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2. Science Mission Directorate (SMD)

2.a. Demographics

2.a.i. Principal Investigators (PIs)

2.a.i.1. Context and Limitations of the Data - SMD PIs

26,043 submitted proposals are included in the ROSES 2016-2021 database. Please see Appendix Table 1 to see which programs are included. The total number of proposals submitted and selected for each ROSES year and the total number of proposals submitted to each SMD Division cannot be reported due to the Office of the Chief Scientist’s suppression guidelines. See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information. The number of proposals rounded to the nearest hundred are included for these two circumstances to provide context. For the SMD Directorate, there are ~22,800 submitted proposals for ROSES 2016-2020 and ~3,300 submitted proposals for ROSES 2021.

Proposal submissions decreased in ROSES 2021 for most SMD Divisions. To display this trend, the table below provides the percentage of submitted proposals for a given ROSES year when compared with the number of submitted proposals in the previous ROSES year.

Division	2017	2018	2019	2020	2021
APD	120%	68%	101%	110%	105%
BPS	48%	305%		45%	85%
CD	92%	113%	116%	165%	77%
ESD	70%	100%	109%	157%	48%
HPD	96%	100%	87%	104%	72%
PSD	92%	110%	93%	89%	68%
SMD-wide	86%	103%	92%	123%	65%

Proposals with PIs who took the survey but selected “prefer not to answer” for all demographic survey questions:

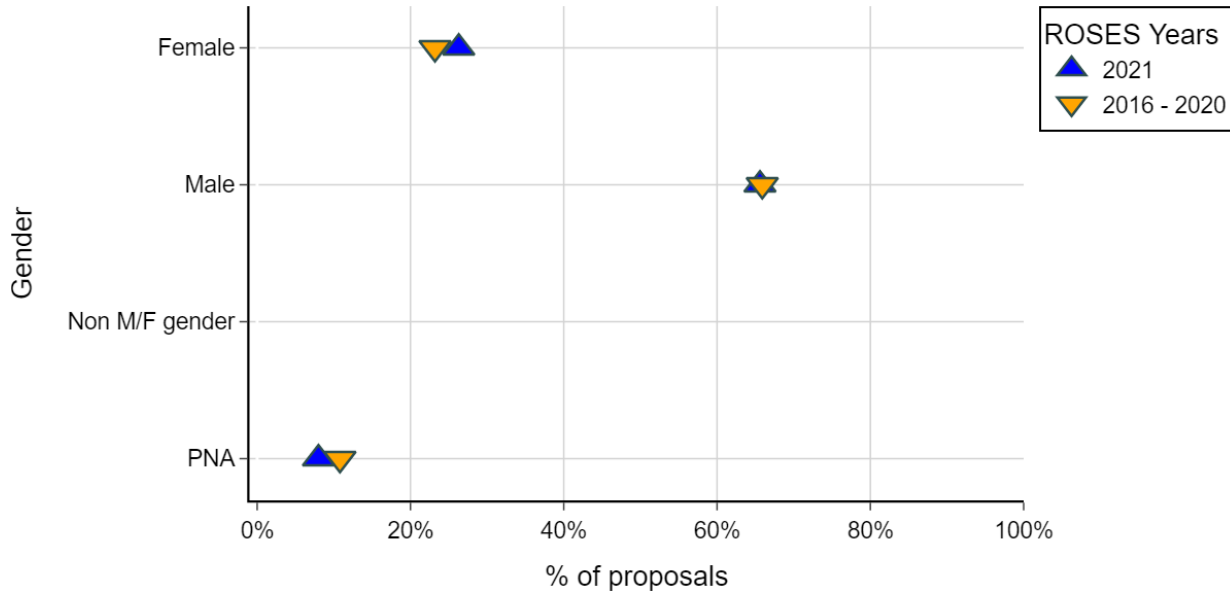
- Submitted proposals: SMD 2016 - 2020: 10% | SMD 2021: 7%
- Selected proposals: SMD 2016 - 2020: 9% | SMD 2021: 7%

Unique identifiers in the dataset are not completely unique. Less than 1% of PIs of submitted ROSES 2016-2021 proposals have more than 1 unique ID in the NSPIRES system.

2.a.i.2. Gender - SMD PIs

SMD PIs: Submitted Gender - Plot

SMD 2016 - 2020 vs. 2021: Submitted PIs - Gender



PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

Suppressed categories: Non M/F gender (All years).

See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

SMD PIs: Submitted Gender - Data Table

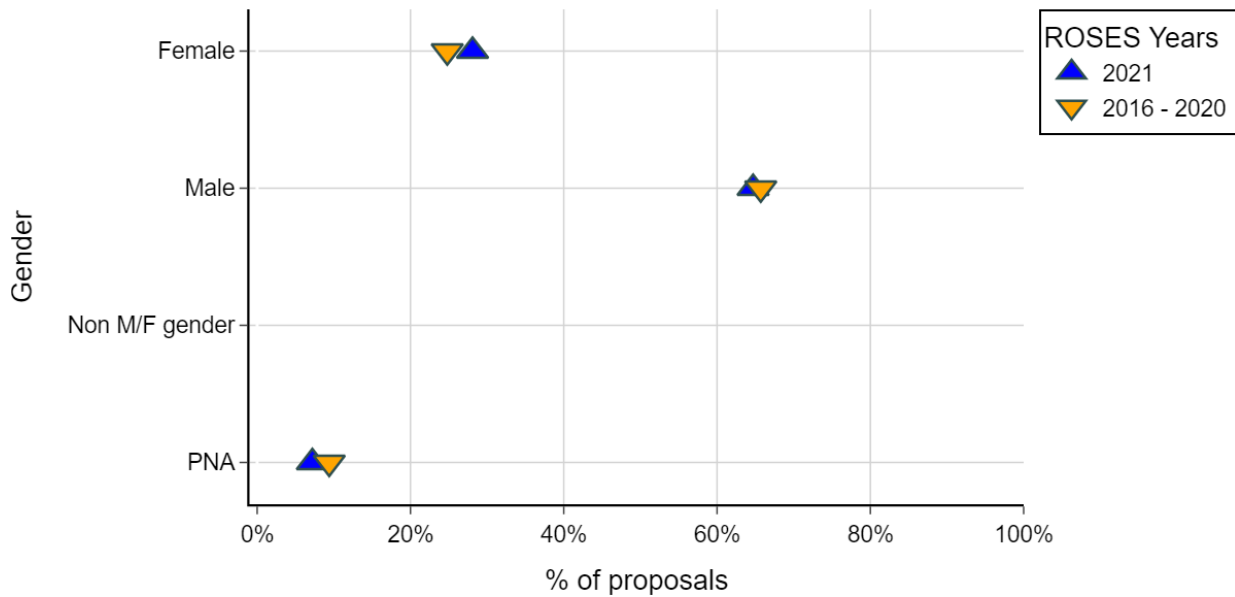
SMD 2016 - 2020 vs. 2021: Submitted PIs - Gender

Gender	SMD 2016 - 2020	SMD 2021
Female	23%	26%
Male	66%	66%
Non M/F gender	NR	NR
PNA	11%	8%

PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected Gender - Plot

SMD 2016 - 2020 vs. 2021: Selected PIs - Gender



PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

Suppressed categories: Non M/F gender (All years).

See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

SMD PIs: Selected Gender - Data Table

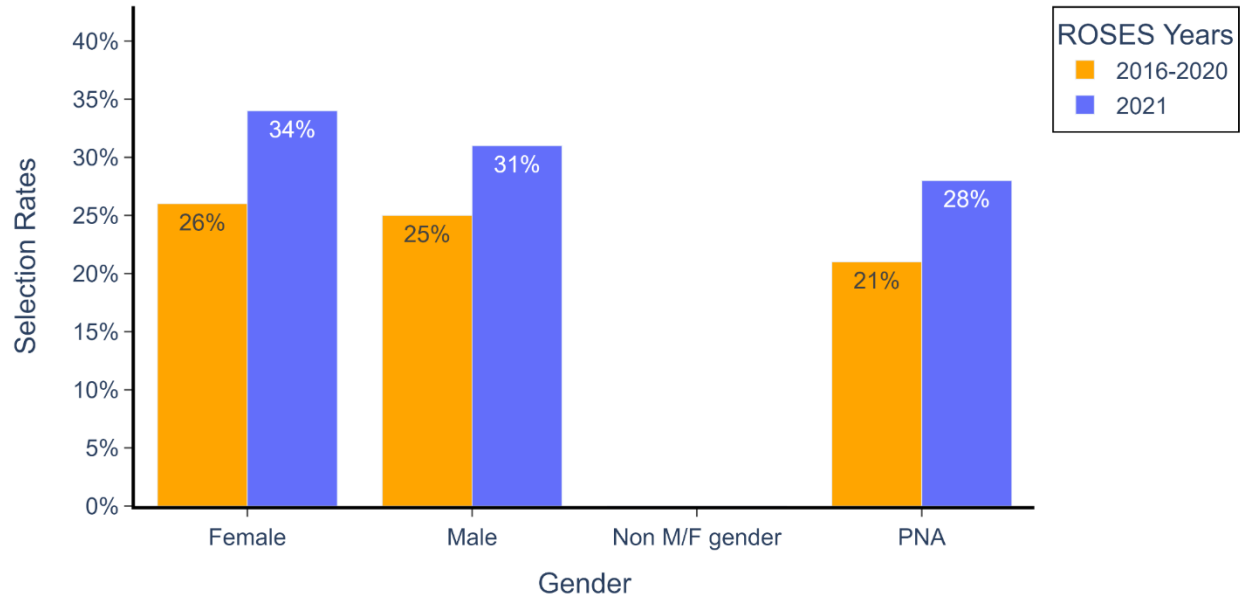
SMD 2016 - 2020 vs. 2021: Selected PIs - Gender

Gender	SMD 2016 - 2020	SMD 2021
Female	25%	28%
Male	66%	65%
Non M/F gender	NR	NR
PNA	9%	7%

PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Gender Selection Rate - Bar Plot

SMD 2016 - 2020 vs. 2021: PI Selection Rates - Gender



PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals with PIs from a demographic response group / # of submitted proposals with PIs from the same demographic response group

Suppressed categories: Non M/F gender (All years).

See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

SMD PIs: Gender Selection Rate - Data Table

SMD 2016 - 2020 vs. 2021: PI Selection Rates - Gender

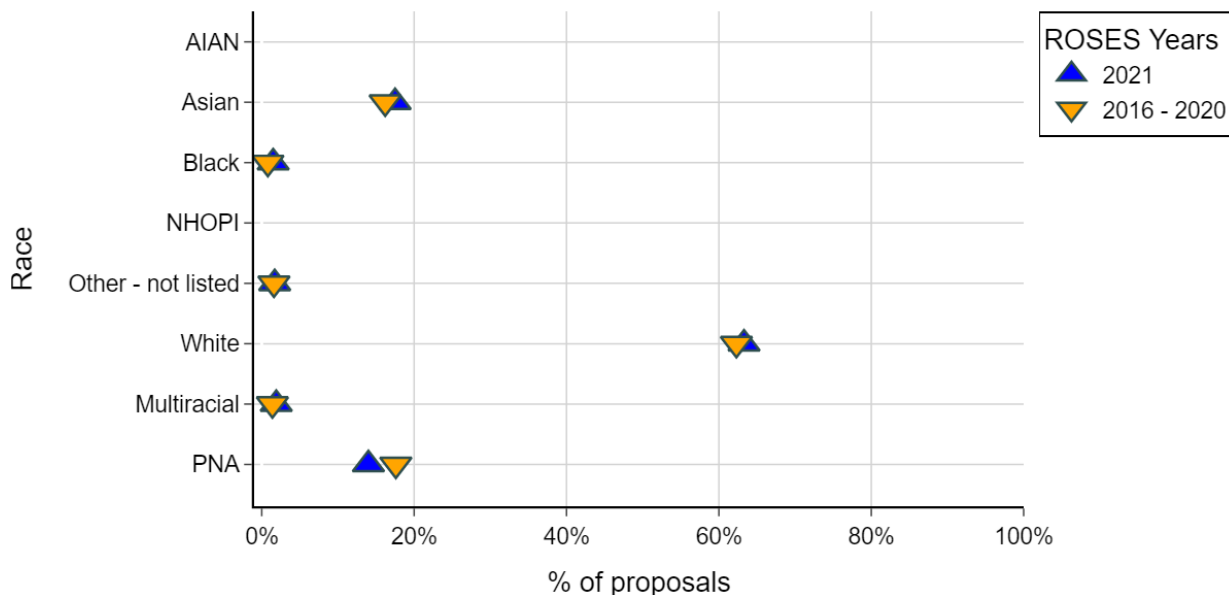
Gender	SMD 2016-2020	SMD 2016-2020 Response/All Genders	SMD 2021	SMD 2021 Response/All Genders
Female	26%	1.04	34%	1.06
Male	25%	1	31%	0.97
Non M/F gender	NR	NR	NR	NR
PNA	21%	0.84	28%	0.88
All Genders	25%	1	32%	1

PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals from a demographic response group / # of submitted proposals from the same demographic response group

2.a.i.3. Race - SMD PIs

SMD PIs: Submitted Race - Plot

SMD 2016 - 2020 vs. 2021: Submitted PIs - Race



AIAN: American Indian and Alaska Native | NHOPI: Native Hawaiian and Other Pacific Islander | PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

Suppressed categories: AIAN (All years), NHOPI (All years).

See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

SMD Pls: Submitted Race - Data Table

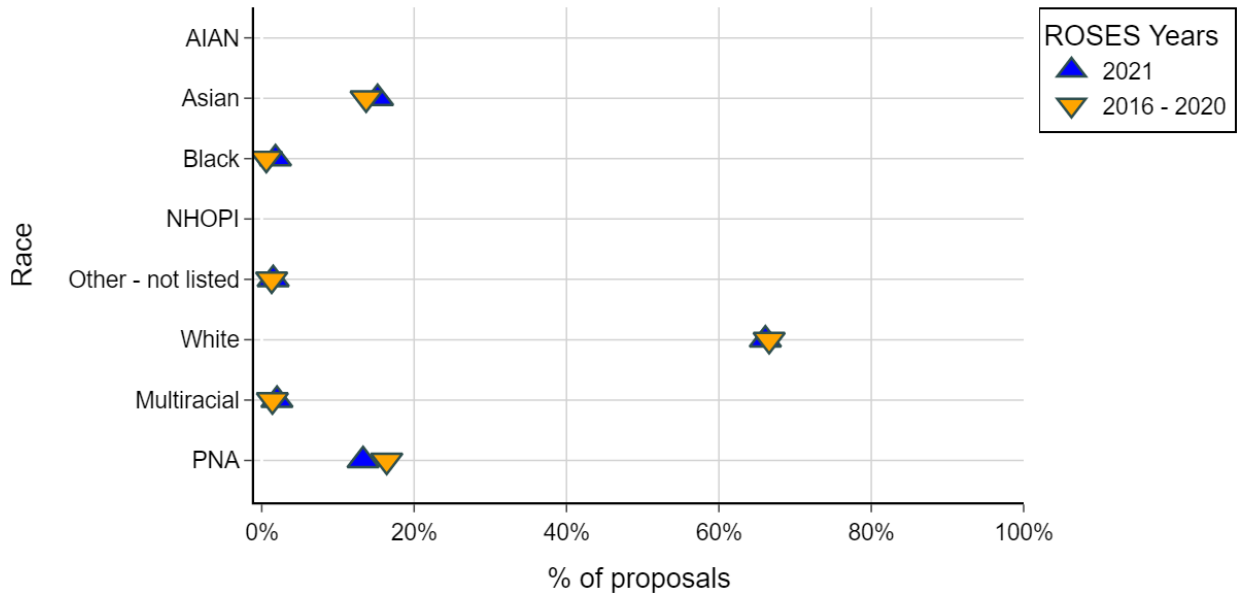
SMD 2016 - 2020 vs. 2021: Submitted Pls - Race

Race	SMD 2016 - 2020	SMD 2021
AIAN	NR	NR
Asian	16%	18%
Black	< 1%	2%
NHOPI	NR	NR
Other - not listed	2%	2%
White	62%	63%
Multiracial	1%	2%
PNA	18%	14%

AIAN: American Indian and Alaska Native | NHOPI: Native Hawaiian and Other Pacific Islander | PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected Race - Plot

SMD 2016 - 2020 vs. 2021: Selected PIs - Race



AIAN: American Indian and Alaska Native | NHOPI: Native Hawaiian and Other Pacific Islander | PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

Suppressed categories: AIAN (All years), NHOPI (All years).

