SCIENCE AND MEDICINE GROUP

Life Science Funding: Strategic Briefing on Academic Lab Budgets

Insights from the upcoming report:
"Life Science Global Funding & Research Budgets in Academia"

Live Learning Session | December 12, 2024

BIOINFORMATICS
A SCIENCE & MEDICINE GROUP COMPANY

Presenter

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Study Overview & Objectives

Study Overview

BioInformatics, part of Science and Medicine Group, conducted market research to provide a comprehensive analysis of budgets and expenditures in academic life science research labs.

Specific objectives include:

- Understand the current and projected levels of funding from public and private sources supporting life science research and drug discovery in the U.S., Europe, and Asia.
- Obtain estimates for average lab budgets in FY2023-2025 to understand relative spend across broad categories; segment by region to provide directional information about expected changes.
- Estimate scientists' budget for purchases and anticipated purchases in instrumentation and consumables, examining trends across key product categories.
- Assess how optimistic scientists are regarding funding and the future of life science research.

BioInformatics designed an online quantitative survey to address the objectives.

- The survey contained 31 questions (including demographics) and took a median time of about 14 minutes to complete.
- It was fielded to 315 respondents.

The qualification criteria for this survey in brief:

- Must work in Academic labs in North America, Europe, and Asia Pacific.
- Must work in basic research, applied research, translational research, or research/discovery.
- Must be extremely or very knowledgeable of their lab's budget.

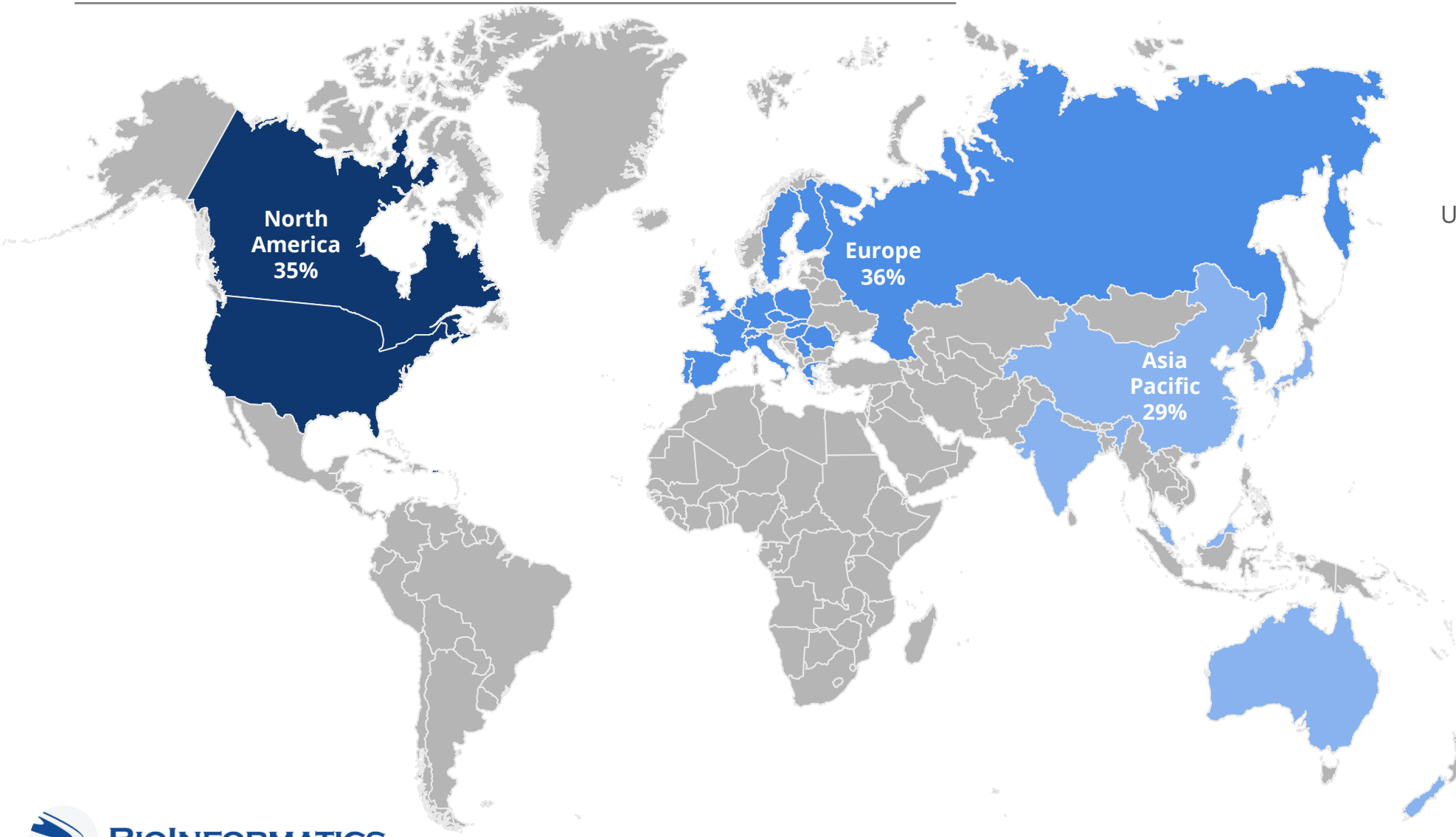
A selection of the results is presented in this learning session. The full report will be available on the Knowledge Center.

