FIGURE TEXT

Figure 1. NIDDK Extramural Research Funding by Mechanisms (excluding Special Statutory Type 1 Diabetes Program) From FY2013 to FY2022

This is a horizontal bar chart whose x-axis displays percentages from zero to one hundred in increments of twenty percentage points. The y-axis shows fiscal years ascending from the bottom, starting with 2013 and ending with 2022 in increments of one year. Each horizontal bar corresponds to a fiscal year and is split into the following categories in order from left to right: Research Project Grants (RPGs), Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR), Interagency Agreement (IAA). In general, most categories represent the same proportion of the budget from year to year. The RPG budget is over seventy percent of the NIDDK extramural budget.

Figure 2: NIDDK Research Project Grants Funding by Activity Codes (Competing and Non-Competing, excluding Special Statutory Type 1 Diabetes Program) from FY2013 to FY2022

This is a horizontal bar chart whose x-axis displays percentages from zero to one hundred in increments of twenty percentage points. The y-axis shows fiscal years ascending from the bottom, starting with 2013 and ending with 2022 in increments of one year. Each horizontal bar corresponds to a fiscal year and is split into the following categories in order from left to right: R01, R21, R37, P01, U01, Other R (includes DP), and Other U. Starting in 2016, the R01 awards represent a larger proportion of RPG awards, increasing from 70 percent in 2015 to 83 percent in 2022. During these same years the fraction of R37, P01, and U01 awards decreased somewhat, with U01s showing more significant fluctuations going from 17% in 2015 to 8.5% in 2022.

Table 1: NIDDK Investigator-Initiated R01 Paylines

Table 1 details the NIDDK payline thresholds by fiscal year. The columns from left to right are the fiscal year, general payline, grants over $500,000 in direct costs payline, the new investigator payline, the Early Stage Investigator (ESI) payline, and the ESI first competitive grant renewal payline. The rows are the Fiscal Years from 2011 and 2022 and contain the payline values for the columns described.

Figure 3A: Number of NIDDK Investigator-Initiated (excluding ESI) R01 Applications and Competing Awards in FY2022 By Percentile Score

This is a stacked bar chart whose x-axis is percentiles from one to fifty in increments of one. The y-axis is the number of applications or awards from zero to forty in increments of five. Each bar shows the total number of applications and awards that were scored at that percentile. For some bars, there are two colored areas, one showing the number of unfunded applications, in orange, and one showing the number of awards, in blue, at that percentile. These data demonstrate that nearly all applications that scored at or below the payline (the sixteenth percentile) received funding in fiscal year 2022. The fraction of applications that are funded tapers off at increasing percentiles, with no applications funded at a percentile of forty-four or higher.

Figure 3B: Number of NIDDK Early Stage Investigator (ESI)-Initiated R01 Applications and Competing Awards in FY2022 By Percentile Score

This is a stacked bar chart whose x-axis is percentiles from one to fifty in increments of one. The y-axis is the number of applications or awards from zero to fourteen in increments of two. Each bar shows the total number of applications and awards that were scored at that percentile. For some bars, there are two colored areas, one showing the number of unfunded ESI applications, in orange, and one showing the number of awards, in blue, at that percentile. These data demonstrate that nearly all applications that scored at or below the payline (the twenty-fifth percentile) received funding in fiscal year 2022. The fraction of applications that are funded tapers off at increasing percentiles, with no applications funded at a percentile of thirty-nine or higher.

Figure 4: Number of Competing NIDDK R01 Applications Received for Funding from FY2013-FY2022

This is a stacked bar chart whose x-axis shows fiscal years between 2013 and 2022 in increments of one year. The y-axis shows the number of competing R01 applications received; it ranges from zero to three thousand five hundred in increments of five hundred. For each fiscal year, the height of the bar represents the total number of competing R01 applications received by NIDDK, and the bar is subdivided to indicate the portion of applications that are new, in blue, and the portion that are renewals, in orange. Total applications received have increased from about 2300 competing applications in 2013 to about 2800 applications in 2022. From 2015 through 2022 competing application numbers averaged about 2700. In 2013 new applications made up about eighty percent of all applications and renewal applications comprised the remaining twenty percent of applications. From 2013 to 2022, the portion of competing applications received that were renewal applications have steadily declined. The fraction of new applications increased from about eighty percent in 2013 to ninety percent in 2022. The percentage of renewal applications steadily decreased from twenty percent competing renewals in 2013 to ten percent competing renewals in 2022.