See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

SMD Pls: Selected Race - Data Table

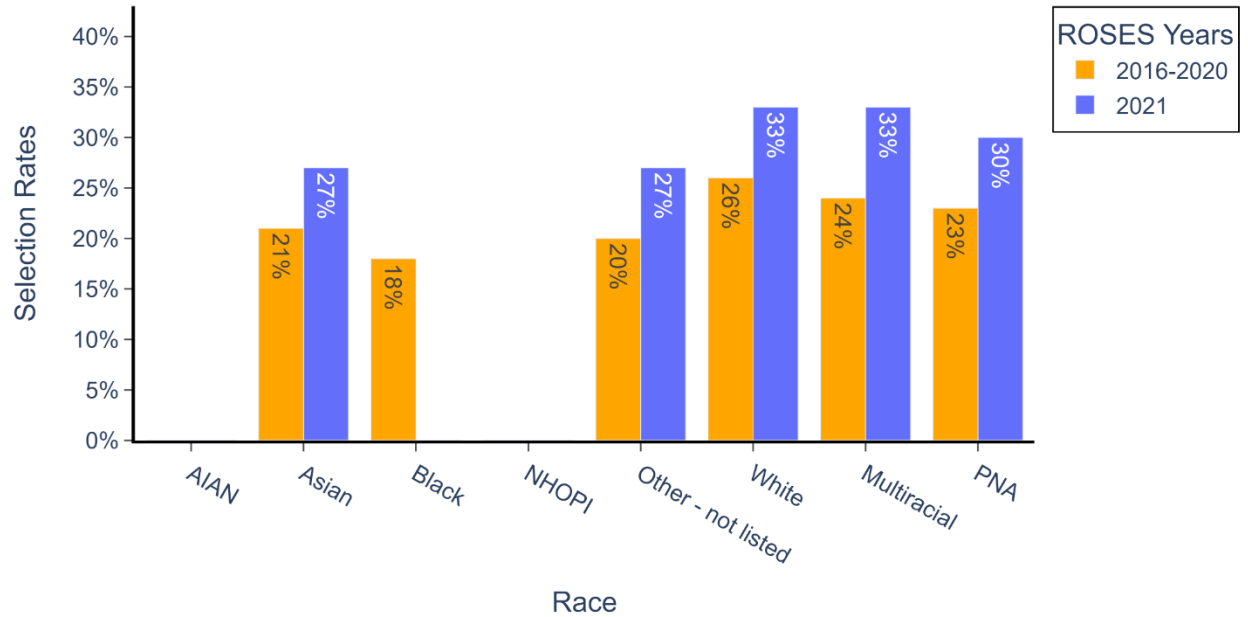
SMD 2016 - 2020 vs. 2021: Selected Pls - Race

Race	SMD 2016 - 2020	SMD 2021
AIAN	NR	NR
Asian	14%	15%
Black	< 1%	2%
NHOPI	NR	NR
Other - not listed	1%	2%
White	67%	66%
Multiracial	1%	2%
PNA	16%	13%

AIAN: American Indian and Alaska Native | NHOPI: Native Hawaiian and Other Pacific Islander |
PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Race Selection Rate - Bar Plot

SMD 2016 - 2020 vs. 2021: PI Selection Rates - Race



AIAN: American Indian and Alaska Native | NHOPI: Native Hawaiian and Other Pacific Islander | PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals from a demographic response group / # of submitted proposals from the same demographic response group

Suppressed categories: AIAN (All years), Black (ROSES 2021), NHOPI (All years).
See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

SMD PIs: Race Selection Rate - Data Table

SMD 2016 - 2020 vs. 2021: PI Selection Rates - Race

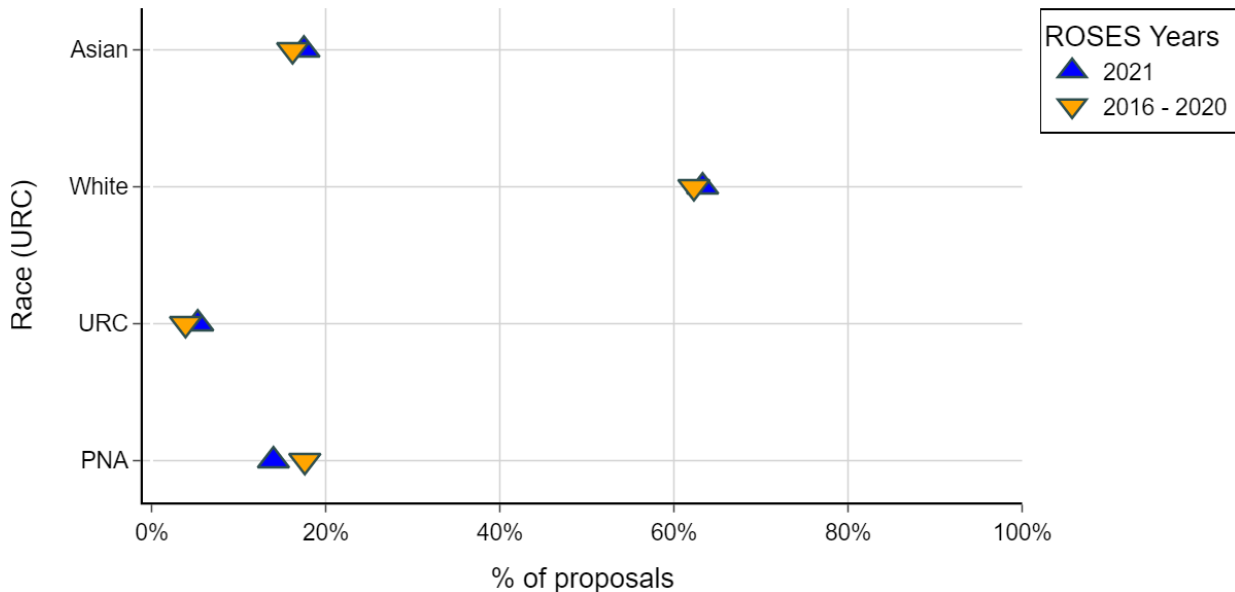
Race	SMD 2016-2020	SMD 2016-2020 Response/All Races	SMD 2021	SMD 2021 Response/All Races
AIAN	NR	NR	NR	NR
Asian	21%	0.84	27%	0.84
Black	18%	0.72	NR	NR
NHOPI	NR	NR	NR	NR
Other - not listed	20%	0.8	27%	0.84
White	26%	1.04	33%	1.03
Multiracial	24%	0.96	33%	1.03
PNA	23%	0.92	30%	0.94
All Races	25%	1	32%	1

AIAN: American Indian and Alaska Native | NHOPI: Native Hawaiian and Other Pacific Islander | PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals from a demographic response group / # of submitted proposals from the same demographic response group

2.a.i.4. Race using Under-Represented Community (URC) - SMD PIs

SMD PIs: Submitted Race (URC) - Plot

SMD 2016 - 2020 vs. 2021: Submitted PIs - Race (URC)



Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other. | PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Submitted Race (URC) - Data Table

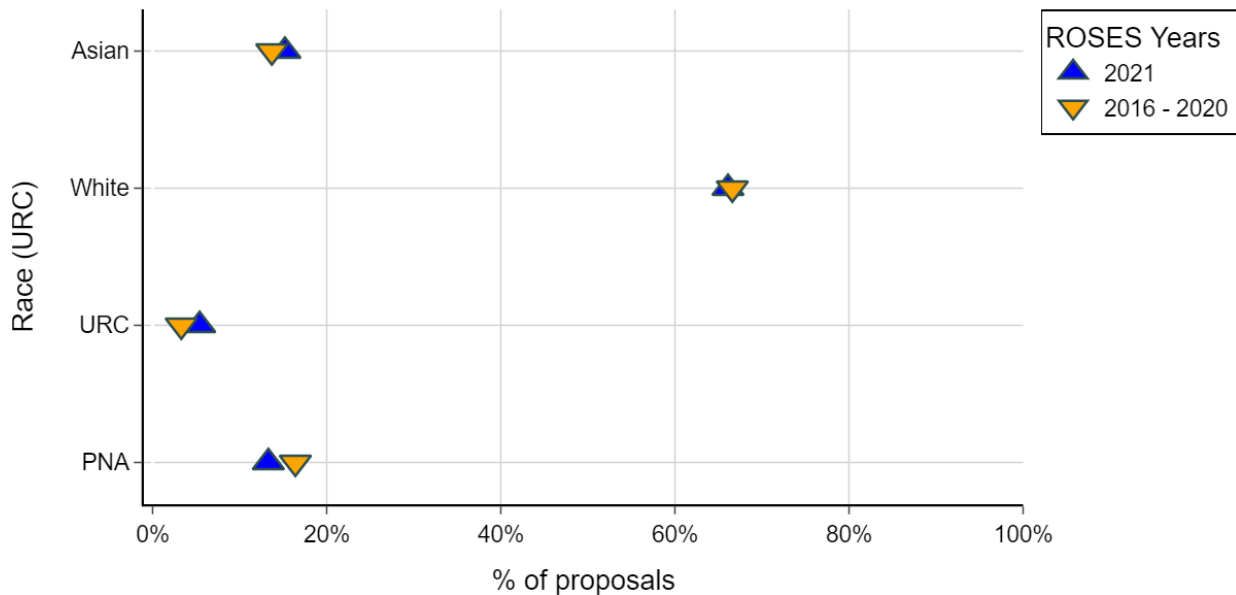
SMD 2016 - 2020 vs. 2021: Submitted PIs - Race (URC)

Race (URC)	SMD 2016 - 2020	SMD 2021
Asian	16%	18%
White	62%	63%
URC	4%	5%
PNA	18%	14%

Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other. | PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected Race (URC) - Plot

SMD 2016 - 2020 vs. 2021: Selected PIs - Race (URC)



Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other. | PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected Race (URC) - Data Table

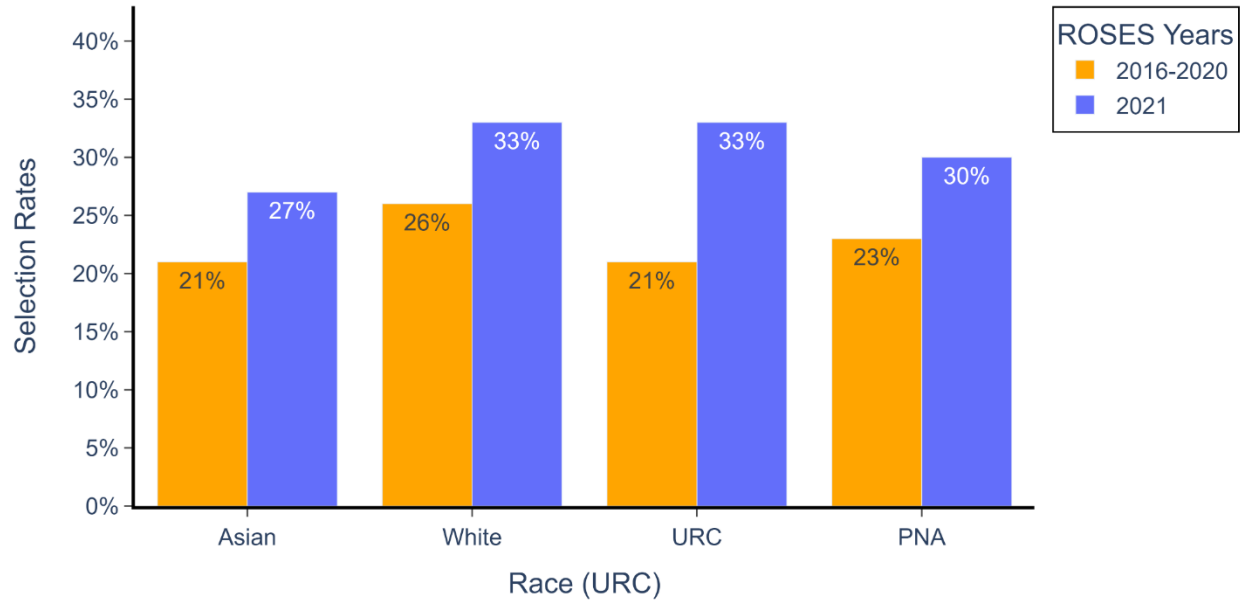
SMD 2016 - 2020 vs. 2021: Selected PIs - Race (URC)

Race (URC)	SMD 2016 - 2020	SMD 2021
Asian	14%	15%
White	67%	66%
URC	3%	5%
PNA	16%	13%

Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other. | PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Race (URC) Selection Rate - Bar Plot

SMD 2016 - 2020 vs. 2021: PI Selection Rates - Race (URC)



Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other. | PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals from a demographic response group / # of submitted proposals from the same demographic response group

SMD PIs: Race (URC) Selection Rate - Data Table

SMD 2016 - 2020 vs. 2021: PI Selection Rates - Race (URC)

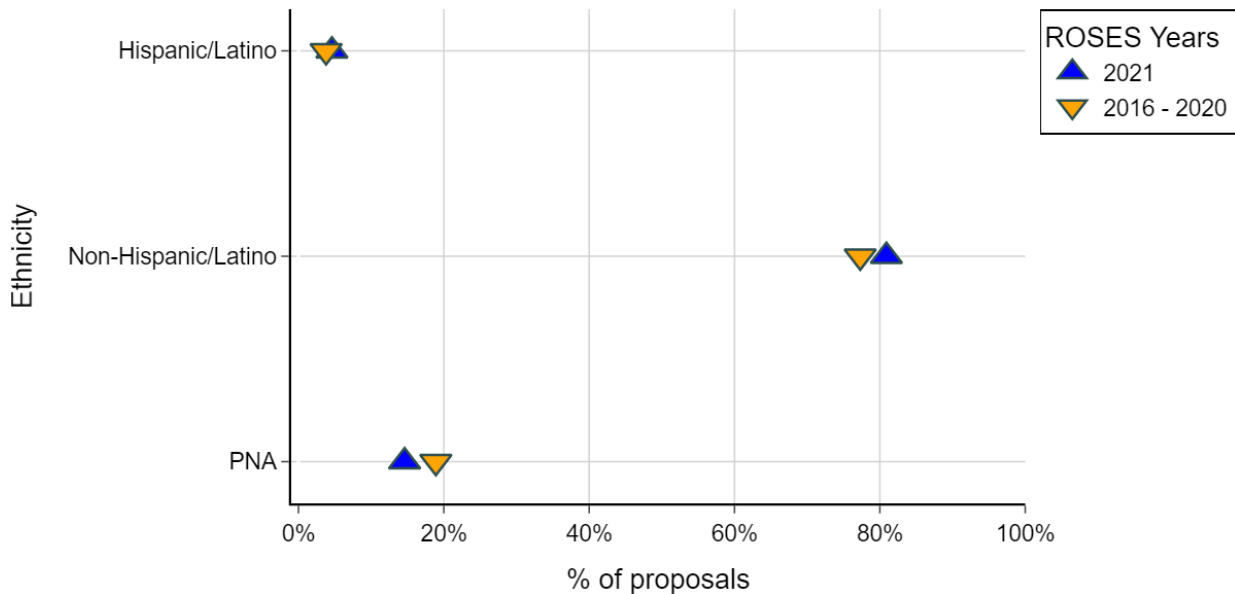
Race (URC)	SMD 2016-2020	SMD 2016-2020 Response/All Races (URC)	SMD 2021	SMD 2021 Response/All Races (URC)
Asian	21%	0.84	27%	0.84
White	26%	1.04	33%	1.03
URC	21%	0.84	33%	1.03
PNA	23%	0.92	30%	0.94
All Races (URC)	25%	1	32%	1

Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other. | PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals with PIs from a demographic response group/ # of submitted proposals with PIs from the same demographic response group

2.a.i.5. Ethnicity– SMD PIs

SMD PIs: Submitted Ethnicity - Plot

SMD 2016 - 2020 vs. 2021: Submitted PIs - Ethnicity



PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Submitted Ethnicity - Data Table

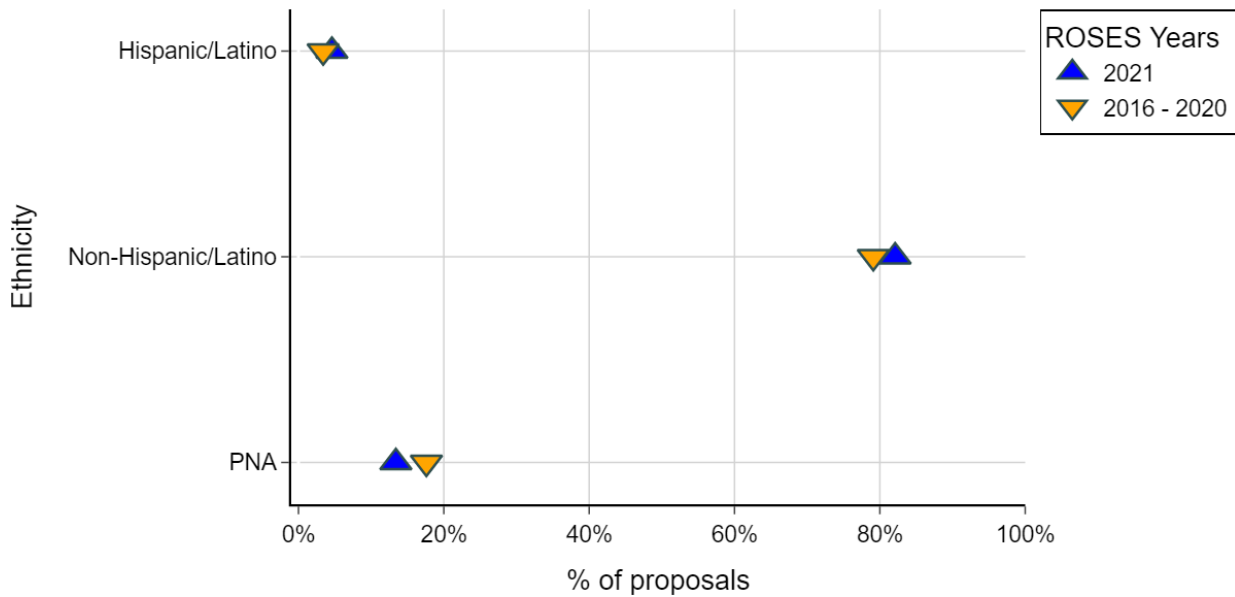
SMD 2016 - 2020 vs. 2021: Submitted PIs - Ethnicity

Ethnicity	SMD 2016 - 2020	SMD 2021
Hispanic/Latino	4%	5%
Non-Hispanic/Latino	77%	81%
PNA	19%	15%

PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected Ethnicity - Plot

SMD 2016 - 2020 vs. 2021: Selected PIs - Ethnicity



PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

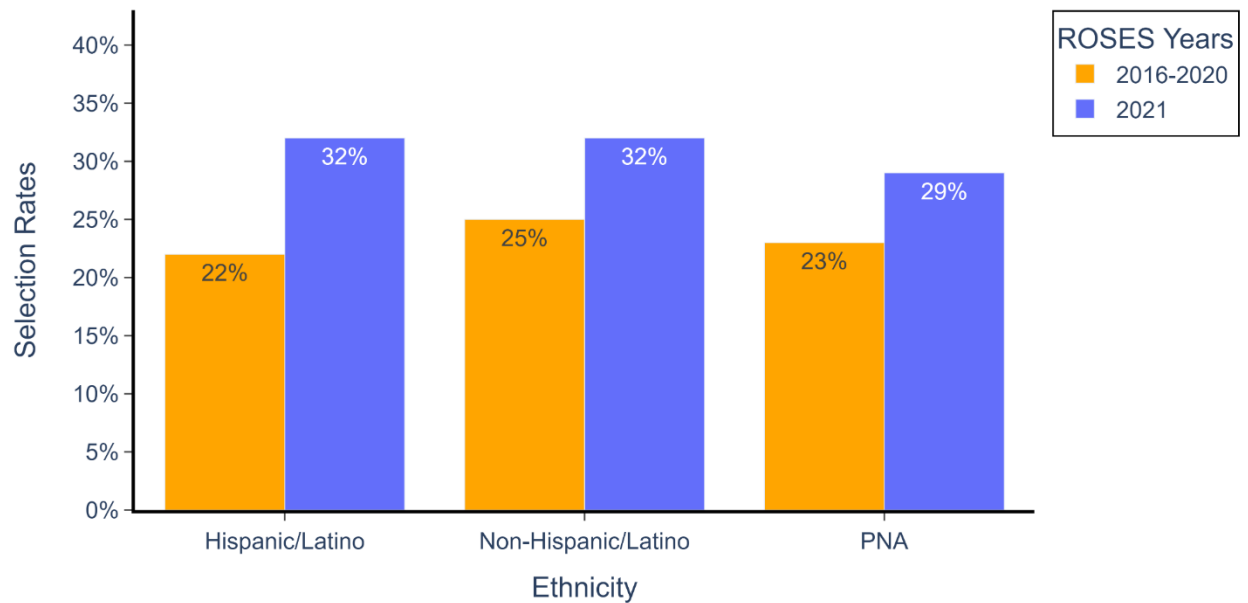
SMD PIs: Selected Ethnicity - Data Table
SMD 2016 - 2020 vs. 2021: Selected PIs - Ethnicity

Ethnicity	SMD 2016 - 2020	SMD 2021
Hispanic/Latino	3%	5%
Non-Hispanic/Latino	79%	82%
PNA	18%	13%

PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Ethnicity Selection Rate - Bar Plot

SMD 2016 - 2020 vs. 2021: PI Selection Rates - Ethnicity



PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals with PIs from a demographic response group / # of submitted proposals with PIs from the same demographic response group

