## RPG Pool Analysis

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## Strong support for RPGs - FY 2013-19

- Increases to the RPG pool several fiscal years starting with 2014
- Established 7-year awards for Outstanding Investigators
- R21 (2-year grants) awards have decreased
- R01 applications have increased by almost 50\%
- Extended many ESI awards from 5 to 7 years with the R37
- Paylines and success rates \& preserved higher payline for ESIs


## Dramatic Increase in R01 Applications 2013-2018 <br> Competing R01 Applications, NCI vs All Other ICs



## Competing R01 applications vs. budgets for NCI \& RPGs: Percent change since 2013

|  | $60 \%$ |  | NCI R01 Applications |
| :---: | :---: | :---: | :---: | :---: |
| Up 45.9\% |  |  |  |

## Success rates for From 2013 to 2018 have increased for NIH overall but decreased for NCI

2013 NIH Success Rates by Institute/Center

| Institute/Center | Applications | Awards | Success Rates |
| :--- | ---: | ---: | ---: |
| NEI | 1,128 | 267 | $23.70 \%$ |
| NIDCD | 721 | 162 | $22.50 \%$ |
| NIDDK | 2,760 | 579 | $21.00 \%$ |
| NHGRI | 341 | 70 | $20.50 \%$ |
| OD ORIP-SEPA | 55 | 11 | $20.00 \%$ |
| NIDCR | 718 | 143 | $19.90 \%$ |
| NIGMS | 4,158 | 826 | $19.90 \%$ |
| NINDS | 3,551 | 702 | $19.80 \%$ |
| NIAAA | 853 | 166 | $19.50 \%$ |
| NIDA | 1,874 | 365 | $19.50 \%$ |
| NIAID | 5,367 | 1,008 | $18.80 \%$ |
| NIMH | 2,736 | 512 | $18.70 \%$ |
| NHLBI | 4,331 | 734 | $16.90 \%$ |
| FY13 TOTALS | 49,581 | 8,310 | $16.80 \%$ |
| NIAMS | 1,635 | 260 | $15.90 \%$ |
| NIEHS | 1,028 | 157 | $15.30 \%$ |
| FIC | 137 | 20 | $14.60 \%$ |
| NCI | 7,975 | 1,095 | $13.70 \%$ |
| NIBIB | 1,329 | 182 | $13.70 \%$ |
| NIA | 2,674 | 365 | $13.60 \%$ |
| NLM | 106 | 13 | $12.30 \%$ |
| NCCAM | 405 | 47 | $11.60 \%$ |
| NICHD | 3,269 | 354 | $10.80 \%$ |
| OD COMMON FUND | 1,434 | 132 | $9.20 \%$ |
| NINR | 581 | 53 | $9.10 \%$ |
| NIMHD | 280 | 12 | $4.30 \%$ |
|  |  |  |  |
|  |  | 10 |  |

2018 NIH Success Rates by Institute/Center

| Institute/Center | Applications | Awards | Success Rates |
| :--- | ---: | ---: | ---: |
| NCATS | 66 | 23 | $34.80 \%$ |
| NIGMS | 3,835 | 1,118 | $29.20 \%$ |
| NIA | 3,240 | 937 | $28.90 \%$ |
| NHGRI | 268 | 75 | $28.00 \%$ |
| NIDCD | 840 | 228 | $27.10 \%$ |
| NEI | 1,159 | 310 | $26.70 \%$ |
| NIAAA | 948 | 253 | $26.70 \%$ |
| NHLBI | 3,960 | 992 | $25.10 \%$ |
| NIAID | 6,207 | 1,420 | $22.90 \%$ |
| NIDCR | 906 | 201 | $22.20 \%$ |
| NIMH | 2,714 | 602 | $22.20 \%$ |
| NINDS | 4,478 | 975 | $21.80 \%$ |
| NIDDK | 3,195 | 689 | $21.60 \%$ |
| NCCIH | 306 | 62 | $20.30 \%$ |
| FY18 TOTALS | 54,834 | 11,071 | $20.20 \%$ |
| FIC | 210 | 41 | $19.50 \%$ |
| NIDA | 2,108 | 391 | $18.50 \%$ |
| NICHD | 3,033 | 557 | $18.40 \%$ |
| OD ORIP-SEPA | 73 | 13 | $17.80 \%$ |
| NLM 2 | 186 | 33 | $17.70 \%$ |
| NIEHS | 1,118 | 191 | $17.10 \%$ |
| NIBIB | 1,523 | 256 | $16.80 \%$ |
| NIAMS | 1,589 | 266 | $16.70 \%$ |
| NCI | 10,282 | 1,162 | $11.30 \%$ |
| OD COMMON FUND | 1,243 | 135 | $10.90 \%$ |
| NIMHD | 656 | 70 | $10.70 \%$ |
| NINR | 691 | 71 | $10.30 \%$ |
|  |  |  |  |
|  |  |  |  |

## NCI Budget - FY 2018



## RPG Funds - FY 2018



Average total award costs of competing R01s: NCl awards are lower than non-NCl awards


## 2013-2019 trends in number of RPG awards by mechanism



R01 \& R21 awards have had the largest changes

## 2013-2019 trends in dollars for RPG awards by mechanism



R01 \& R21 awards have had the largest changes.