Figure 5: Total Number of NIDDK R01 Awards from FY2013-FY2022

This is a stacked bar chart whose x-axis shows fiscal years between 2013 and 2022 in increments of one year. The y-axis shows the number of R01 awards and ranges from zero to two thousand five hundred in increments of 500. The total height of the bar in each fiscal year represents the total number of R01 grants as non-competing awards, in gray, new competing awards, in blue, and renewal competing awards, in orange. The total number of awards decreases slightly from two thousand sixty-one awards in 2013 to one thousand nine hundred sixty-one awards in 2014 but increases steadily from 2014 to 2022 to a about two thousand three hundred awards. Non-competing awards roughly comprised about 80 percent of R01 awards each year, with numbers increasing from about one thousand seven hundred noncompeting awards in 2013 to about one thousand nine hundred in 2022. Over the last 10 years, the proportion of new competing awards is increasing, while renewal awards are decreasing.

Figure 6: Total NIDDK R01 Award Costs, Competing and Non-competing (Includes Direct and Indirect Costs) with adjustments for inflation from FY2013-FY2022

This is a line chart whose x-axis shows fiscal years between 2013 and 2022 in increments of one year. The y-axis shows total awarded dollars from zero to twelve hundred million dollars in increments of one hundred million dollars. There are three lines on the chart and from top to bottom represent: 1) the actual total cost of R01 grants awarded, in blue; 2) the total cost of R01 grants

awarded when adjusted for inflation using the Consumer Price Index (CPI), in orange, and 3) the total cost of R01 grants awarded when adjusted for inflation using the Biomedical Research and Development Price Index (BRDPI), in gray. All three lines on the chart starts slightly above seven hundred million dollars in 2013. The total cost of R01 awards rises steadily from 2013 to 2022 where it reaches just above eleven hundred million dollars. Both the BRDPI and CPI lines have lesser increases from 2013 to 2022 where they rise to just over nine hundred million dollars.

Figure 7: Mean & Median NIDDK R01 Award Costs, Competing and Non-competing (Includes Direct and Indirect Costs) from FY2013-FY2022

This is a line chart whose x-axis shows fiscal years between 2013 and 2022 in increments of one year. The y-axis displays dollar amounts ranging from two hundred fifty thousand dollars to five hundred thousand dollars in increments of fifty thousand dollars. There are two lines on the chart. The top line, in blue, represents the mean award cost. The lower line, in orange, represents the median award cost. In 2013, the mean cost is about three hundred fifty thousand dollars and steadily increases to about four hundred eighty thousand dollars in 2022. In 2013, the median cost is about three hundred thirty thousand dollars and steadily increases to about four hundred seventy five thousand dollars in 2022.

Figure 8: Single and Multi-PI (MPI) Competing and Non-competing R01 Awards from FY2013 to FY2022

This is a stacked bar chart whose x-axis shows fiscal years between 2013 and 2022 in increments of one year. The y-axis displays the number of R01 awards from zero to two thousand five hundred in increments of five hundred. Each vertical bar represents the total project count for each fiscal year. Each bar is divided to show the R01 awards that have a single principal investigator (PI), in orange, and R01 awards that have multiple PIs (Multi-PI), in blue. In 2013 there were about two thousand R01 awards with approximately nine percent of those awards having a multi-PI component. There was a slight decrease in R01 awards in 2014 to just under two thousand awards. From 2014 to 2022, the number of R01 awards steadily increased and reached about two thousand three hundred awards. During the same time period, the number of multi-PI grants also increased steadily. The proportion of multi-PI grants steadily increased from 2013 to 2022. The number above each bar represents the proportion of multi-PI R01 awards in each fiscal year.

Figure 9: NIDDK Competing and Non-competing Human Subjects Research Cost and Project Count

This is a combined vertical bar chart, in blue, with a line graph, in orange, whose x-axis shows fiscal years between 2013 and 2022 in increments of one year. The y-axis on the left side of the chart displays the project count number from zero to two thousand in increments of two hundred and correspond to the blue bars on the chart. The y-axis on the right side of the chart displays the cost in millions ranging from zero to one thousand million in increments of one hundred million dollars and are associated with the orange line on the chart. The project count of human subjects research in 2013 is about one thousand four hundred, and steadily increases to about one thousand eight hundred in 2018 and remained relatively flat from 2018 to 2022. The total cost of human subject research in 2013 was about seven hundred million dollars and steadily increased to eight hundred sixty million dollars in 2018 and remained relatively flat from 2018 to 2022.

