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2014-2019 National Science Foundation (NSF) Rankings by Total R&D Expenditures

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2014 - 2019 NATIONAL SCIENCE FOUNDATION (NSF) RANKINGS BY TOTAL R&D EXPENDITURES

Higher Education Fact Sheet No. 20 | February 2022

Prepared by: Katie M. Gilbertson, Caitlin J. Saladino, and William E. Brown, Jr.

PURPOSE:

This fact sheet presents National Science Foundation (NSF) funding data for 10 individual research universities in addition to the *combined* funding received by the University of Nevada, Las Vegas (UNLV) and the University of Nevada, Reno (UNR) for the years 2014 to 2019.

ABOUT THE DATA:

The National Science Foundation (NSF) is an independent federal agency created by Congress in 1950 "to promote the progress of science; to advance the national health, prosperity, and welfare; [and] to secure the national defense."[1] NSF provides the tools necessary for basic research and empowers people to create transformative knowledge. This type of support is a primary driver of the U.S. economy, enhances the nation's security, and advances knowledge to sustain global leadership. "NSF is the funding source for approximately 27 percent of the total federal budget for basic research conducted at U.S. colleges and universities."[2]

For the years 2014 and 2015, the combined UNLV and UNR NSF funding remained below that of all 10 individual research universities. With the launch of UNLV's Top Tier (Carnegie R1) campaign - a plan quickly copied by UNR at the insistence of the chancellor of the Nevada System of Higher Education - Nevada's research universities began the long overdue process of improving NSF and other federal agency research funding.[3] By 2016, the combined NSF funding of UNLV and UNR exceeded that of three individual universities: North Dakota State University, the University of Alaska, and New Mexico State University.

In 2018, UNLV became the first academic research university in Nevada to achieve R1 status. Days later, with an expanded set of qualifications, UNR also joined the list.[4] Nevada is now home to two R1 research universities, yet as this table illustrates, there is a significant gap in NSF research production by universities in the Silver State. UNLV's launch of the UNLV School of Medicine in 2017 and additional graduate program expansion could help alleviate this gap and contribute increased economic development through patents, business startups, and public-private partnerships. UNR, through research advances in green technology and other energy-related activities, can also contribute to greater economic development in Nevada.

KEY TAKEAWAYS:

1. The 2014 and 2015 combined R&D expenditures for UNLV and UNR total less that the individual R&D expenditures for the ten institutions included in this analysis.
2. In 2016 and 2017, the combined R&D expenditures from UNLV and UNR exceed three institutions on the list: North Dakota State University, the University of Alaska, and New Mexico State University.
3. Combined R&D expenditures for UNR and UNLV exceeded six universities in 2018 (Utah State University, Kansas State University, University of Central Florida, North Dakota State University, University of Alaska, and New Mexico State University) and surpassed five universities in 2019 (all in 2018 except for Utah State University).

[1] NSF, https://nsf.gov/about/glance.jsp
[2] Ibid; In many fields such as mathematics, computer science and the social sciences, NSF is the major source of federal backing.
[3] Damore, David F., and Robert E. Lang. 2019. "The Road to Carnegie R1 for the University of Nevada, Las Vegas." Education Series, No. 7. The Lincy Institute
[4] Ibid.

4. From 2014 to 2019, UNR advanced from the 155th ranked institution to the 139th ranked university and UNLV improved from the 210th ranked institution to the 161st ranked university.
5. Five institutions in this analysis improved their R&D expenditure rank from 2014 to 2019. UNLV (+49) saw the largest improvement followed by Utah State University (+29), UNR (+16), Colorado State University (+10), Mississippi State University (+7).
6. Both Nevada universities increased their R&D expenditures from 2010 to 2019, with a 59.4 percent increase for UNR and 123.7 percent increase for UNLV.

The change in total research and development expenditures of twelve research universities is highlighted in the following order: Table 1 displays 2014 and 2015, Table 2 displays 2016 and 2017, and Table 3 displays 2018 and 2019. Individual ranks for Nevada institutions, UNLV and UNR, are shown, but total research and development expenditures are combined to illustrate the disparity between individual research universities.