SMD PIs: Ethnicity Selection Rate - Data Table

SMD 2016 - 2020 vs. 2021: PI Selection Rates - Ethnicity

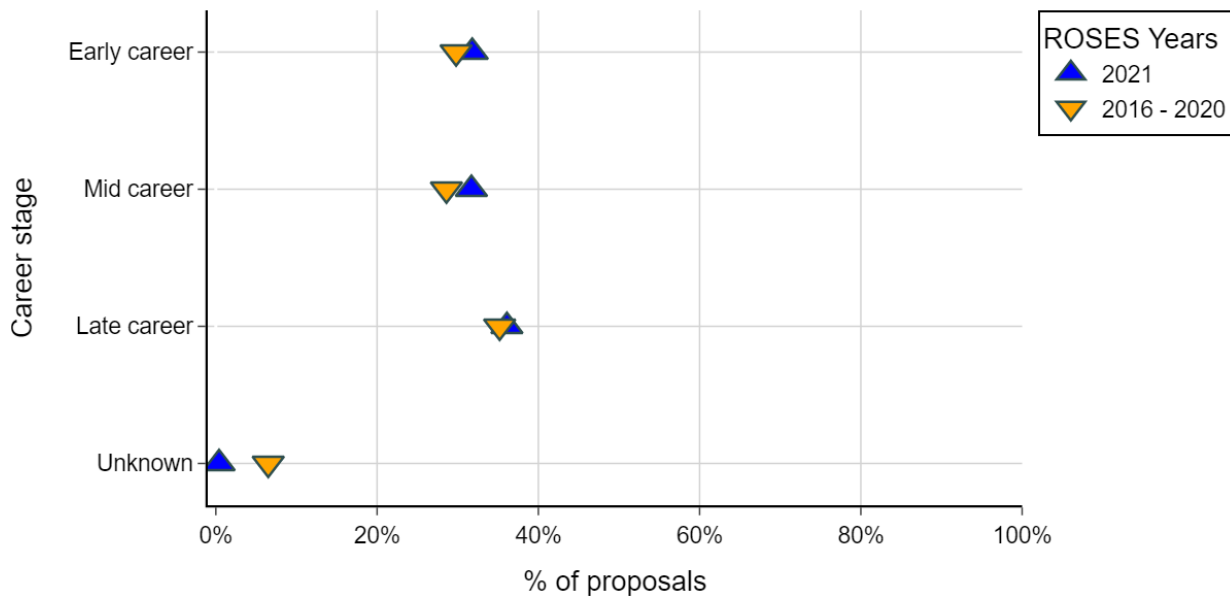
Ethnicity	SMD 2016-2020	SMD 2016-2020 Response/All Ethnicities	SMD 2021	SMD 2021 Response/All Ethnicities
Hispanic/Latino	22%	0.88	32%	1
Non-Hispanic/Latino	25%	1	32%	1
PNA	23%	0.92	29%	0.91
All Ethnicities	25%	1	32%	1

PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals with PIs from a demographic response group / # of submitted proposals with PIs from the same demographic response group

2.a.i.6. Career Stage - SMD PIs

SMD PIs: Submitted Career Stage - Plot

SMD 2016 - 2020 vs. 2021: Submitted PIs - Career stage



Early career: < 10 years since earning final degree | Mid career: 10 - 19 years since earning final degree | Late career: 20+ years since earning final degree | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Submitted Career Stage - Data Table

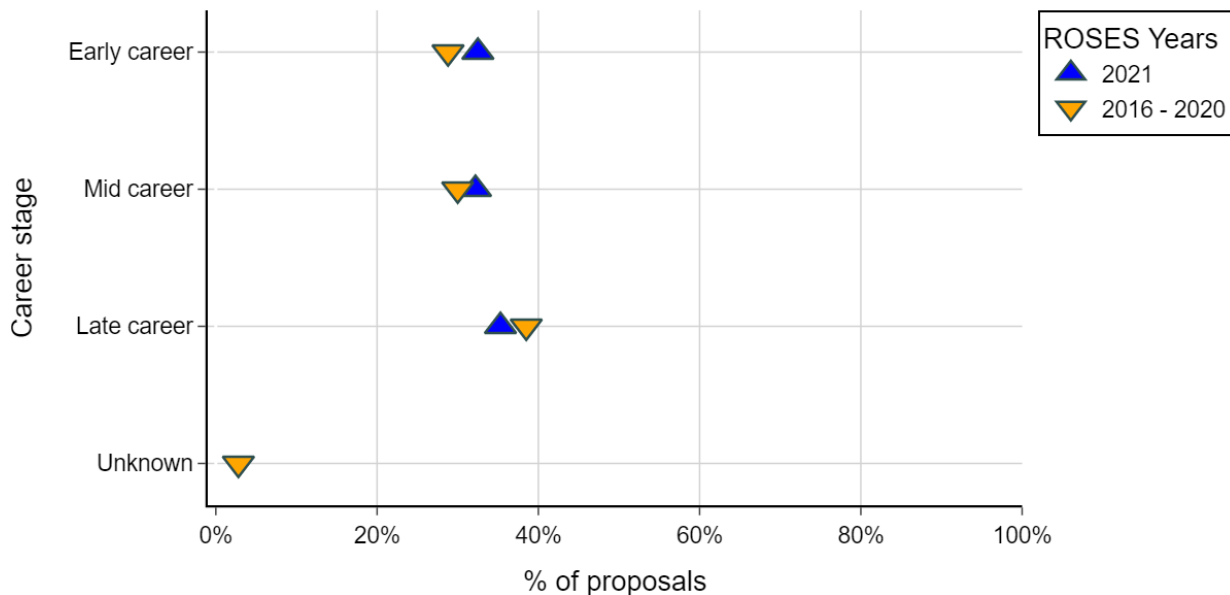
SMD 2016 - 2020 vs. 2021: Submitted PIs - Career stage

Career stage	SMD 2016 - 2020	SMD 2021
Early career	30%	32%
Mid career	29%	32%
Late career	35%	36%
Unknown	6%	< 1%

Early career: < 10 years since earning final degree | Mid career: 10 - 19 years since earning final degree | Late career: 20+ years since earning final degree | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected Career Stage - Plot

SMD 2016 - 2020 vs. 2021: Selected PIs - Career stage



Early career: < 10 years since earning final degree | Mid career: 10 - 19 years since earning final degree | Late career: 20+ years since earning final degree | ROSES 2016-2020 proposal data are aggregated.

Suppressed categories: Unknown (ROSES 2021).

See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

SMD PIs: Selected Career Stage - Data Table

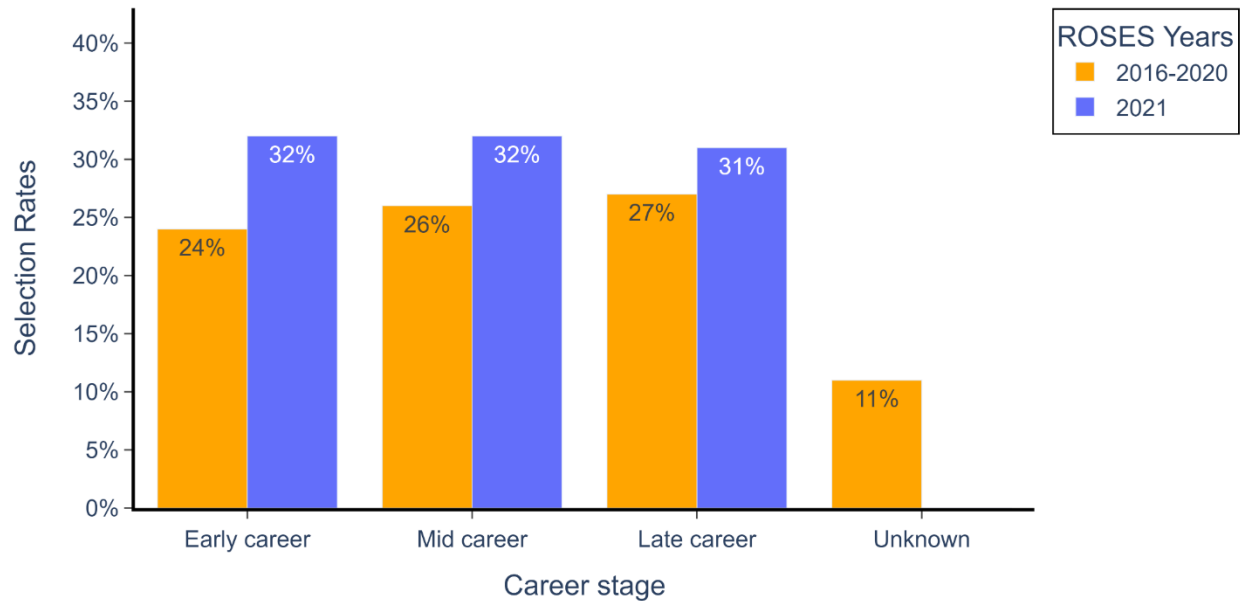
SMD 2016 - 2020 vs. 2021: Selected PIs - Career stage

Career stage	SMD 2016 - 2020	SMD 2021
Early career	29%	32%
Mid career	30%	32%
Late career	38%	35%
Unknown	3%	NR

Early career: < 10 years since earning final degree | Mid career: 10 - 19 years since earning final degree | Late career: 20+ years since earning final degree | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Career Stage Selection Rate - Bar Plot

SMD 2016 - 2020 vs. 2021: PI Selection Rates - Career stage



Early career: < 10 years since earning final degree | Mid career: 10 - 19 years since earning final degree | Late career: 20+ years since earning final degree. | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals with PIs from a demographic response group / # of submitted proposals with PIs from the same demographic response group

Suppressed categories: Unknown (ROSES 2021).

See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

SMD PIs: Career Stage Selection Rate - Data Table

SMD 2016 - 2020 vs. 2021: PI Selection Rates - Career stage

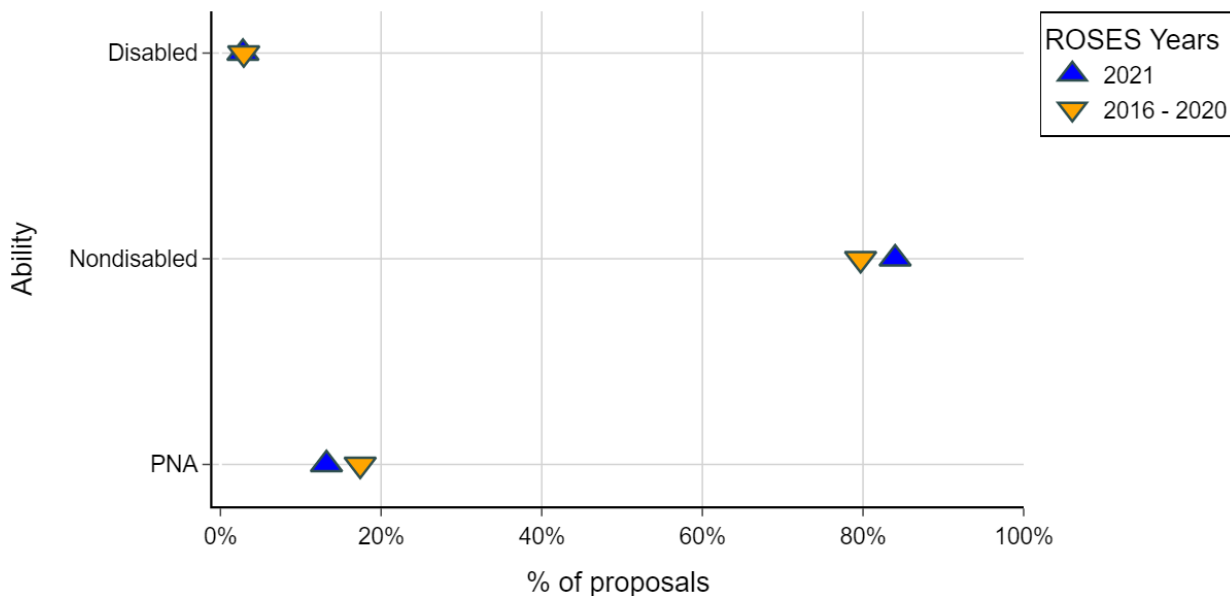
Career stage	SMD 2016-2020	SMD 2016-2020 Response/All Career stages	SMD 2021	SMD 2021 Response/All Career stages
Early career	24%	0.96	32%	1
Mid career	26%	1.04	32%	1
Late career	27%	1.08	31%	0.97
Unknown	11%	0.44	NR	NR
All Career stages	25%	1	32%	1

Early career: < 10 years since earning final degree | Mid career: 10 - 19 years since earning final degree | Late career: 20+ years since earning final degree. | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals with PIs from a demographic response group / # of submitted proposals with PIs from the same demographic response group

2.a.i.7. Disability Status– SMD PIs

SMD PIs: Submitted Ability - Plot

SMD 2016 - 2020 vs. 2021: Submitted PIs - Ability



Disabled includes hearing, visual, mobility/orthopedic, and other impairment. | PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Submitted Ability - Data Table

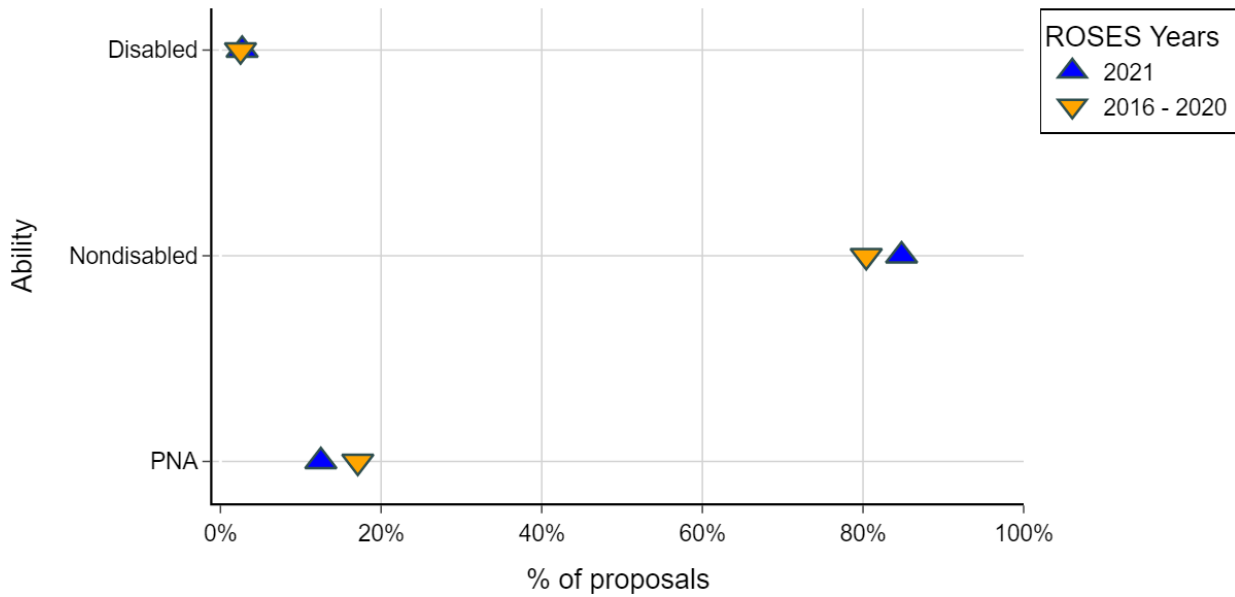
SMD 2016 - 2020 vs. 2021: Submitted PIs - Ability

Ability	SMD 2016 - 2020	SMD 2021
Disabled	3%	3%
Nondisabled	80%	84%
PNA	17%	13%

Disabled includes hearing, visual, mobility/orthopedic, and other impairment. | PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected Ability - Plot

SMD 2016 - 2020 vs. 2021: Selected PIs - Ability



Disabled includes hearing, visual, mobility/orthopedic, and other impairment. | PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected Ability - Data Table

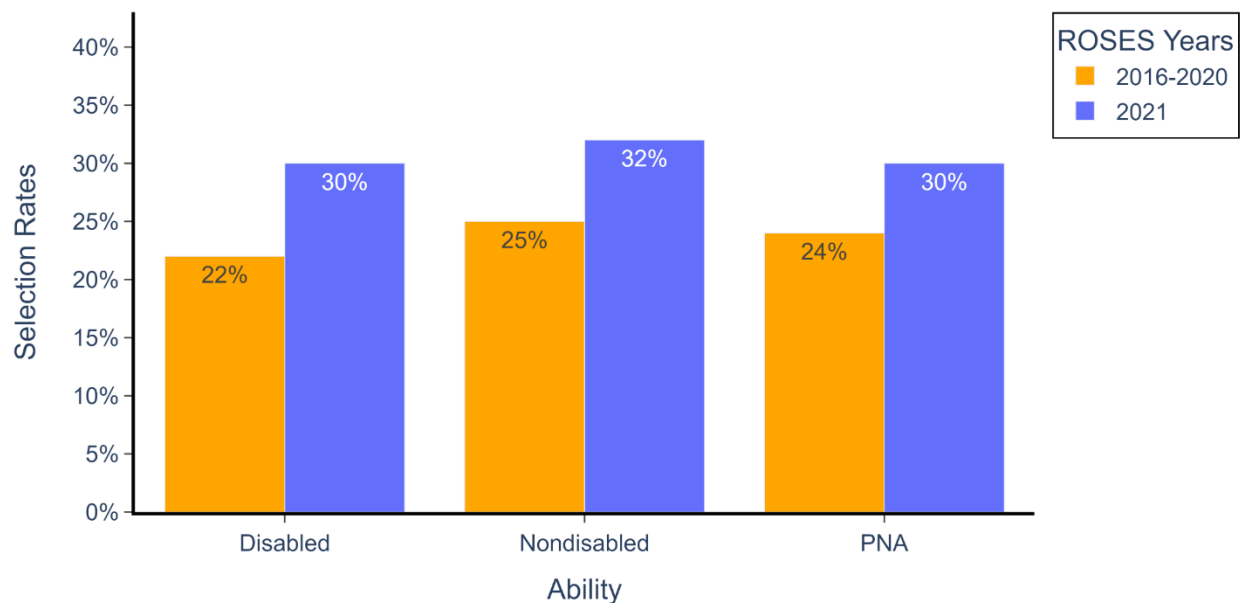
SMD 2016 - 2020 vs. 2021: Selected PIs - Ability

Ability	SMD 2016 - 2020	SMD 2021
Disabled	2%	3%
Nondisabled	80%	85%
PNA	17%	12%

Disabled includes hearing, visual, mobility/orthopedic, and other impairment. | PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Ability Selection Rate - Bar Plot

SMD 2016 - 2020 vs. 2021: PI Selection Rates - Ability



Disabled includes hearing, visual, mobility/orthopedic, and other impairment. | PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals with PIs from a demographic response group/ # of submitted proposals with PIs from the same demographic response group

SMD PIs: Ability Selection Rate - Data Table

SMD 2016 - 2020 vs. 2021: PI Selection Rates - Ability

Ability	SMD 2016-2020	SMD 2016-2020 Response/All Abilities	SMD 2021	SMD 2021 Response/All Abilities
Disabled	22%	0.88	30%	0.94
Nondisabled	25%	1	32%	1
PNA	24%	0.96	30%	0.94
All Abilities	25%	1	32%	1

