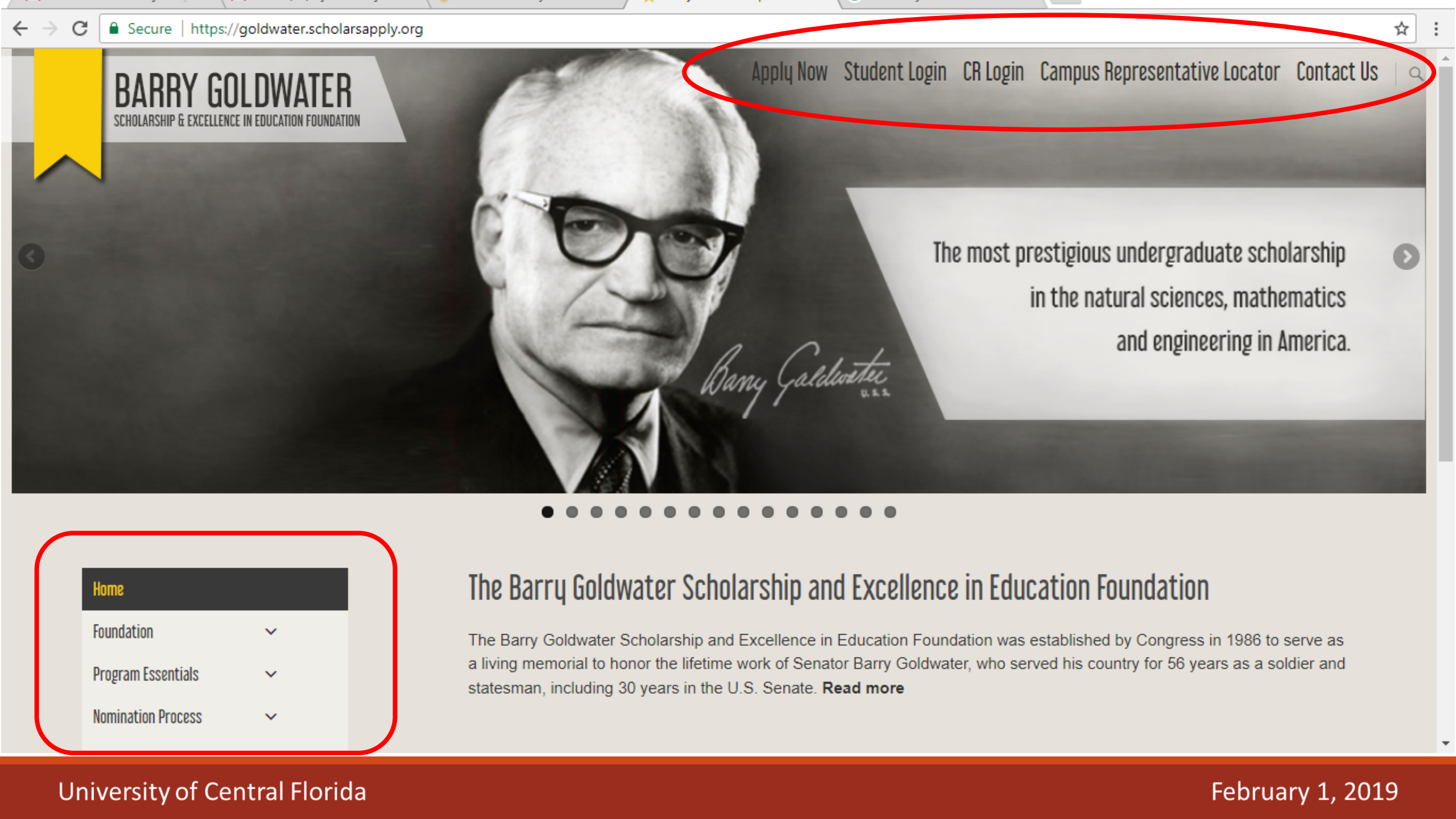
2018 Statistics – Nominations/Awards



$$(\text{Scholars} + \text{HMs}) / \text{Nominations} = 38\%$$

2018 Statistics - By Discipline





BARRY GOLDWATER

SCHOLARSHIP & EXCELLENCE IN EDUCATION FOUNDATION

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Foundation



Program Essentials



Nomination Process



The Barry Goldwater Scholarship and Excellence in Education Foundation

The Barry Goldwater Scholarship and Excellence in Education Foundation was established by Congress in 1986 to serve as a living memorial to honor the lifetime work of Senator Barry Goldwater, who served his country for 56 years as a soldier and statesman, including 30 years in the U.S. Senate. **Read more**