Funding Patterns for Competing Research Project Grants -FY14-18

2 R37s included in Other RPGs

|  | FY2014 |  |  | FY2015 |  |  | FY2016 |  |  | FY2017 |  |  | FY2018 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Requested | Funde | Success <br> Rate | equested | Funded | Success <br> Rate | Requested | Funded | Success <br> Rate | Requested | Funded | Success <br> Rate | Requested | Funde | Success <br> Rate |
| R01/R37 - Unsolicited ${ }^{1}$ | 3,849 | 578 | 15\% | 4,550 | 623 | 14\% | 4,785 | 650 | 14\% | 5,263 | 650 | 12\% | 5,864 | ¢ 76 | 12\% |
| R01 RFAs | 391 | 51 | 13\% | 102 | 12 | 12\% | 240 | 45 | 19\% | 309 | 44 | 14\% | 249 |  | 14\% |
| Total R01/R37 | 4,240 | 629 | co, | 4,652 | 635 | 14\% | 5,025 | 695 | 14\% | 5,572 | 694 | 12\% | 6,113 | 711 | . |
| R21-Unsolicited | 2,539 | 302 | 12\% | 2,864 | 325 | 11\% | 3,100 | 260 | 8\% | 1,513 | 109 | 7\% | 2,100 | 187 | 9\% |
| R21 RFAs | 397 | 53 | 13\% | 250 | 38 | 15\% | 283 | 35 | 12\% | 388 | 44 | 11\% | 310 | 26 | 8\% |
| Total R21 | 2,936 | 355 | 12\% | 3,114 | 363 | 12\% | 3,383 | 295 | 9\% | 1,901 | 153 | 8\% | 2,410 | 213 | 9\% |
| R35 |  | - | - | 224 | 43 | 19\% | 175 | 35 | 20\% | 141 | 29 | 21\% | 104 | 20 | 19\% |
| R03-Unsolicited | 627 | 93 | 15\% | 582 | 67 | 12\% | 484 | 48 | 10\% | 714 | 90 | 13\% | 564 | 60 | 11\% |
| Other RFAs ${ }^{2}$ | 226 | 35 | 15\% | 297 | 34 | 11\% | 285 | 62 | 22\% | 443 | 57 | 13\% | 338 | 54 | 16\% |
| Other RPGs ${ }^{3}$ | 510 | 95 | 19\% | 656 | 94 | 14\% | 889 | 95 | 11\% | 933 | 116 | 12\% | 788 | 104 | 13\% |
| Total Competing RPGs: | 8,539 | 1,207 | 14\% | 9,525 | 1,236 | 13\% | 10,241 | 1,230 | 12\% | 9,704 | 1,139 | 12\% | 10,317 | 1,162 | 11\% |

${ }^{1}$ Funded R01s include competing revisions. In FY2018 64 R01s were converted to R37s.
${ }^{2}$ Other RFAs include UM1, R33, R03, R38, P01, U01, UH2 and UG3
${ }^{3}$ Other RPGs include SI2, DP2, P01, R15, R50, R56, R00, U01, U19, UH2, UH3, R33, UM1 and UG3.

Available online:

## http://tiny.cc/NCIFundingPatterns

## Want more data? NCI Budget Fact Book


cancer.gov > search: Fact book

- Funding Allocated to Major NCI Program Areas
- Extramural Funding Displays the dollar amount and percent of NCl budget for grants and contracts.
- Obligations by Budget Mechanism and NCI Division
- NIH Management Fund, Service and Supply Fund, and GSA Rent
- Special Sources of Funds
- Funding for Research Areas


## Number of R01/R35 awards \& RPG pool size (millions of dollars) - FY 13-18

|  | FY13 | FY14 | FY15 | FY16 | FY17 | FY18 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| R21s | 271 | 355 | 363 | 295 | 153 | 213 |
| R01s | 582 | 578 | 623 | 650 | 650 | 673 |
| R35s | --- | --- | 43 | 35 | 29 | 20 |
| Total (R01s + <br> R35s) | 582 | 578 | 666 | 685 | 689 | 693 |
| Competing RPG <br> pool | $\$ 404$ | $\$ 450$ | $\$ 508$ | $\$ 513$ | $\$ 514^{*}$ | $\$ 512$ |
| Total RPG pool | $\mathbf{\$ 1 8 5 4}$ | $\mathbf{\$ 1 8 5 8}$ | $\mathbf{\$ 1 9 2 7}$ | $\mathbf{\$ 1 9 6 7}$ | $\mathbf{\$ 2 0 4 5 *}$ | $\mathbf{\$ 2 1 3 7}$ |

## Projected RPG pool size needed for commitments to continuing grants: 3 scenarios

$\left.$|  | FY18 | FY19 est. | FY 20 <br> est. | FY 21 <br> est. | Commitment <br> to continuing <br> grants | Add'l funds <br> needed |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Total competing <br> pool | $\$ 512$ | $\$ 515$ | $\$ 515$ | $\$ 515$ |  | $\mathbf{1 0 0 \%}$ | $\mathbf{\$ 1 6 5 M} \right\rvert\,$


| Total competing <br> pool | $\$ 512$ | $\$ 515$ | $\$ 515$ | $\$ 515$ | 97\% | \$108M |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Total RPG pool | $\$ 2137$ | $\$ 2235$ | $\$ 2288$ | $\$ 2343$ |  | \$ |


| Total competing <br> pool | $\$ 512$ | $\$ 515$ | $\$ 515$ | $\$ 515$ |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Total RPG pool | $\$ 2137$ | $\$ 2235$ | $\$ 2201$ | $\$ 2253$ |  | \$18 |

## Going Forward: Sustaining Support for RPGs



## Rationale/strategy for various mechanisms

| R01 | Mainstay for individual investigator-initiated cancer research, now allow 7 <br> years for top ESI applicants; possible modification: reduce support for <br> some R01 awards to 4 years rather than 5? |
| :---: | :--- |
| R35 | Use to allow top senior scientists extended runway; appropriate total <br> number at full implementation? (Currently aiming for ~175) |
| R21 | Use for projects and programs that benefit from 2-year funding; avoid use <br> as main lab support |
| $\mathbf{P 0 1}$ | Maintain at current level or expand? |