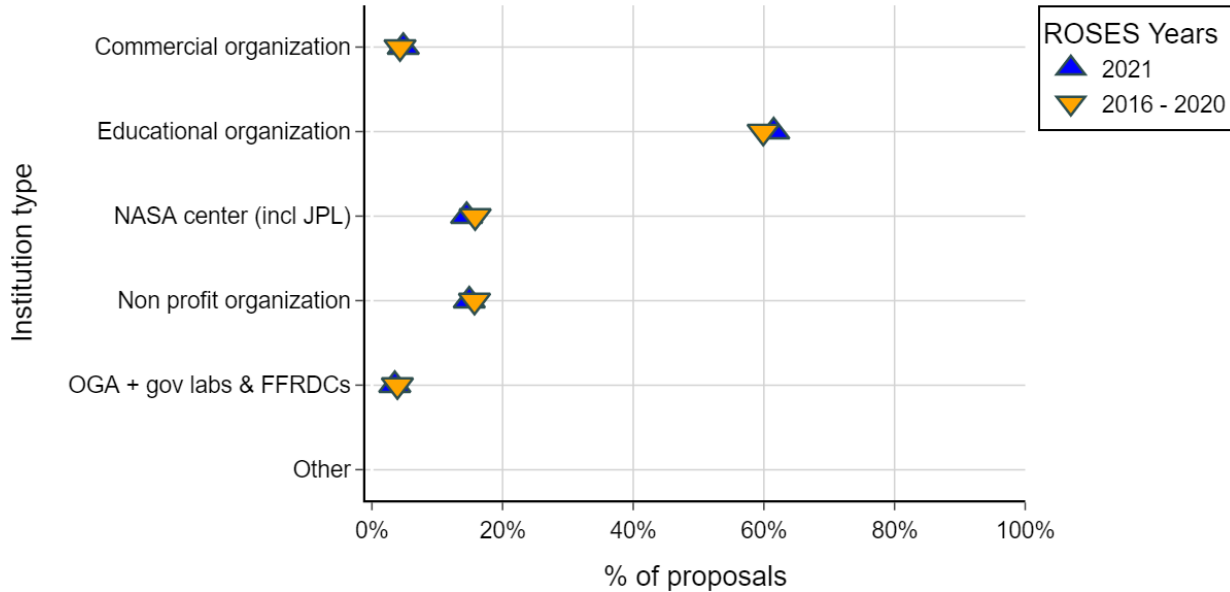
Disabled includes hearing, visual, mobility/orthopedic, and other impairment. | PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals with PIs from a demographic response group / # of submitted proposals with PIs from the same demographic response group

2.a.i.8. Institutional Analysis

2.a.i.8.a. Institution Type– SMD PIs

SMD PIs: Submitted Institution Type - Plot

SMD 2016 - 2020 vs. 2021: Submitted PIs - Institution type



OGA: Other Government Agency | FFRDCs: Federally Funded Research and Development Centers |
Other: State, Local or Federally Recognized Tribal Government Agency & Unaffiliated Individuals |
ROSES 2016-2020 proposal data are aggregated.

Suppressed categories: Other (All years).

See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

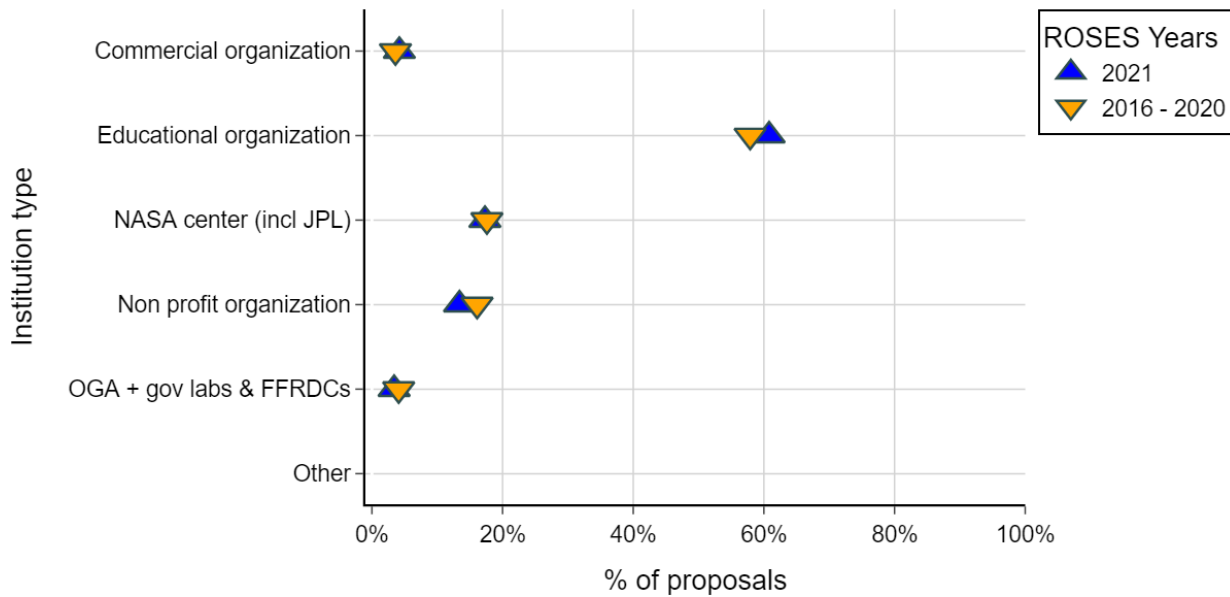
SMD PIs: Submitted Institution Type - Data Table
SMD 2016 - 2020 vs. 2021: Submitted PIs - Institution type

Institution type	SMD 2016 - 2020	SMD 2021
Commercial organization	4%	5%
Educational organization	60%	62%
NASA center (incl JPL)	16%	14%
Non profit organization	16%	15%
OGA + gov labs & FFRDCs	4%	4%
Other	NR	NR

OGA: Other Government Agency | FFRDCs: Federally Funded Research and Development Centers |
 Other: State, Local or Federally Recognized Tribal Government Agency & Unaffiliated Individuals |
 NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected Institution Type - Plot

SMD 2016 - 2020 vs. 2021: Selected PIs - Institution type



OGA: Other Government Agency | FFRDCs: Federally Funded Research and Development Centers |
Other: State, Local or Federally Recognized Tribal Government Agency & Unaffiliated Individuals |
ROSES 2016-2020 proposal data are aggregated.

Suppressed categories: Other (All years).

See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

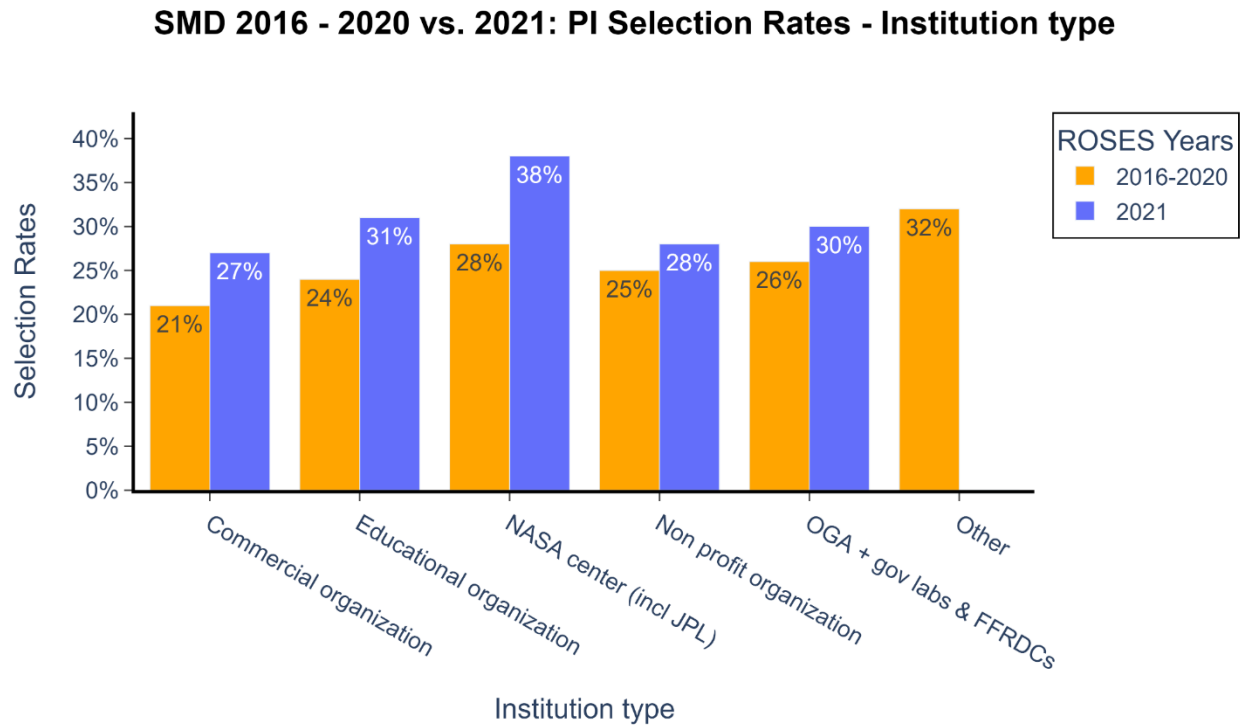
SMD PIs: Selected Institution Type - Data Table

SMD 2016 - 2020 vs. 2021: Selected PIs - Institution type

Institution type	SMD 2016 - 2020	SMD 2021
Commercial organization	4%	4%
Educational organization	58%	61%
NASA center (incl JPL)	18%	17%
Non profit organization	16%	13%
OGA + gov labs & FFRDCs	4%	3%
Other	NR	NR

OGA: Other Government Agency | FFRDCs: Federally Funded Research and Development Centers |
Other: State, Local or Federally Recognized Tribal Government Agency & Unaffiliated Individuals |
NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Institution Type Selection Rate - Bar Plot



OGA: Other Government Agency | FFRDCs: Federally Funded Research and Development Centers | Other: State, Local or Federally Recognized Tribal Government Agency & Unaffiliated Individuals | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals with PIs from a demographic response group / # of submitted proposals with PIs from the same demographic response group

Suppressed categories: Other (ROSES 2021).

See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

SMD PIs: Institution Type Selection Rate - Data Table

SMD 2016 - 2020 vs. 2021: PI Selection Rates - Institution type

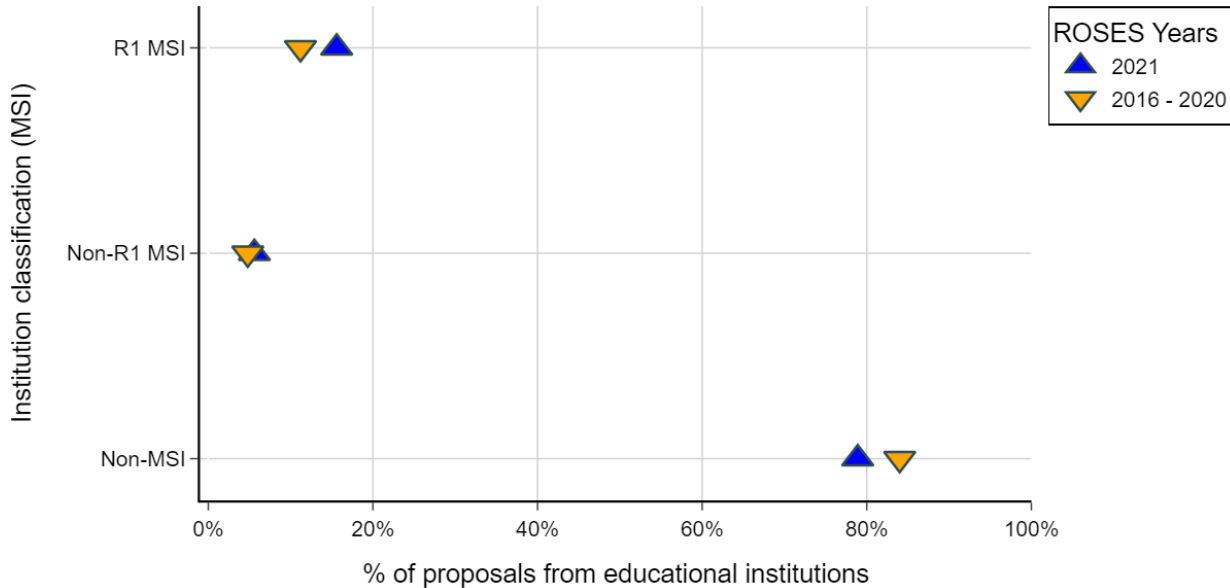
Institution type	SMD 2016-2020	SMD 2016-2020 Response/All Institution types	SMD 2021	SMD 2021 Response/All Institution types
Commercial organization	21%	0.84	27%	0.84
Educational organization	24%	0.96	31%	0.97
NASA center (incl JPL)	28%	1.12	38%	1.19
Non profit organization	25%	1	28%	0.88
OGA + gov labs & FFRDCs	26%	1.04	30%	0.94
Other	32%	1.28	NR	NR
All Institution types	25%	1	32%	1

OGA: Other Government Agency | FFRDCs: Federally Funded Research and Development Centers | Other: State, Local or Federally Recognized Tribal Government Agency & Unaffiliated Individuals | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals with PIs from a demographic response group/ # of submitted proposals with PIs from the same demographic response group

2.a.i.8.b. Minority Serving Institutions (MSIs) – SMD PIs

SMD PIs: Submitted MSI - Plot

SMD 2016 - 2020 vs. 2021: Submitted PIs - MSI



MSI: Minority Serving Institution | R1: Doctoral university - Very high research activity | N = # of proposals | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Submitted MSI - Data Table

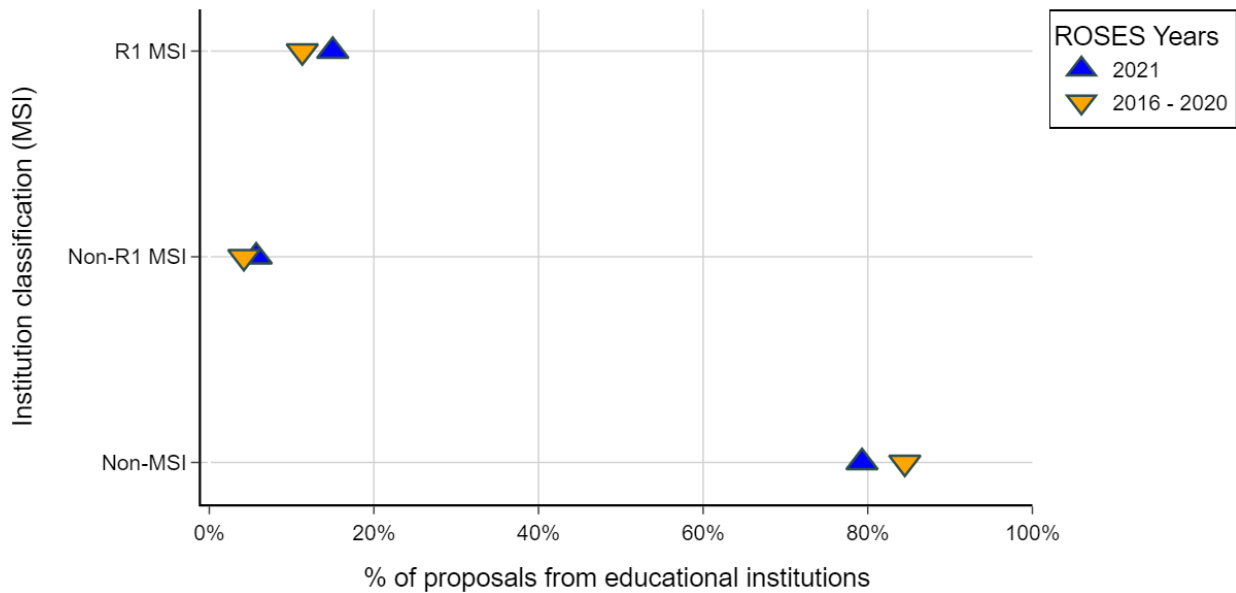
SMD 2016 - 2020 vs. 2021: Submitted PIs - MSI

MSI	SMD 2016 - 2020	SMD 2021
R1 MSI	11%	16%
Non-R1 MSI	5%	6%
Non-MSI	84%	79%

MSI: Minority Serving Institution | R1: Doctoral university - Very high research activity | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected MSI - Plot

SMD 2016 - 2020 vs. 2021: Selected PIs - MSI



MSI: Minority Serving Institution | R1: Doctoral university - Very high research activity | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected MSI - Data Table

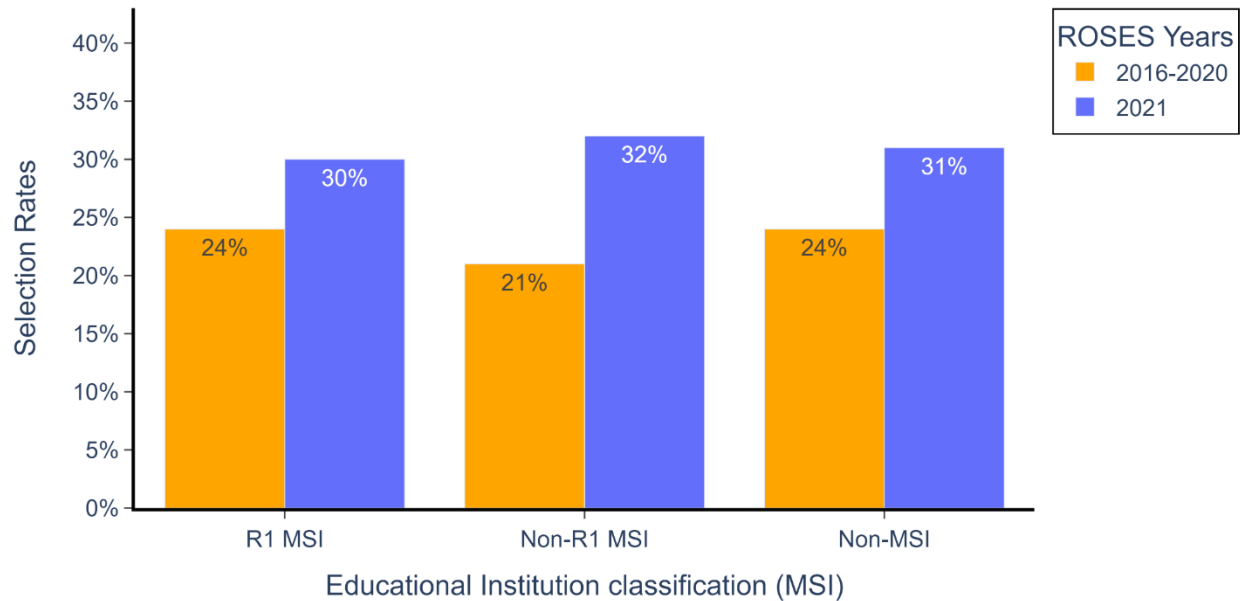
SMD 2016 - 2020 vs. 2021: Selected PIs - MSI