Table 1: 2014 & 2015 National Science Foundation (NSF) Total R&D Expenditures, In Rank Order by Total R&D Expenditure Per Year

2014			2015		
INSTITUTION	**RANK**	**TOTAL R&D EXPENDITURES**	**INSTITUTION**	**RANK**	**TOTAL R&D EXPENDITURES**
University of Arizona	33	$588,088,000	University of Arizona	33	$606,219,000
Colorado State University	75	$307,978,000	Colorado State University	73	$317,219,000
Oregon State University	91	$230,963,000	Oregon State University	86	$245,317,000
Mississippi State University	99	$209,729,000	Mississippi State University	94	$226,359,000
University of Central Florida	105	$185,555,000	University of Central Florida	99	$215,519,000
Kansas State University	106	$184,945,000	Kansas State University	106	$188,721,000
Utah State University	115	$169,605,000	Utah State University	109	$175,353,000
University of Alaska	121	$155,769,000	North Dakota State University	120	$153,542,000
North Dakota State University	122	$154,437,000	University of Alaska	128	$142,742,000
New Mexico State University	129	$134,262,000	New Mexico State University	133	$132,377,000
UNR	**155**	**$126,722,000**	**UNR**	**150**	**$132,138,000**
UNLV	**210**		**UNLV**	**208**	

Table 2: 2016 & 2017 National Science Foundation (NSF) Total R&D Expenditures, In Rank Order by Total R&D Expenditure Per Year

2016			2017		
INSTITUTION	**RANK**	**TOTAL R&D EXPENDITURES**	**INSTITUTION**	**RANK**	**TOTAL R&D EXPENDITURES**
University of Arizona	38	$604,464,000	University of Arizona	38	$622,200,000
Colorado State University	71	$331,862,000	Colorado State University	71	$338,404,000
Oregon State University	87	$254,275,000	Oregon State University	87	$267,068,000
Mississippi State University	92	$239,446,000	Mississippi State University	94	$240,972,000
University of Central Florida	105	$198,211,000	University of Central Florida	107	$200,387,00
Kansas State University	107	$193,254,000	Kansas State University	109	$196,478,000
Utah State University	113	$180,590,000	Utah State University	115	$187,314,000
UNR	**152**	**$168,290,000**	**UNR**	**148**	**$172,154,000**
UNLV	**177**		**UNLV**	**176**	
North Dakota State University	124	$156,297,000	North Dakota State University	130	$153,119,000
University of Alaska	132	$144,259,000	University of Alaska	121	$152,694,000
New Mexico State University	145	$106,282,000	New Mexico State University	151	$102,218,000

Table 3: 2018 & 2019 National Science Foundation (NSF) Total R&D Expenditures, In Rank Order by Total R&D Expenditure Per Year

2018			2019		
INSTITUTION	**RANK**	**TOTAL R&D EXPENDITURES**	**INSTITUTION**	**RANK**	**TOTAL R&D EXPENDITURES**
University of Arizona	35	$687,066,000	University of Arizona	34	$734,270,000
Colorado State University	65	$374,955,000	Colorado State University	65	$398,477,000
Oregon State University	87	$272,433,000	Utah State University	86	$283,917,000
Mississippi State University	98	$244,102,000	Mississippi State University	92	$264,526,000
UNR	**139**	**$228,226,000**	Oregon State University	93	$263,830,000
UNLV	**165**		**UNR**	**139**	**$251,573,000**
Utah State University	104	$219,397,000	**UNLV**	**161**	
Kansas State University	105	$218,299,000	Kansas State University	111	$218,622,000
University of Central Florida	106	$215,332,000	University of Central Florida	108	$225,085,000
North Dakota State University	138	$145,669,000	University of Alaska	121	$155,769,000
University of Alaska	132	$144,259,000	North Dakota State University	138	$152,381,000
New Mexico State University	160	$96,270,000	New Mexico State University	160	$101,457,000