Figure 10: NIDDK Competing and Non-competing Grant Count and Total Cost with Clinical Trial Research

This is a combined vertical bar chart, in blue, with a line graph, in orange, whose x-axis shows fiscal years between 2013 and 2022 in increments of one year. The y-axis on the left side of the chart displays the project count number from zero to seven hundred in increments of one hundred and correspond to the blue bars on the chart. The y-axis on the right side of the chart displays the cost in millions ranging from zero to three hundred fifty million in increments of fifty million dollars and are associated with the orange line on the chart. The project count of clinical trials research in 2013 is about three hundred fifty and steadily increases to about four hundred thirty trials in 2016. There was a slight decrease in 2017 to four hundred ten trials and then a steady increase up to about six hundred forty trials in 2022. The total cost of clinical trials research in 2013 was about two hundred million dollars and steadily increased to three hundred twenty million dollars in 2022.

Figure 11: Number of Investigators at Various Career Stages Supported by at Least One R01 from FY2013 to FY2022

This is a vertical stacked bar chart whose x-axis displays fiscal years from 2013 to 2022 in increments of one year. The y-axis displays numbers of principal investigators (PIs) from zero to two thousand five hundred in increments of five hundred. The total height of the bar each year represents the number of unique investigators supported by NIDDK R01 awards. Each bar is divided to show the number of PIs at various career stages: Early Stage Investigators (ESI) in blue, New Investigators (NI) in orange, and Established Investigators in gray. The number of PIs with a R01 has fluctuated over time. About one thousand eight hundred R01 investigators were supported by NIDDK in 2013, then the number of investigators declined to about one thousand seven hundred between fiscal years 2014-2015. Since 2016, the total number of PIs has steadily increased to approximately two thousand three hundred in 2022. Established investigators comprise about 90 percent of all NIDDK R01 funded investigators across all years and the number of ESIs and NIs averaged about 10 percent.

Figure 12: Number of NIDDK ESI R01 Applications and Awarded Grants (FY2013-FY2022)

This is a stack bar chart whose x-axis shows fiscal years between 2013 and 2022 in increments of one year. The y-axis displays the application count in numbers from zero to five hundred in increments of fifty. Each bar represents the total number of ESI R01 applications and awards. In each bar, there are two colored areas, showing the number of unfunded ESI applications, in blue, and the number of ESI awards, in orange. There are fluctuations in the number of ESI applications from 2013 to 2022, with the fewest applications received being 319 in 2014 and the highest number of applications of 448 received in 2022. The average number of ESI applications received from 2013 to 2022 was 372. For this same time period the average number of unfunded applications is 293 and the average number of funded applications is 79.

Figure 13: Median and Mean Ages of NIDDK R01 Investigators, from FY2013 to FY2022

This is a line chart whose x-axis shows fiscal years between 2013 and 2022 in increments of one year. The y-axis displays the age of investigators from forty-nine point five years to fifty-three point

five years in increments of zero point five years. There are two lines on the chart, from top to bottom: 1) the mean age in blue, and the median age in orange. The mean age of investigators had a slight decrease from fifty-two point five in 2013 to fifty-two point three in fiscal year 2014 and 2015. There is a steady increase in the mean age beginning in fiscal year 2015 increasing from fifty-two point three, up to fifty-three point two in fiscal year 2019. Starting in fiscal year 2020, there was a decrease in the mean age going from fifty-three point one in fiscal year 2020 and decreasing to fifty-two point nine in fiscal year 2022. The median age of investigators in fiscal year 2013 was fifty-two years and decreased to fifty one years in fiscal years 2014 and 2015. Investigator median age then increased to fifty-one point five in fiscal year 2016 and fifty-two in fiscal years 2017 through 2020,before decreasing to fifty-one years in fiscal years 2021 and 2022.

Table 2: NIDDK R01 PI demographic information by race from FY2013 to FY2022

Table 2 details the NIDDK R01 PI demographic information by race. The columns from left to right are White, Asian, Black or African-American, American Indian/Alaska Native, Native Hawaiian or Other Pacific Islander, Unknown, Withheld, More than One Race. The rows, from top to bottom, are the Funded R01 PIs, PIs who submitted R01 applications, and Success Rate. For the Funded R01 PIs, and PIs who submitted R01 applications, the value represents the total number of individuals in each group. The Success Rate represents the percentage of the funded PIs in relation to the PIs who submitted an application. For five of the cells within the table, data had to be redacted per NIH policy because the number of people counted was less than eleven. The values in these cases are represented as a double asterisk.