MSI	SMD 2016 - 2020	SMD 2021
R1 MSI	11%	15%
Non-R1 MSI	4%	6%
Non-MSI	84%	79%

MSI: Minority Serving Institution | R1: Doctoral university - Very high research activity | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: MSI Selection Rate - Bar Plot

SMD 2016 - 2020 vs. 2021: PI Selection Rates - MSI



MSI: Minority Serving Institution | R1: Doctoral university - Very high research activity | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals with PIs from a demographic response group / # of submitted proposals with PIs from the same demographic response group

SMD PIs: MSI Selection Rate - Data Table

SMD 2016 - 2020 vs. 2021: PI Selection Rates - MSI

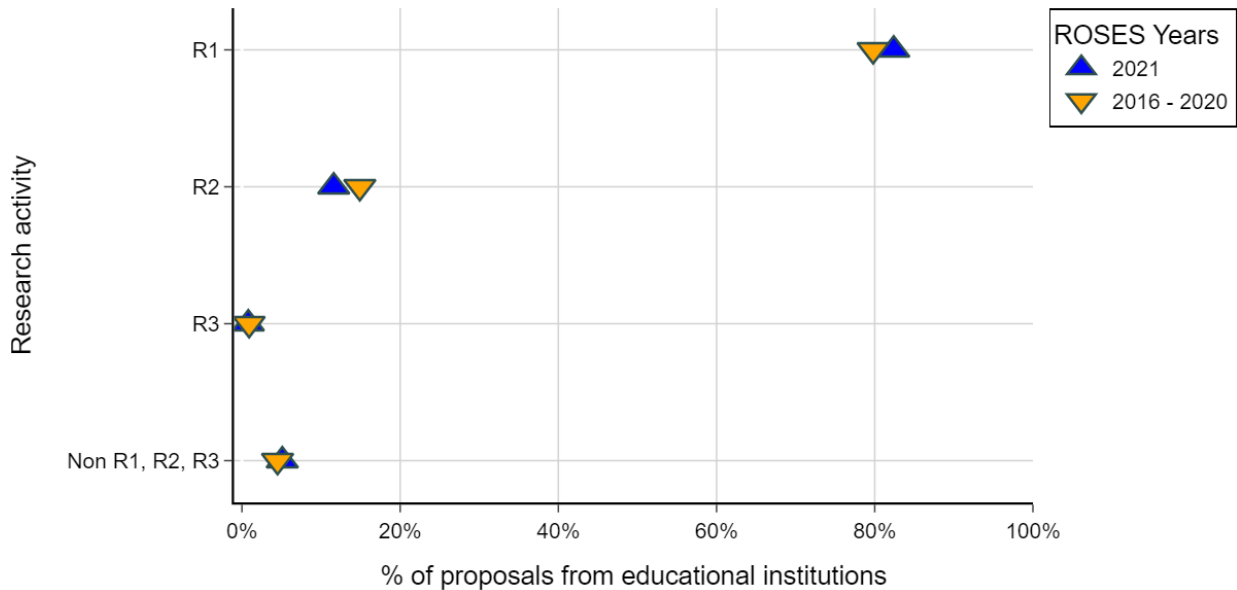
MSI	SMD 2016-2020	SMD 2016-2020 Response/All Educational Institutions	SMD 2021	SMD 2021 Response/All Educational Institutions
R1 MSI	24%	1	30%	0.97
Non-R1 MSI	21%	0.88	32%	1.03
Non-MSI	24%	1	31%	1
All Educational Institutions	24%	1	31%	1

MSI: Minority Serving Institution | R1: Doctoral university - Very high research activity | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals with PIs from a demographic response group / # of submitted proposals with PIs from the same demographic response group

2.a.i.8.c. Carnegie Classification of Research Activity – SMD PIs

SMD PIs: Submitted Research Activity - Plot

SMD 2016 - 2020 vs. 2021: Submitted PIs - Research activity



R1: Doctoral university - Very high research activity | R2: Doctoral university - High research activity | R3: Doctoral/professional university | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Submitted Research Activity - Data Table

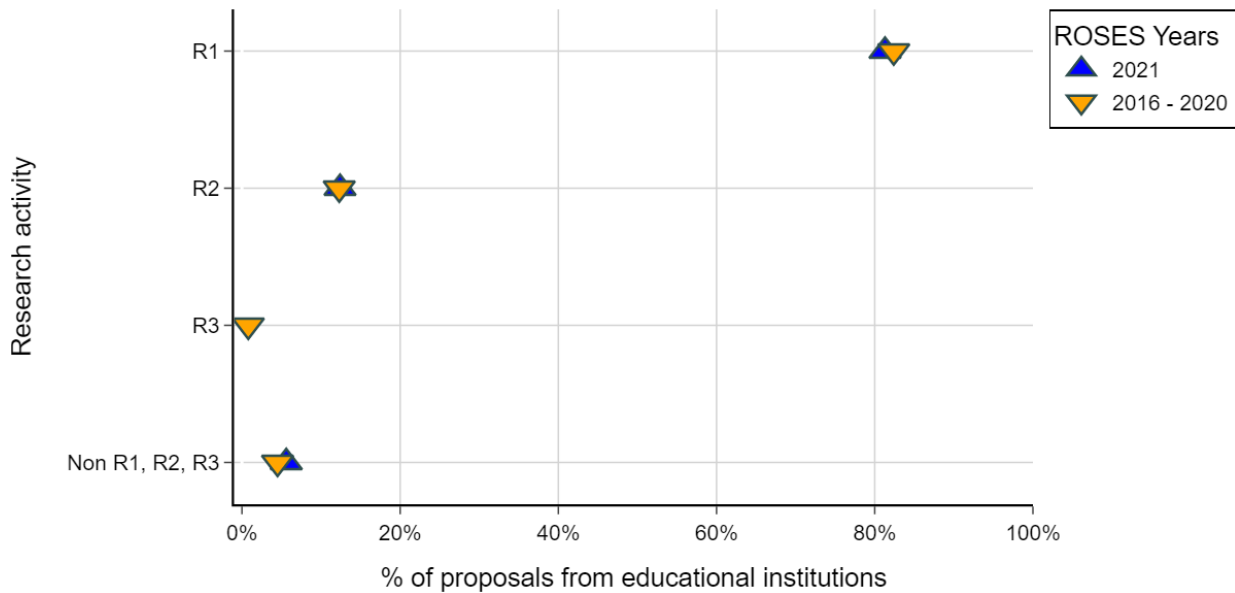
SMD 2016 - 2020 vs. 2021: Submitted PIs - Research activity

Research activity	SMD 2016 - 2020	SMD 2021
R1	80%	82%
R2	15%	12%
R3	< 1%	< 1%
Non R1, R2, R3	4%	5%

R1: Doctoral university - Very high research activity | R2: Doctoral university - High research activity | R3: Doctoral/professional university | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected Research Activity - Plot

SMD 2016 - 2020 vs. 2021: Selected PIs - Research activity



R1: Doctoral university - Very high research activity | R2: Doctoral university - High research activity | R3: Doctoral/professional university | ROSES 2016-2020 proposal data are aggregated.

Suppressed categories: R3 (ROSES 2021).

See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

SMD PIs: Selected Research Activity - Data Table

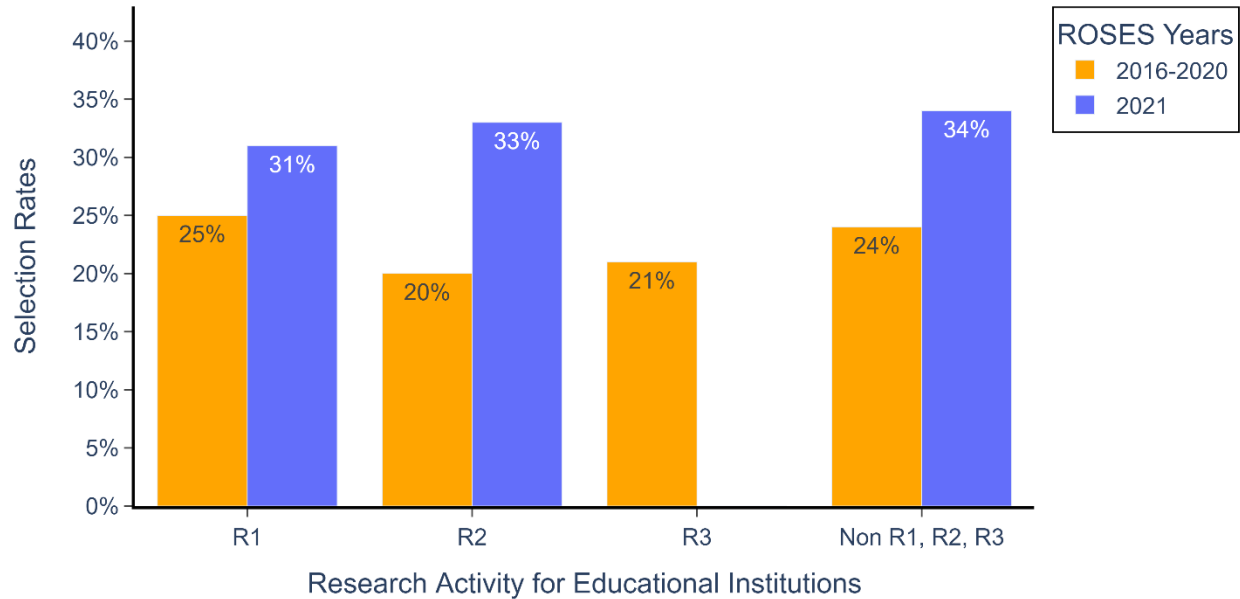
SMD 2016 - 2020 vs. 2021: Selected PIs - Research activity

Research activity	SMD 2016 - 2020	SMD 2021
R1	82%	81%
R2	12%	12%
R3	< 1%	NR
Non R1, R2, R3	4%	6%

R1: Doctoral university - Very high research activity | R2: Doctoral university - High research activity | R3: Doctoral/professional university | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Research Activity Selection Rate - Bar Plot

SMD 2016 - 2020 vs. 2021: PI Selection Rates - Research activity



R1: Doctoral university - Very high research activity | R2: Doctoral university - High research activity | R3: Doctoral/professional university | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals with PIs from a demographic response group/ # of submitted proposals with PIs from the same demographic response group

Suppressed categories: R3 (ROSES 2021).

See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

SMD PIs: Research Activity Selection Rate - Data Table

SMD 2016 - 2020 vs. 2021: PI Selection Rates - Research activity

Research activity	SMD 2016-2020	SMD 2016-2020 Response/All Educational Institutions	SMD 2021	SMD 2021 Response/All Educational Institutions
R1	25%	1.04	31%	1
R2	20%	0.83	33%	1.06
R3	21%	0.88	NR	NR
Non R1, R2, R3	24%	1	34%	1.1
All Educational Institutions	24%	1	31%	1

R1: Doctoral university - Very high research activity | R2: Doctoral university - High research activity | R3: Doctoral/professional university | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated. | Selection rate = # of selected proposals with PIs from a demographic response group / # of submitted proposals with PIs from the same demographic response group

2.a.i.9. Intersectional Demographic Analysis - SMD PIs

2.a.i.9.a. Career Stage & Gender

SMD PIs: Submitted Career Stage & Gender - Data Table

SMD Submitted PIs: Career Stage & Gender

Dropped N (2016 - 2021): 18%

Career Stage	2016-2020		2021	
	Female	Male	Female	Male
Early career	36%	64%	37%	63%
Mid career	27%	73%	31%	69%
Late career	16%	84%	18%	82%

Dropped N includes Prefer Not to Answer (PNA) and Non M/F gender responses & unknown career stage | Early career: < 10 years since earning final degree | Mid career: 10 - 19 years since earning final degree | Late career: 20+ years since earning final degree | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected Career Stage & Gender - Data Table

SMD Selected PIs: Career Stage & Gender

Dropped N (2016 - 2021): 13%

Career Stage	2016-2020		2021	
	Female	Male	Female	Male
Early career	40%	60%	41%	59%
Mid career	28%	72%	32%	68%
Late career	18%	82%	18%	82%

Dropped N includes Prefer Not to Answer (PNA) and Non M/F gender responses & unknown career stage | Early career: < 10 years since earning final degree | Mid career: 10 - 19 years since earning final degree | Late career: 20+ years since earning final degree | ROSES 2016-2020 proposal data are aggregated.

2.a.i.9.b. Under-Represented Community (URC) Race & Gender

SMD PIs: Submitted Race (URC) & Gender - Data Table

SMD Submitted PIs: Race (URC) & Gender

Dropped N (2016 - 2021): 21%

Race (URC)	2016-2020		2021	
	Female	Male	Female	Male
Asian	24%	76%	27%	73%
White	26%	74%	28%	72%
URC	35%	65%	38%	62%

Dropped N includes Prefer Not to Answer (PNA) race and gender responses, and Non M/F gender responses | Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other. | ROSES 2016-2020 proposal data are aggregated.

SMD Pls: Selected Race (URC) & Gender Cross Tab - Data Table

SMD Selected Pls: Race (URC) & Gender

Dropped N (2016 - 2021): 19%

Race (URC)	2016-2020		2021	
	Female	Male	Female	Male
Asian	28%	72%	31%	69%
White	27%	73%	28%	72%
URC	36%	64%	43%	57%

Dropped N includes Prefer Not to Answer (PNA) race and gender responses, and Non M/F gender responses | Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other. | ROSES 2016-2020 proposal data are aggregated.

2.a.i.9.c. Institution Type & Gender

SMD Pls: Submitted Institution Type & Gender - Data Table

SMD Submitted Pls: Institution Type & Gender

Dropped N (2016 - 2021): 12%

Institution type	2016-2020		2021	
	Female	Male	Female	Male
Educational org	25%	75%	26%	74%
NASA center	25%	75%	29%	71%
Other	30%	70%	34%	66%

Dropped N includes Prefer Not to Answer (PNA) and Non M/F gender responses. Other includes Commercial Organization, Local or Federally Recognized Tribal Government Agency, Non-profit Organization, Other Government Agency & Government Labs/FFRDCs, and Unaffiliated Individuals | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected Institution Type & Gender - Data Table

SMD Selected PIs: Institution Type & Gender

Dropped N (2016 - 2021): 10%

Institution type	2016-2020		2021	
	Female	Male	Female	Male
Educational org	27%	73%	27%	73%
NASA center	27%	73%	34%	66%
Other	30%	70%	36%	64%

Dropped N includes Prefer Not to Answer (PNA) and Non M/F gender responses | Other Institution Type includes Commercial Organization, Local or Federally Recognized Tribal Government Agency, Non-profit Organization, Other Government Agency & Government Labs/FFRDCs, and Unaffiliated Individuals | ROSES 2016-2020 proposal data are aggregated.

2.a.i.9.d. Institution Type & Under-Represented Community (URC) Race

SMD PIs: Submitted Institution Type & Race - Data Table

SMD Submitted PIs: Institution Type & Race (URC)

Dropped N (2016 - 2021): 21%

Institution type	2016-2020			2021		
	Asian	White	URC	Asian	White	URC
Educational org	22%	74%	4%	24%	70%	6%
NASA center	19%	73%	8%	19%	75%	6%
Other	15%	80%	5%	12%	82%	6%

Dropped N includes Prefer Not to Answer (PNA) race responses | Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other. | Other Institution Type includes Commercial Organization, Local or Federally Recognized Tribal Government Agency, Non-profit Organization, Other Government Agency & Government Labs/FFRDCs, and Unaffiliated Individuals | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected Institution Type & Race - Data Table

SMD Selected PIs: Institution Type & Race (URC)

Dropped N (2016 - 2021): 19%

Institution type	2016-2020			2021		
	Asian	White	URC	Asian	White	URC
Educational org	17%	79%	3%	21%	74%	6%
NASA center	18%	76%	6%	15%	77%	8%
Other	14%	83%	3%	11%	83%	7%

Dropped N includes Prefer Not to Answer (PNA) race responses | Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other. | Other Institution Type includes Commercial Organization, Local or Federally Recognized Tribal Government Agency, Non-profit Organization, Other Government Agency & Government Labs/FFRDCs, and Unaffiliated Individuals | ROSES 2016-2020 proposal data are aggregated.

2.a.i.9.e. Institution Type & Career Stage

SMD PIs: Submitted Institution Type & Career Stage - Data Table

SMD Submitted PIs: Institution Type & Career Stage

Dropped N (2016 - 2021): 6%

Institution type	2016-2020			2021		
	Early career	Mid career	Late career	Early career	Mid career	Late career
Educational org	33%	31%	36%	33%	32%	35%
NASA center	27%	30%	42%	25%	36%	40%
Other	33%	30%	37%	33%	29%	38%

Dropped N includes Unknown career stage. | Other Institution Type includes Commercial Organization, Local or Federally Recognized Tribal Government Agency, Non-profit Organization, Other Government Agency & Government Labs/FFRDCs, and Unaffiliated Individuals | ROSES 2016-2020 proposal data are aggregated.

SMD PIs: Selected Institution Type & Career Stage - Data Table

SMD Selected PIs: Institution Type & Career Stage

Dropped N (2016 - 2021): 2%

Institution type	2016-2020			2021		
	Early career	Mid career	Late career	Early career	Mid career	Late career
Educational org	31%	31%	38%	36%	31%	34%
NASA center	24%	32%	44%	24%	33%	43%
Other	32%	29%	39%	31%	35%	34%

Dropped N includes Unknown career stage. | Other Institution Type includes Commercial Organization, Local or Federally Recognized Tribal Government Agency, Non-profit Organization, Other Government Agency & Government Labs/FFRDCs, and Unaffiliated Individuals | ROSES 2016-2020 proposal data are aggregated.

2.a.ii. Science Team

2.a.ii.1. Context and Limitations of the Data – Science team

26,043 submitted proposals are included in the ROSES 2016-2021 database. Please see Appendix Table 1 to see which programs are included. The total number of proposals submitted and selected for each ROSES year and the total number of proposals submitted to each SMD Division cannot be reported due to the Office of the Chief Scientist's suppression guidelines. See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information. The number of proposals rounded to the nearest hundred are included for these two circumstances to provide context. For the SMD Directorate, there are ~22,800 submitted proposals for ROSES 2016-2020 and ~3,300 submitted proposals for ROSES 2021.