Figure 1 displays the total R&D expenditures in millions for Nevada's two universities, UNR and UNLV, from 2010 through 2019. Both universities increased their R&D expenditures over this time period, with a 59.4 percent increase for UNR and 123.7 percent increase for UNLV.
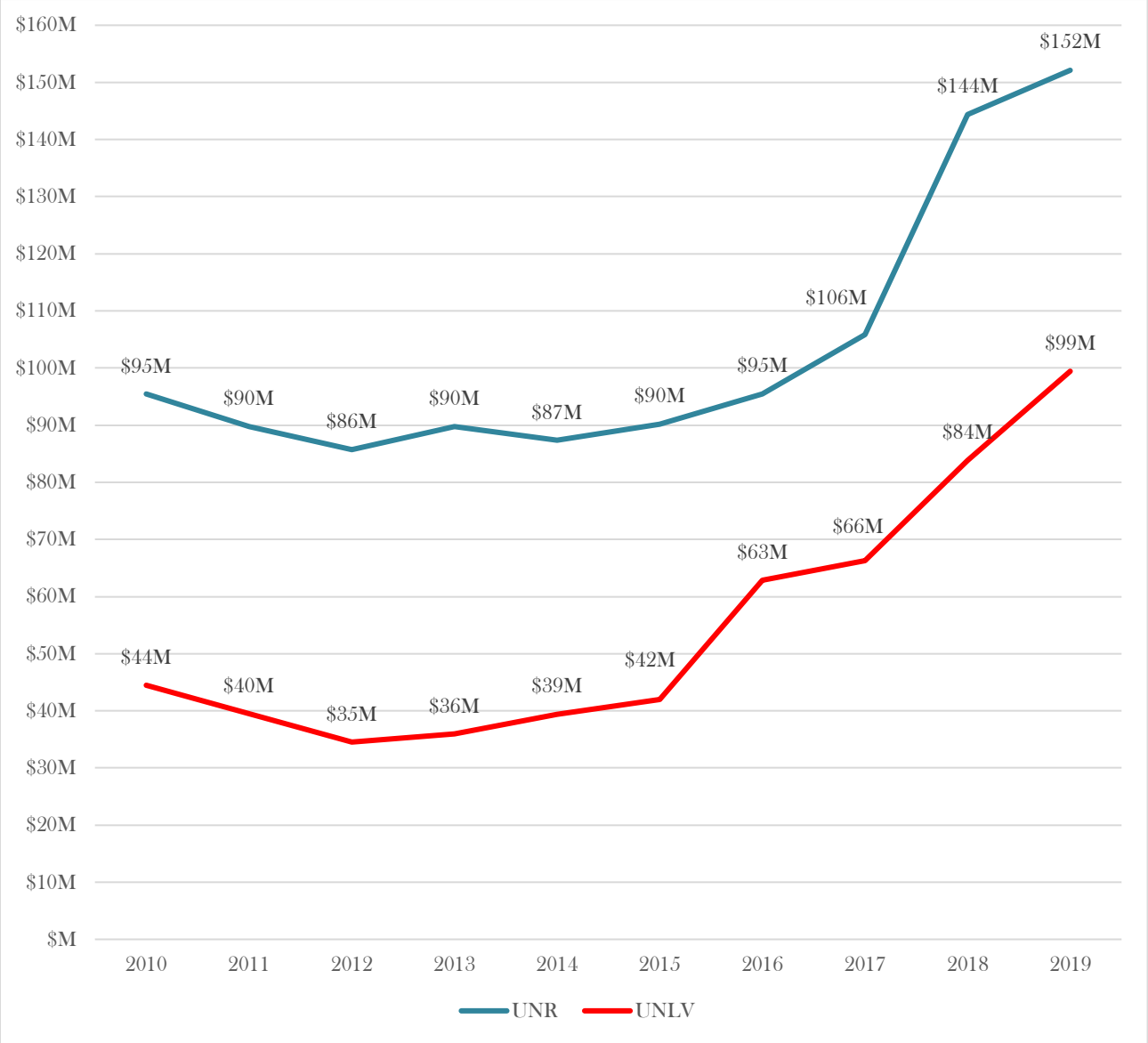
Figure 1: Total R&D Expenditures in Millions for UNR and UNLV, 2010 to 2019