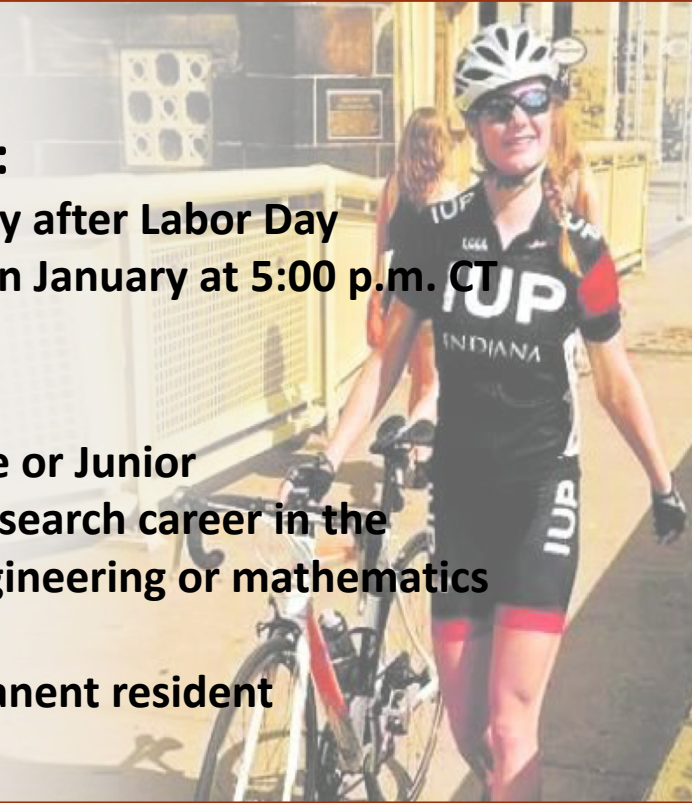
2019 Competition

Nomination Period:

- Opens – First Tuesday after Labor Day
- Closes – Last Friday in January at 5:00 p.m. CT

Eligibility:

- Full-time Sophomore or Junior
- Intent to pursue a research career in the natural sciences, engineering or mathematics
- GPA of 3.0 or Higher
- U.S. Citizen or permanent resident



"I am a first-generation student trying to navigate my way through to graduate school. I was excited to win. I am responsible for my own finances. So next year, I won't have to take any loans."

Kara McClain
Indiana University of Pennsylvania, BSN Nursing
2016 Goldwater Scholar

2019 Competition – Nomination Process

Steps in the Nomination Process

- Student must complete a pre-application and profile → **Campus Representative**
- **Application Elements**
 - On-line student questionnaire
 - Can review the questions on the web site
 - Research Essay
 - Transcript(s)
 - Letters of Recommendation (3)
- Each registered academic institution may nominate up to four students

“Being selected as a Goldwater Scholar helped me realize my capability and potential as a scientist, and further reaffirmed my resolve to pursue graduate studies.”

Abby Smith
University of Evansville, Chemistry
2015 Goldwater Scholar


Characteristics of a Strong Application

- Coursework consistent with goal to attend grad school
- Research Essay demonstrates experience and leadership or well-developed research plan
- EVERY application element suggests a research career
- Three strong Letters of Recommendation
- Strong academic credentials (generally 3.5 - 4.0)

"The [Goldwater application] process prepared me well for subsequent competitive fellowships and grant application in my doctoral career."

Goran Micevic
Iowa State University, Biochemistry
2009 Goldwater Scholar

Developing a Strong Application

- 
- Read **ALL** the Instructions, tips and FAQs
 - The Goldwater scholarship is **ALL** about a research career
 - Letters of Recommendation are very important – chose letter writers carefully
 - Have others review student's materials
 - Proofread, Proofread, Proofread!!!

"It was the first kind of recognition I received for the research I was pursuing, and it propelled me forward by helping me realize the importance of challenging myself.

Nikea Ulrich, Environmental Microbiology
Juniata College
2016 Goldwater Scholar

Secret to Winning Goldwater Scholarships!

Nominate Your Students!

Convince Goldwater that Your Students
Are Destined to Become Research Professionals!

Questions?

Contact Information:

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Goldwater web site:
<https://goldwater.scholarsapply.org>



*"This distinction is proof to anyone beginning their journey
a little later in life, as I have, that it is truly
never too late to pursue your dreams."*

Staci Okada
Massachusetts Bay Community College
2016 Goldwater Scholar