Instances in the science team member dataset where a science team member took the survey but selected "prefer not to answer" for all demographic survey questions:

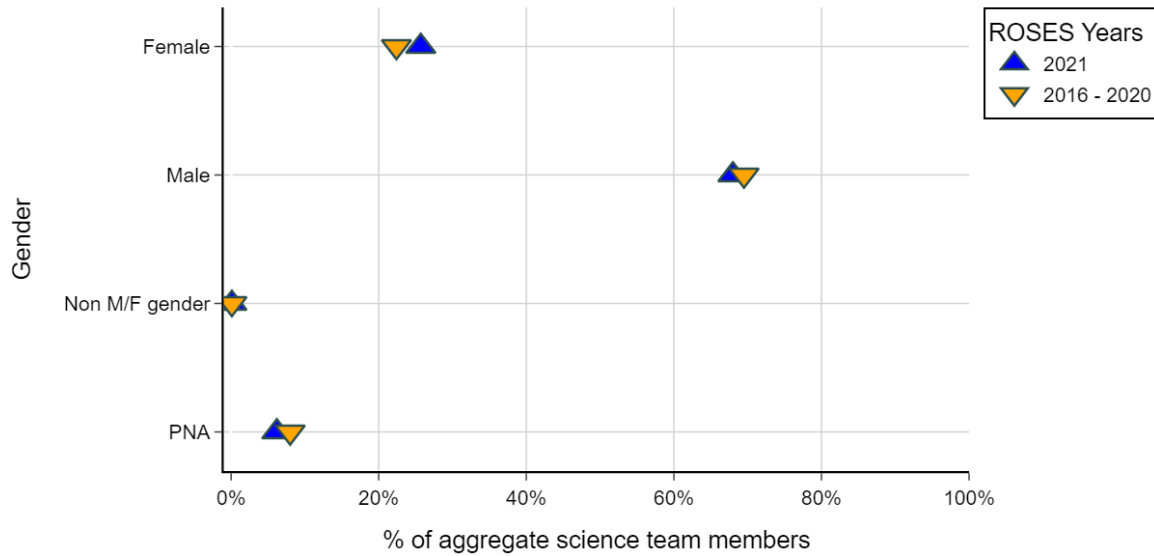
- Submitted proposals: SMD 2016 - 2020: 7% | SMD 2021: 5%
- Selected proposals: SMD 2016 - 2020: 7% | SMD 2021: 5%

Demographic data responses for one collaborator and three Co-Is participating in ROSES 2016 and 2017 proposals are missing and have been removed from the database.

2.a.ii.2. Gender - SMD Science Team

SMD Science Team: Submitted Gender - Plot

SMD 2016 - 2020 vs. 2021: Submitted Science Team - Gender



PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

SMD Science Team: Submitted Gender - Data Table

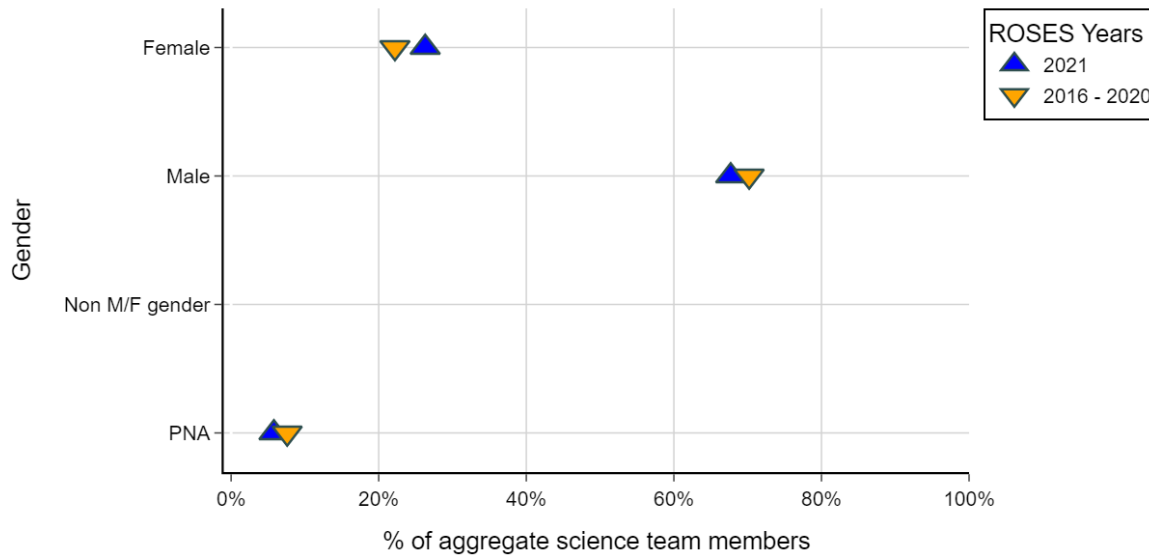
SMD 2016 - 2020 vs. 2021: Submitted Science Team - Gender

Gender	SMD 2016 - 2020	SMD 2021
Female	22%	26%
Male	70%	68%
Non M/F gender	< 1%	< 1%
PNA	8%	6%

PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD Science Team: Selected Gender - Plot

SMD 2016 - 2020 vs. 2021: Selected Science Team - Gender



PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

Suppressed categories: Non M/F gender (All years).

See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

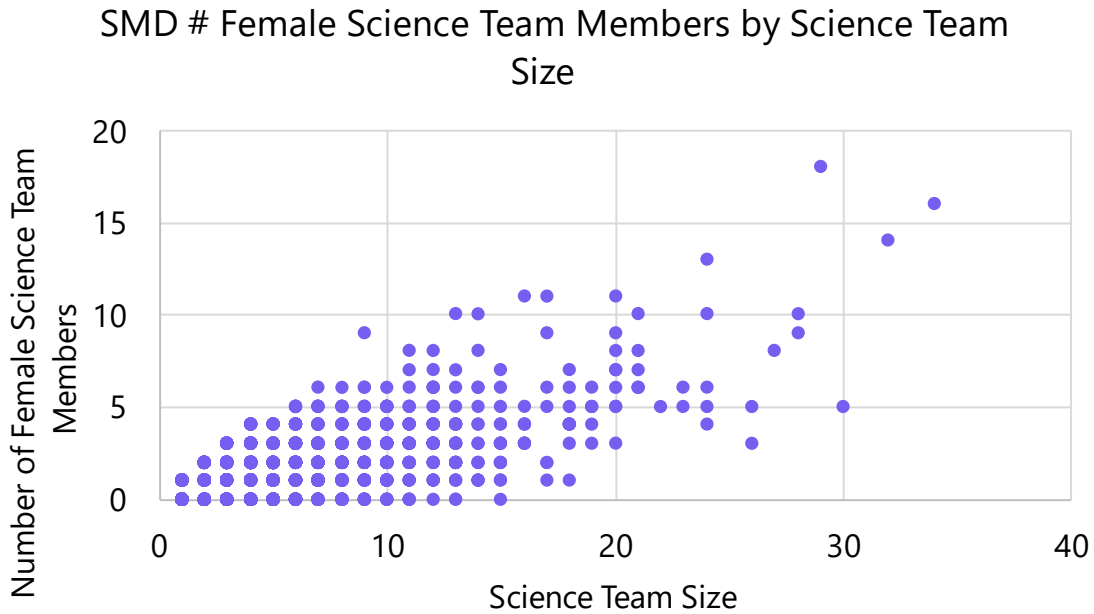
SMD Science Team: Selected Gender - Data Table

SMD 2016 - 2020 vs. 2021: Selected Science Team - Gender

Gender	SMD 2016 - 2020	SMD 2021
Female	22%	26%
Male	70%	68%
Non M/F gender	NR	NR
PNA	8%	6%

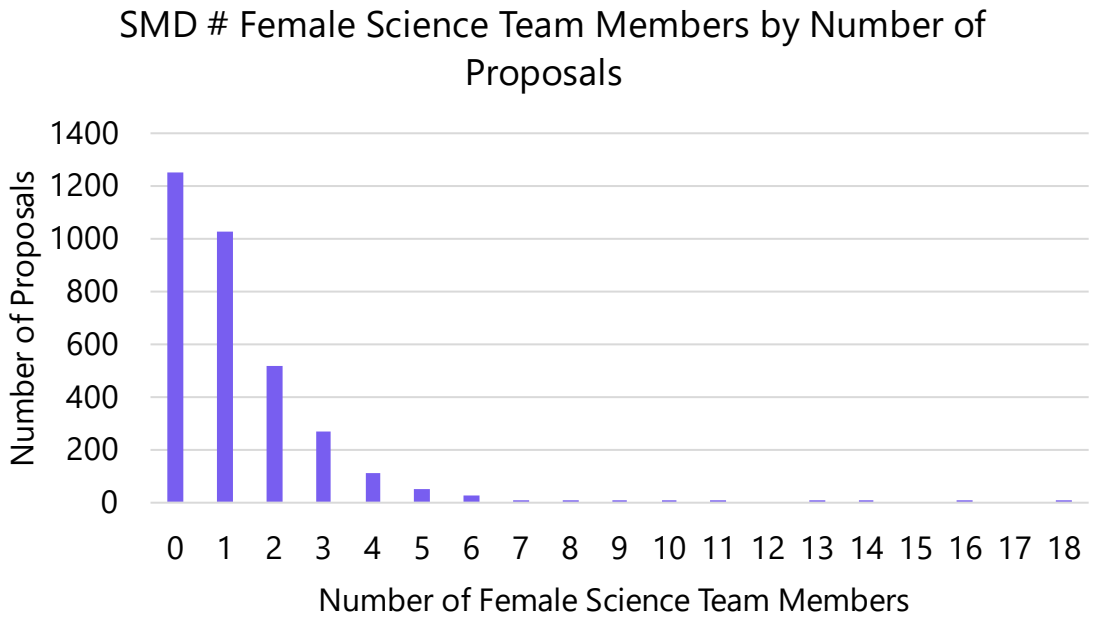
PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD ROSES 2021 Science Teams: Female Science Team Members by Science Team Size – Scatter Plot



Note: 38% of proposals submitted to ROSES 2021 did not include female researchers in their science team. 13% of proposals submitted to ROSES 2021 only included the PI as the science team.

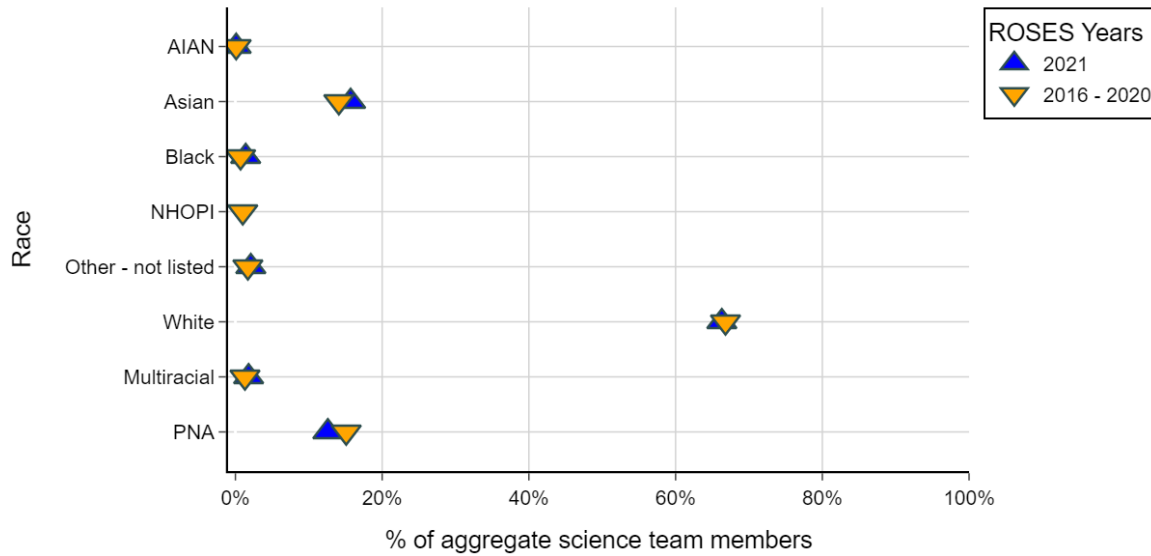
SMD ROSES 2021 Science Teams: Female Science Team Members by Number of Proposals – Bar Chart



2.a.ii.3. Race - SMD Science Team

SMD Science Team: Submitted Race - Plot

SMD 2016 - 2020 vs. 2021: Submitted Science Team - Race



AIAN: American Indian and Alaska Native | NHOPI: Native Hawaiian and Other Pacific Islander | PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.*

Suppressed categories: NHOPI (ROSES 2021).

See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

SMD Science Team: Submitted Race - Data Table

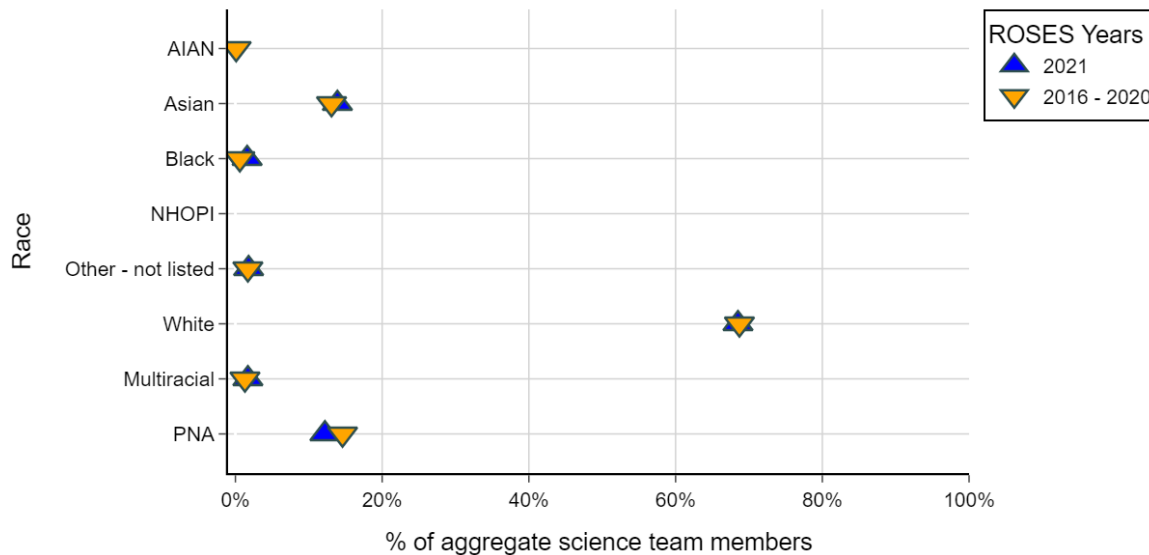
SMD 2016 - 2020 vs. 2021: Submitted Science Team - Race

Race	SMD 2016 - 2020	SMD 2021
AIAN	< 1%	< 1%
Asian	14%	16%
Black	< 1%	1%
NHOPI	1%	NR
Other - not listed	2%	2%
White	67%	66%
Multiracial	1%	2%
PNA	15%	13%

AIAN: American Indian and Alaska Native | NHOPI: Native Hawaiian and Other Pacific Islander | PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD Science Team: Selected Race - Plot

SMD 2016 - 2020 vs. 2021: Selected Science Team - Race



AIAN: American Indian and Alaska Native | NHOPI: Native Hawaiian and Other Pacific Islander | PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

Suppressed categories: AIAN (ROSES 2021), NHOPI (All years).

See *Yearbook Introduction Section 1.a.ii.1 Office of the Chief Scientist (OCS) Suppression Guidelines for self-reported demographics* for more information.

SMD Science Team: Selected Race - Data Table

SMD 2016 - 2020 vs. 2021: Selected Science Team - Race

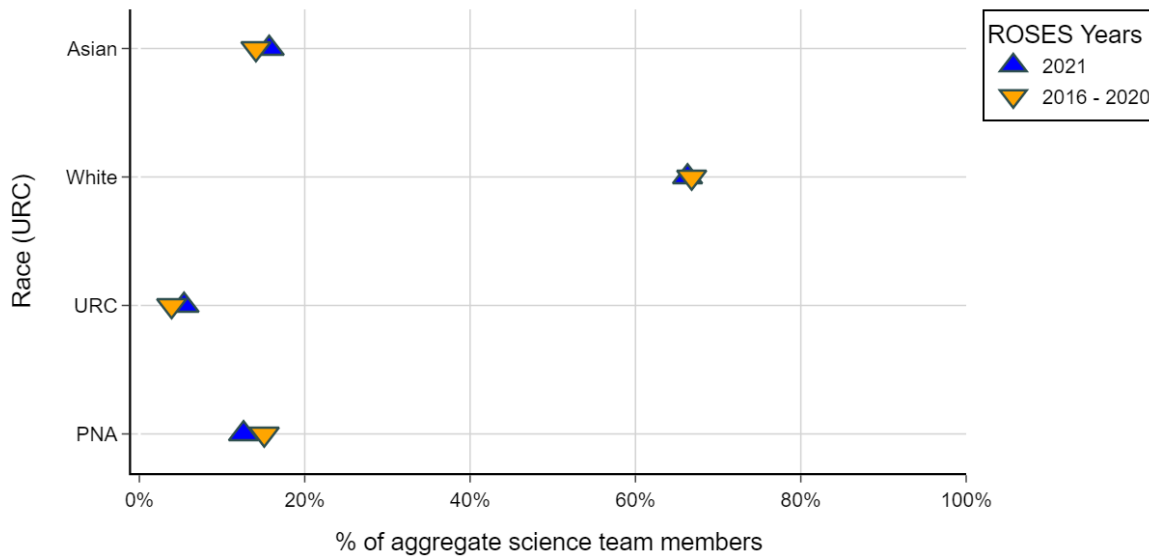
Race	SMD 2016 - 2020	SMD 2021
AIAN	< 1%	NR
Asian	13%	14%
Black	< 1%	2%
NHOPI	NR	NR
Other - not listed	2%	2%
White	69%	68%
Multiracial	1%	2%
PNA	15%	12%

AIAN: American Indian and Alaska Native | NHOPI: Native Hawaiian and Other Pacific Islander | PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

2.a.ii.4. Race using Under-Represented Community (URC) - SMD Science Team

SMD Science Team: Submitted Race (URC) - Plot

SMD 2016 - 2020 vs. 2021: Submitted Science Team - Race (URC)



URC: Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other. | PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

SMD Science Team: Submitted Race (URC) - Data Table

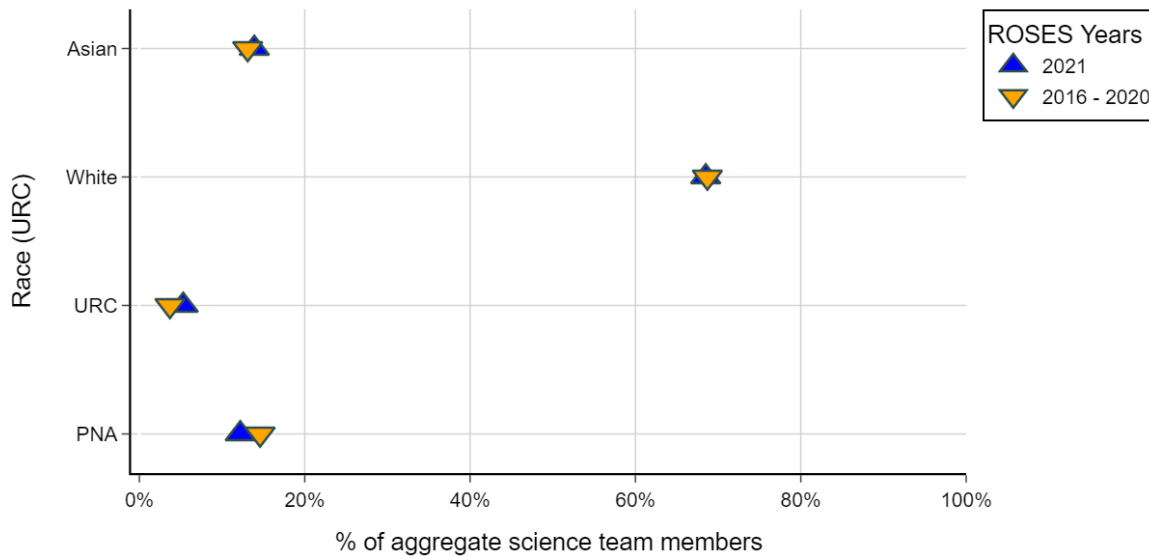
SMD 2016 - 2020 vs. 2021: Submitted Science Team - Race (URC)