Figure 14: NIDDK-supported Competing and Non-competing Training Award Total Costs of Select Mechanisms (Includes Direct and Indirect Costs) from FY2013-FY2022

This is a line chart whose x-axis displays fiscal years 2013 to 2022 in one year increments. The y-axis shows total cost in millions from zero to ninety in increments of ten. There are three lines on the chart, which display (from top to bottom): 1) K awards, in gray; 2) T-awards, in yellow, and 3) F-awards, in orange. K awards accounted for approximately seventy million dollars in 2013 and up to eighty million dollars in 2022. T-awards remained relatively flat from fiscal year 2013 to 2016 at approximately forty million dollars, then slightly increased from 2017 to 2019 to about forty-seven million dollars and then decreased in fiscal years 2020 to 2022 to approximately forty million dollars. Between fiscal years 2013 and 2022, F-award spending remained relatively constant at approximately ten million dollars of extramural funding.

Figure 15: Number of NIDDK-supported Competing and Non-competing Fellowship (F) Awards by Activity Code from FY2013-FY2022

This is a line chart whose x-axis displays fiscal years from 2013 through 2022 in increments of one year. The y-axis displays number of awards from zero to one hundred sixty in increments of twenty and includes both competing and non-competing awards. There are three lines from top to bottom: 1) F32, in yellow, 2) F30, in orange, 3) F31, in gray. For the F32 awards, this line starts at about one hundred twenty in fiscal year 2013. In 2014, it increased to almost one hundred forty and had fluctuations of increases and decreases across each year and then declines to an average of ninety awards in fiscal years 2019 through 2022. For the F30 awards there was a decline from slightly over one hundred awards in fiscal year 2013 and then from fiscal year 2014 onward the line remains generally stable with an average of ninety awards from 2013 through 2022. F31 awards increased from about twenty awards in 2013 to almost one hundred thirty awards in 2022.

Figure 16: Number of NIDDK-supported Competing and Non-competing Career Development (K) Awards by Activity Code from FY2013-FY2022

This is a line chart whose x-axis displays fiscal years from 2013 through 2022 in increments of one year. The y-axis displays the project count from zero to two hundred fifty in increments of fifty and includes both competing and non-competing awards. There are five lines from top to bottom: 1) K01, in orange, 2) K08, in gray, 3) K23, in yellow, 4) K24, in blue, and 5) K99, in green. For the K01 awards, this line starts at about one hundred sixty in fiscal years 2013 and 2014. There is then an increase in K01 awards that has a peak at about two hundred awards in fiscal year 2015. The number of K01 awards then declines to an average of one hundred sixty awards in fiscal years 2016 through 2020, followed by an increase to about two hundred ten awards in fiscal year 2021, and then a decrease to one hundred sixty awards in fiscal year 2022. The K08 line starts at around one hundred sixty awards in fiscal year 2013 and then declines to about one hundred fifteen K08 awards in fiscal year 2020. The number of K08 awards then increases to about one hundred forty awards in fiscal years 2021 and 2022. For the K23 awards, the line remains generally stable at about one hundred twenty-four awards from fiscal years 2013 through 2018. The number of K23 awards then increases to approximately one hundred ninety awards in fiscal years 2021 and 2022. The K24 line starts at forty-one awards in fiscal year 2013 and then gradually declines to three awards in fiscal year2022. The K99 line remains generally stable across fiscal years 2013 to 2022 at just under twenty awards throughout the period, with small variability from year to year.

Figure 17: Number of NIDDK-supported T32 Trainees and Project Count from FY2013-FY2021

This is a combined vertical bar chart, in orange, with a line graph, in blue, whose x-axis shows fiscal years between 2013 and 2021 in increments of one year. The y-axis on the left side of the chart displays the number of T32 trainees from zero to nine hundred in increments of one hundred and correspond to the orange bars on the chart. The y-axis on the right side of the chart displays the T32 project count ranging from zero to two hundred fifty in increments of fifty and are associated with the blue line on the chart. In fiscal year 2013 there were approximately eight hundred trainees. There was a steady decrease in each fiscal year from 2013 to 2021. There were six hundred sixty trainees in fiscal year 2021. The number of T32 projects remained stable at about two hundred projects from fiscal years 2013 to 2016. Since fiscal year 2017, the number of T32 projects declined to about one hundred fifty in fiscal year 2021.