Race (URC)	SMD 2016 - 2020	SMD 2021
Asian	14%	16%
White	67%	66%
URC	4%	5%
PNA	15%	13%

Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other. | PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD Science Team: Selected Race (URC) - Plot

SMD 2016 - 2020 vs. 2021: Selected Science Team - Race (URC)



Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other. | PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

SMD Science Team: Selected Race (URC) - Data Table

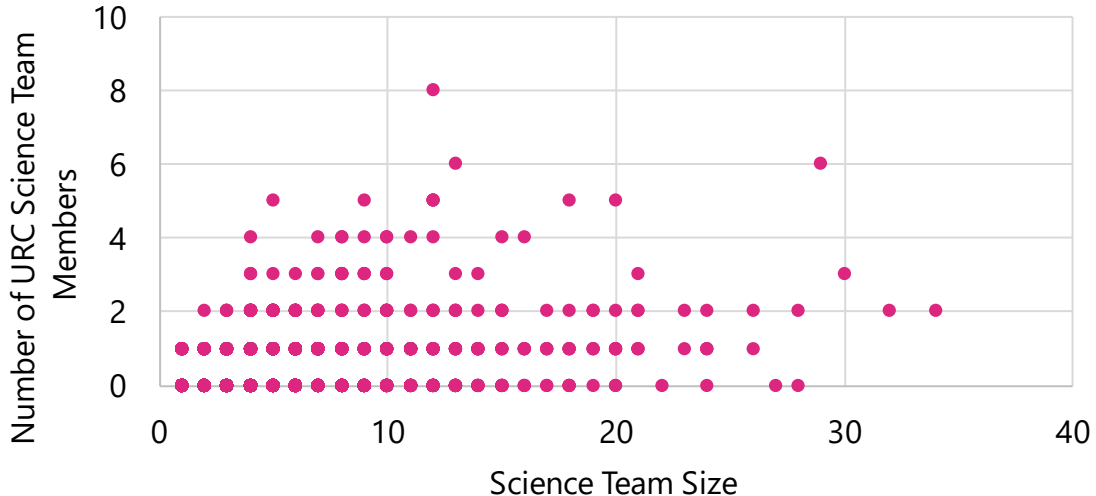
SMD 2016 - 2020 vs. 2021: Selected Science Team - Race (URC)

Race (URC)	SMD 2016 - 2020	SMD 2021
Asian	13%	14%
White	69%	68%
URC	4%	5%
PNA	15%	12%

Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other. | PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

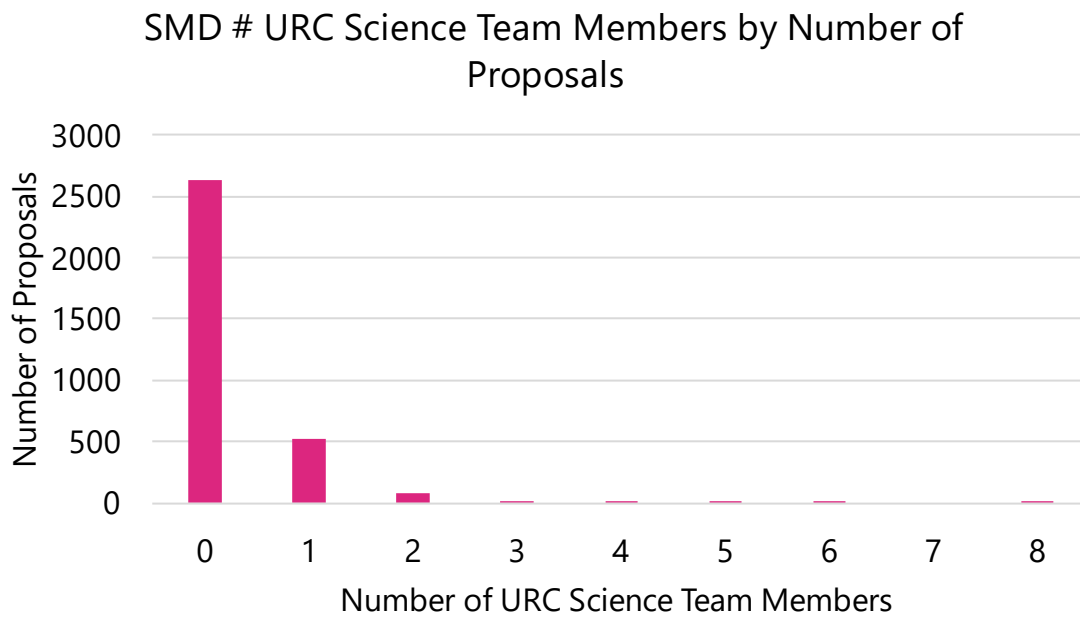
SMD ROSES 2021 Science Teams: URC Science Team Members by Science Team Size – Scatter Plot

SMD # URC Science Team Members by Science Team Size



Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other. | Note: 80% of proposals submitted to ROSES 2021 did not include URC researchers in their science team. 13% of proposals submitted to ROSES 2021 only included the PI as the science team.

SMD ROSES 2021 Science Teams: URC Science Team Members by Number of Proposals - Bar Chart

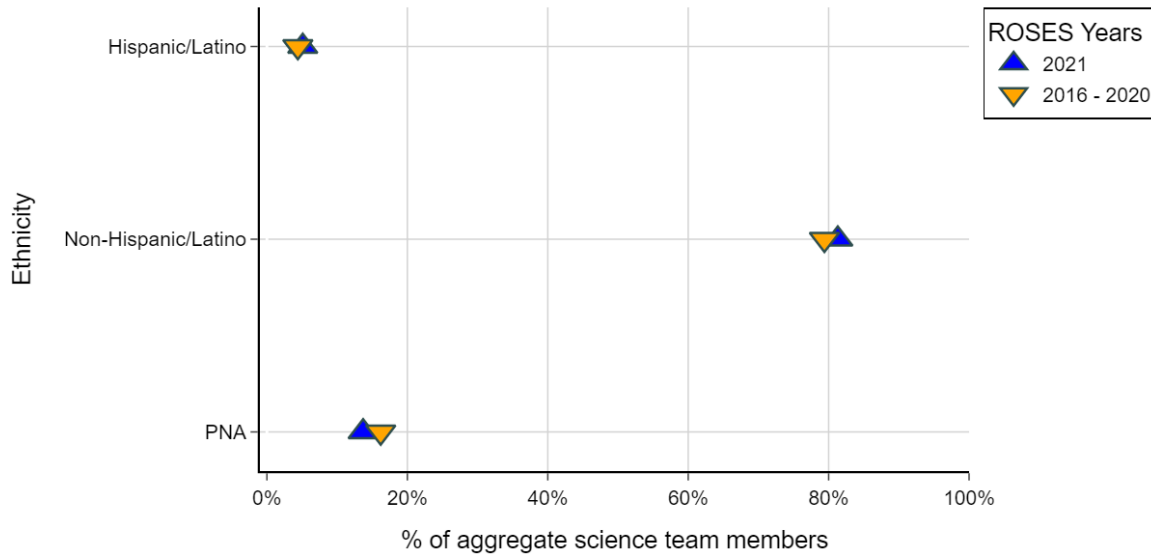


Under-Represented Community (URC) includes American Indian & Alaska Native, Black, Native Hawaiian & Other Pacific Islander, Multiracial, and Other.

2.a.ii.5. Ethnicity - SMD Science Team

SMD Science Team: Submitted Ethnicity - Plot

SMD 2016 - 2020 vs. 2021: Submitted Science Team - Ethnicity



PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD Science Team: Submitted Ethnicity - Data Table

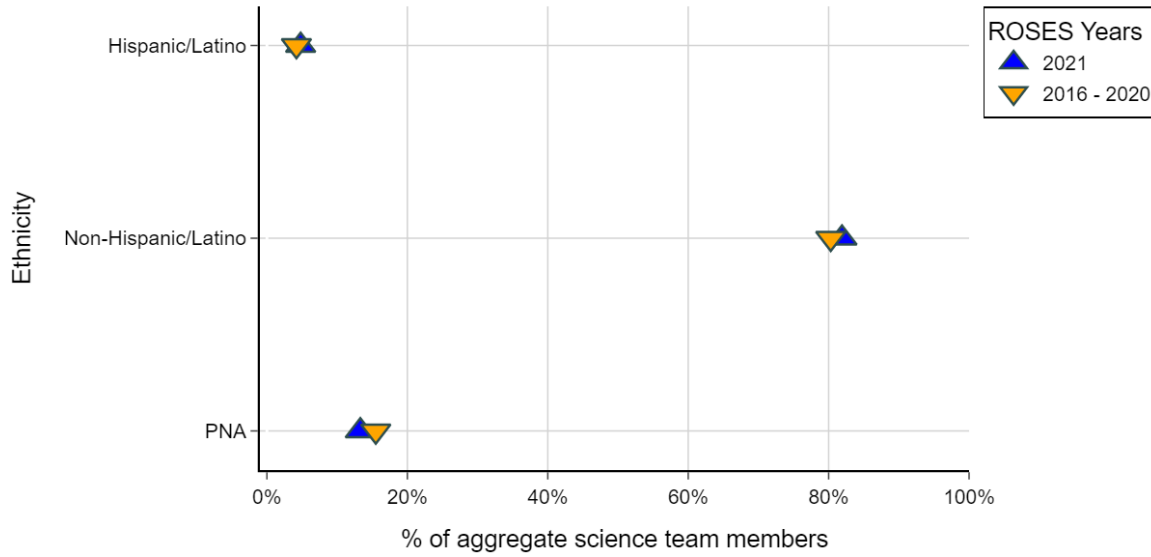
SMD 2016 - 2020 vs. 2021: Submitted Science Team - Ethnicity

Ethnicity	SMD 2016 - 2020	SMD 2021
Hispanic/Latino	4%	5%
Non-Hispanic/Latino	79%	81%
PNA	16%	14%

PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD Science Team: Selected Ethnicity - Plot

SMD 2016 - 2020 vs. 2021: Selected Science Team - Ethnicity



PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

SMD Science Team: Selected Ethnicity - Data Table

SMD 2016 - 2020 vs. 2021: Selected Science Team - Ethnicity

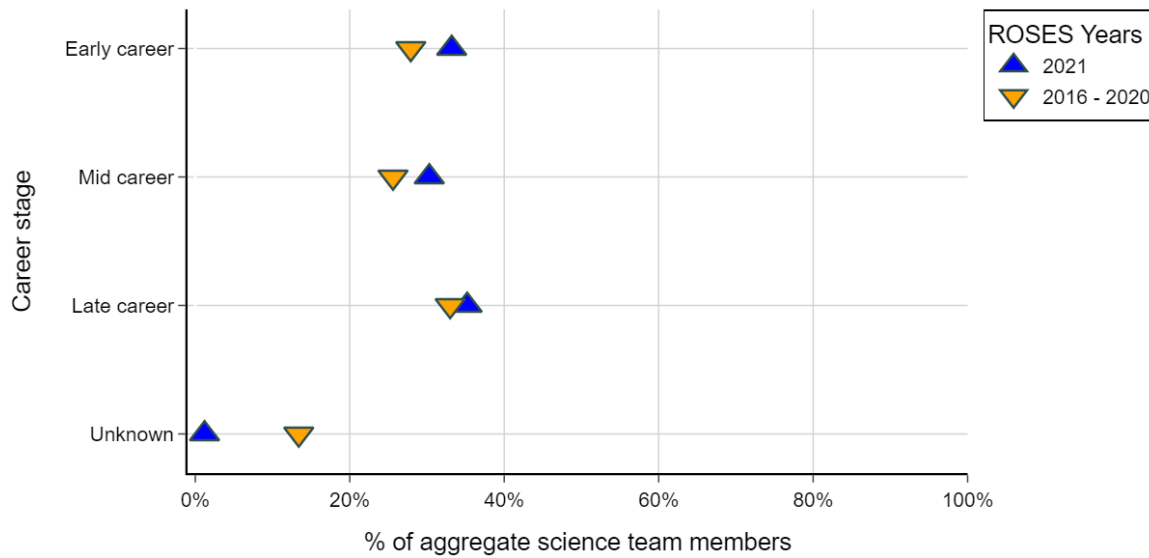
Ethnicity	SMD 2016 - 2020	SMD 2021
Hispanic/Latino	4%	5%
Non-Hispanic/Latino	80%	82%
PNA	16%	13%

PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

2.a.ii.6. Career Stage - SMD Science Team

SMD Science Team: Submitted Career Stage - Plot

SMD 2016 - 2020 vs. 2021: Submitted Science Team - Career stage



Early career: < 10 years since earning final degree | Mid career: 10 - 19 years since earning final degree | Late career: 20+ years since earning final degree | ROSES 2016-2020 proposal data are aggregated.

SMD Science Team: Submitted Career Stage - Data Table

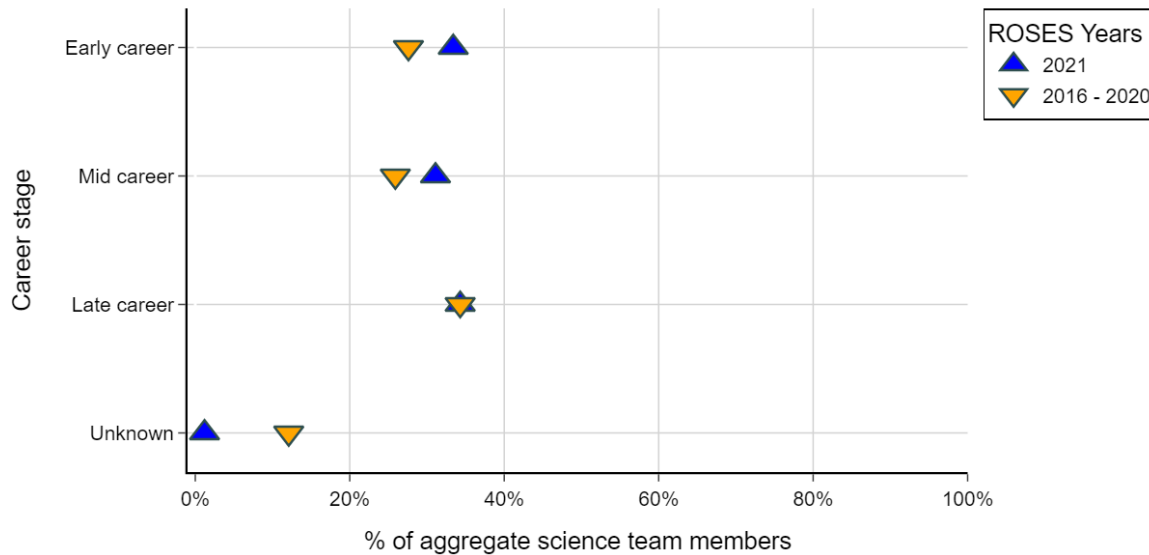
SMD 2016 - 2020 vs. 2021: Submitted Science Team - Career stage

Career stage	SMD 2016 - 2020	SMD 2021
Early career	28%	33%
Mid career	26%	30%
Late career	33%	35%
Unknown	13%	1%

Early career: < 10 years since earning final degree | Mid career: 10 - 19 years since earning final degree | Late career: 20+ years since earning final degree | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD Science Team: Selected Career Stage - Plot

SMD 2016 - 2020 vs. 2021: Selected Science Team - Career stage



Early career: < 10 years since earning final degree | Mid career: 10 - 19 years since earning final degree | Late career: 20+ years since earning final degree | ROSES 2016-2020 proposal data are aggregated.

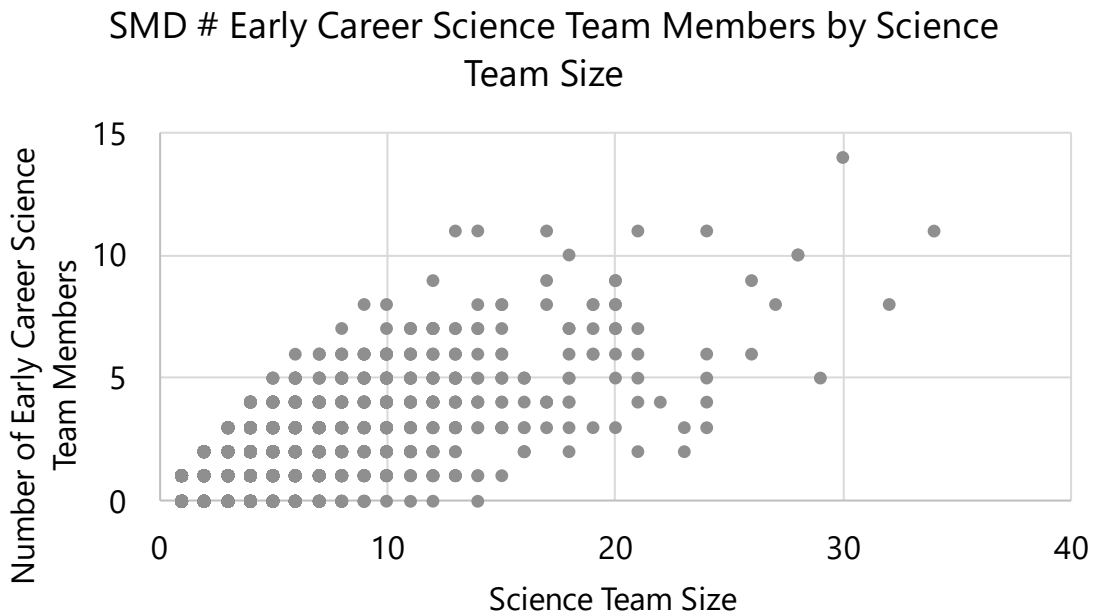
SMD Science Team: Selected Career Stage - Data Table

SMD 2016 - 2020 vs. 2021: Selected Science Team - Career stage

Career stage	SMD 2016 - 2020	SMD 2021
Early career	28%	33%
Mid career	26%	31%
Late career	34%	34%
Unknown	12%	1%

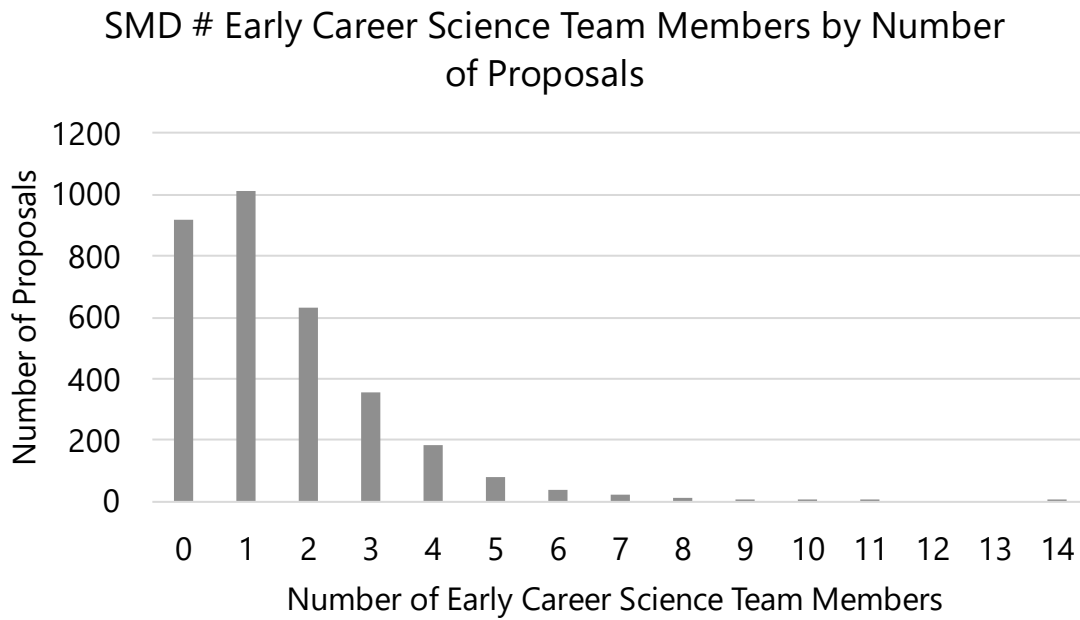
Early career: < 10 years since earning final degree | Mid career: 10 - 19 years since earning final degree | Late career: 20+ years since earning final degree | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD ROSES 2021 Science Teams: Early Career Science Team Members by Science Team Size – Scatter Plot



Early career: < 10 years since earning final degree | Note: 28% of proposals submitted to ROSES 2021 did not include early career researchers in their science team. 13% of proposals submitted to ROSES 2021 only included the PI as the science team.

SMD ROSES 2021 Science Teams: Early Career Science Team Members by Number of Proposals - Bar Chart

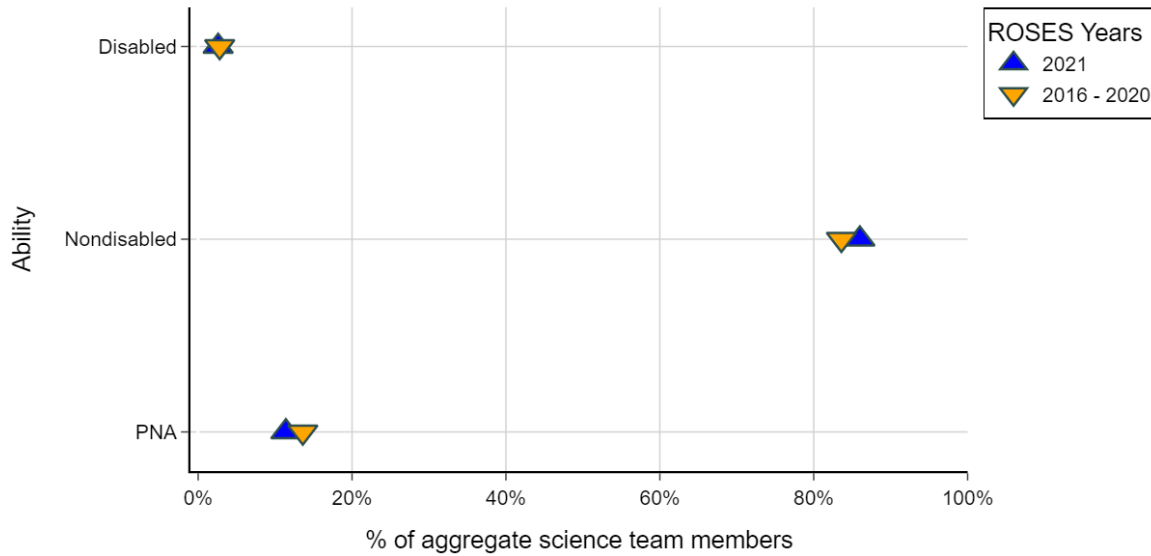


Early career: < 10 years since earning final degree

2.a.ii.7. Disability Status - SMD Science Team

SMD Science Team: Submitted Ability - Plot

SMD 2016 - 2020 vs. 2021: Submitted Science Team - Ability



Disabled includes hearing, visual, mobility/orthopedic, and other impairment | PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

SMD Science Team: Submitted Ability - Data Table

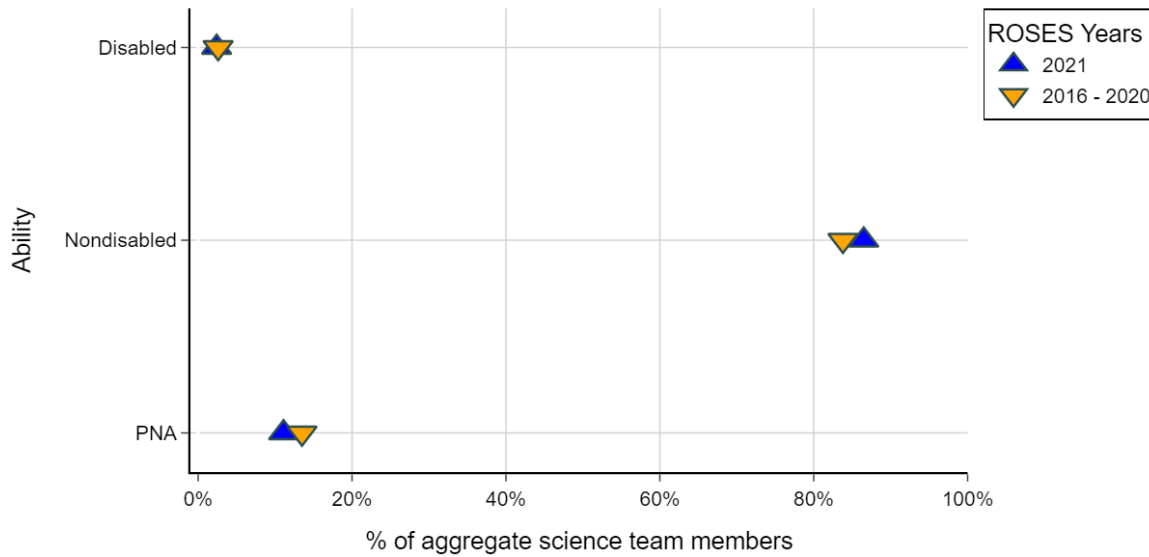
SMD 2016 - 2020 vs. 2021: Submitted Science Team - Ability

Ability	SMD 2016 - 2020	SMD 2021
Disabled	3%	3%
Nondisabled	84%	86%
PNA	14%	11%

Disabled includes hearing, visual, mobility/orthopedic, and other impairment | PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

SMD Science Team: Selected Ability - Plot

SMD 2016 - 2020 vs. 2021: Selected Science Team - Ability



Disabled includes hearing, visual, mobility/orthopedic, and other impairment | PNA: Prefer not to answer | ROSES 2016-2020 proposal data are aggregated.

SMD Science Team: Selected Ability - Data Table

SMD 2016 - 2020 vs. 2021: Selected Science Team - Ability

Ability	SMD 2016 - 2020	SMD 2021
Disabled	3%	2%
Nondisabled	84%	86%
PNA	14%	11%

Disabled includes hearing, visual, mobility/orthopedic, and other impairment | PNA: Prefer not to answer | NR: Not reportable | ROSES 2016-2020 proposal data are aggregated.

2.b. Proposal Data

2.b.i. Unique PI Cohort

Unique PI Selection Rate for ROSES 2016-2020 and ROSES 2021 - Data Table

Proposal Information	ROSES 2016-20	ROSES 2021
Unique Selected PIs	3742	969
Unique Submitted PIs	8454	2639
Unique PI Selection Rate	44%	37%
Total Selections	~5600	~1000
Total Submissions	~22800	~3300
Total Selection Rate	25%	32%

Unique PI: removes duplicate submitted and selected proposals from an individual PI
Total Selection Rate is for all proposals submitted to SMD for the given ROSES years.

Comparison of Unique PIs Across SMD Divisions for ROSES 2021 - Data Table

Proposal Information	APD	BPS	CD	ESD	HPD	PSD	SMD
Unique Selected PIs	162	27	48	384	119	236	969
Unique Submitted PIs	510	110	237	890	315	685	2639
Unique PI Selection Rate	32%	25%	20%	43%	38%	34%	37%
Total Selection Rate	29%	24%	19%	39%	32%	29%	32%

Unique PI: removes duplicate submitted and selected proposals to look at participation of an individual PI
Total Selection Rate is for all proposals submitted to the given SMD Division/Directorate-wide for ROSES 2021.

2.b.ii. New PIs

Comparison of Proposal Statistics of New PIs and Unique PIs for ROSES 2021 - Data Table

SMD 2021	New PIs	Unique PIs	New PI %
Selected	461	969	48%
Submitted	1494	2639	57%
Selection Rate	31%	37%	

New PI (Directorate): A PI that was selected by any program in SMD in ROSES 2021 but was not selected by any program in SMD in the previous five ROSES years.

New PIs Submitted: an individual submitting a proposal that would be a new PI if the submitted proposal were selected.

Unique PIs: participation of individuals and not proposals.

Comparison of New PIs Across SMD Divisions for ROSES 2021 - Data Table

New PIs	APD	BPS	CD	ESD	HPD	PSD	SMD
Selected	91	20	41	196	43	106	461
Submitted	358	85	201	513	145	384	1494
Selection Rate	25%	24%	20%	38%	30%	28%	31%
Submission Rate	70%	77%	85%	58%	46%	56%	57%

New PIs Selected is the same as a New PI: A PI that was selected by any program in the given Directorate/ SMD Division in ROSES 2021 but was not selected by any program in that Directorate/SMD Division in the previous five ROSES years.

New PIs Submitted: an individual submitting a proposal that would be a new PI if the submitted proposal were selected.

New PIs Submission Rate: New PIs Submitted/ total Unique PIs that submitted proposals

2.b.iii. Time from Proposal Submission to Award Notification for ROSES 2021

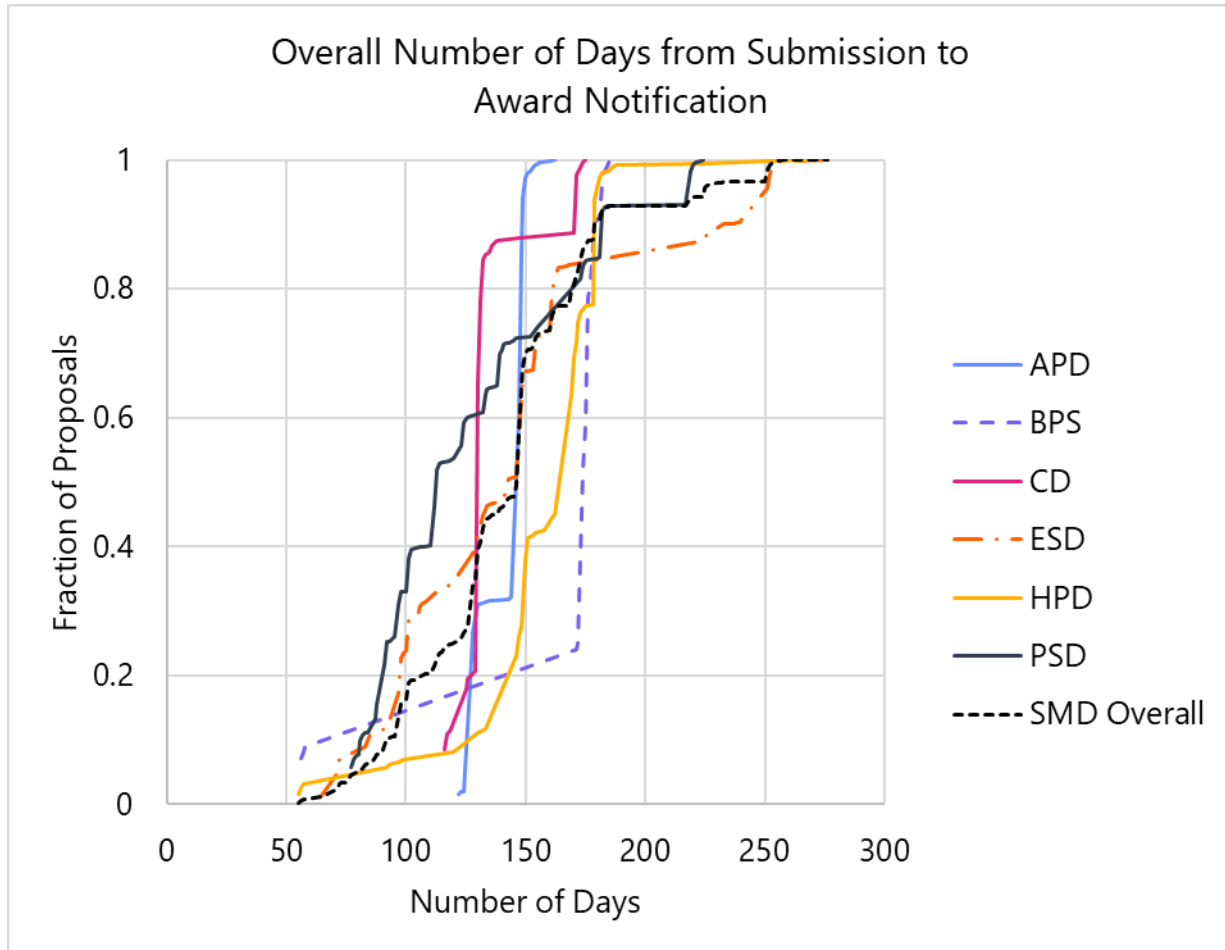
Number of Days from Proposal Submission to 80% Award Notification for SMD Divisions and Directorate Overall- Data Table

Division	Number of Days to 80% Notification
APD	148
BPS	177
CD	132
ESD	162
HPD	179
PSD	173
SMD Overall	170

Notes: SMD Policy Document SPD-22A applied to proposals submitted to ROSES 2016-2021 and included this statement: "Proposers shall receive a status notification from the Program Officer concerning their proposal no later than 150 days after the proposal due date, if selections have not yet already been made and announced."

Programs with no due dates are not included: Emerging Worlds; Exobiology; Laboratory Analysis of Returned Samples; Planetary Data Archiving, Restoration and Tools; Planetary Instrument Concepts for the Advancement of Solar System Observations; Rapid Response and Novel Research in Earth Science; Solar System Observations; and Solar System Workings

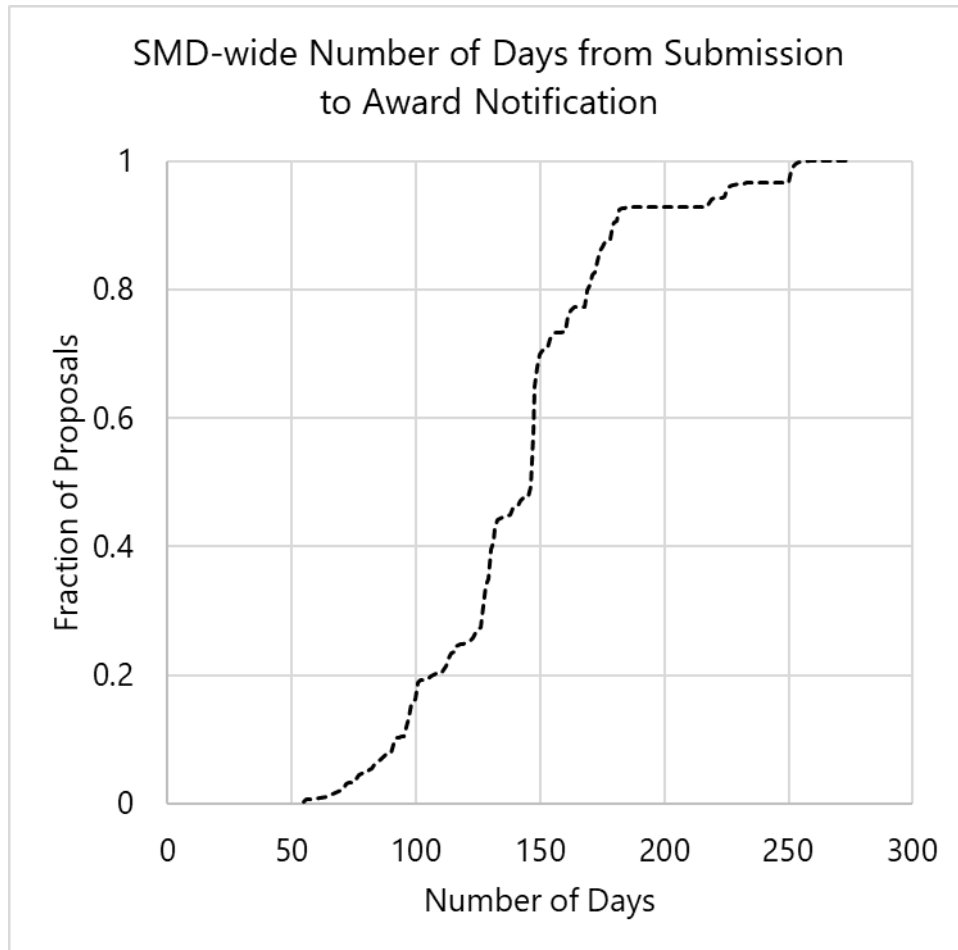
Number of Days from Proposal Submission to Award Notification for SMD Divisions and Directorate Overall - Empirical Distribution Function



Notes: Number of days from proposal submission to 80% of award notifications for SMD is 170 days. SMD Policy Document SPD-22A applied to proposals submitted to ROSES 2016-2021 and included this statement: "Proposers shall receive a status notification from the Program Officer concerning their proposal no later than 150 days after the proposal due date, if selections have not yet already been made and announced."

Programs with no due dates are not included: Emerging Worlds; Exobiology; Laboratory Analysis of Returned Samples; Planetary Data Archiving, Restoration and Tools; Planetary Instrument Concepts for the Advancement of Solar System Observations; Rapid Response and Novel Research in Earth Science; Solar System Observations; and Solar System Workings

Number of Days from Proposal Submission to Award Notification for SMD Directorate Overall - Empirical Distribution Function



Notes: Number of days from proposal submission to 80% of award notifications for SMD is 170 days. SMD Policy Document SPD-22A applied to proposals submitted to ROSES 2016-2021 and included this statement: "Proposers shall receive a status notification from the Program Officer concerning their proposal no later than 150 days after the proposal due date, if selections have not yet already been made and announced."

Programs with no due dates are not included: Emerging Worlds; Exobiology; Laboratory Analysis of Returned Samples; Planetary Data Archiving, Restoration and Tools; Planetary Instrument Concepts for the Advancement of Solar System Observations; Rapid Response and Novel Research in Earth Science; Solar System Observations; and Solar System Workings