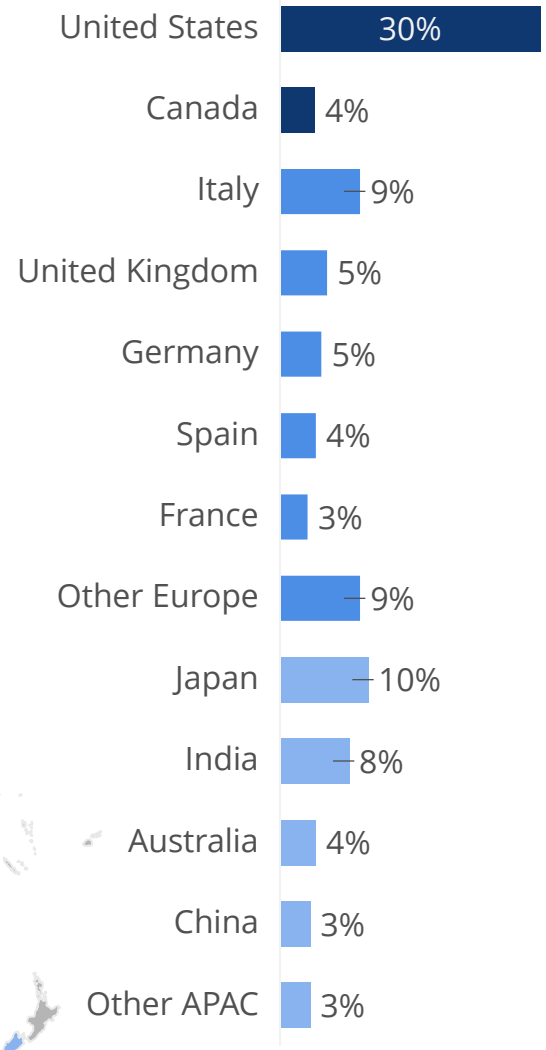
Definition of Key Terms

- In this study, definitions were displayed to respondents to better facilitate their understanding/communicate the intended meaning of the following key terms:
  - **Lab Budgets**: budgets, including overhead, based on specific laboratory, not the department or organization, and in terms of lab's fiscal year, not calendar year.
  - **Instrumentation**: includes used or new instruments, capital equipment, and small/large lab equipment like freezers, gel boxes, centrifuges, etc.
  - **Consumables**: includes biologicals (issue culture media, enzymes, reagents), research/specialty kits, customized products (e.g., full-length synthetic genes, model systems like engineered cell lines and animal models), and customized services (e.g., specialized assay development).

Demographics

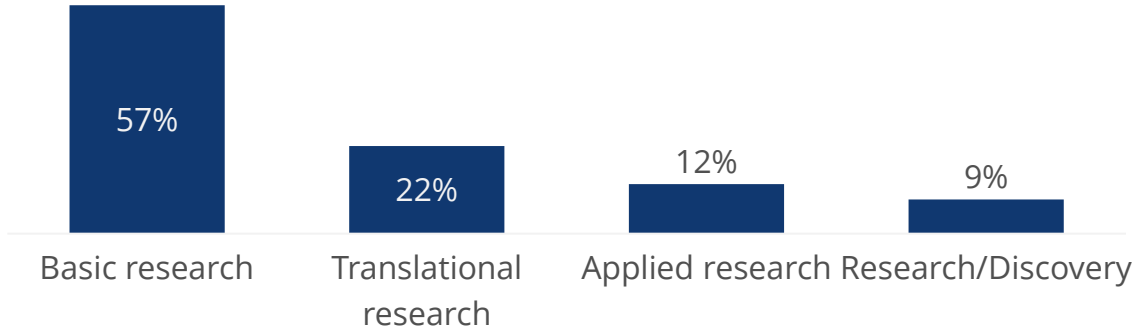
Region (n=315)



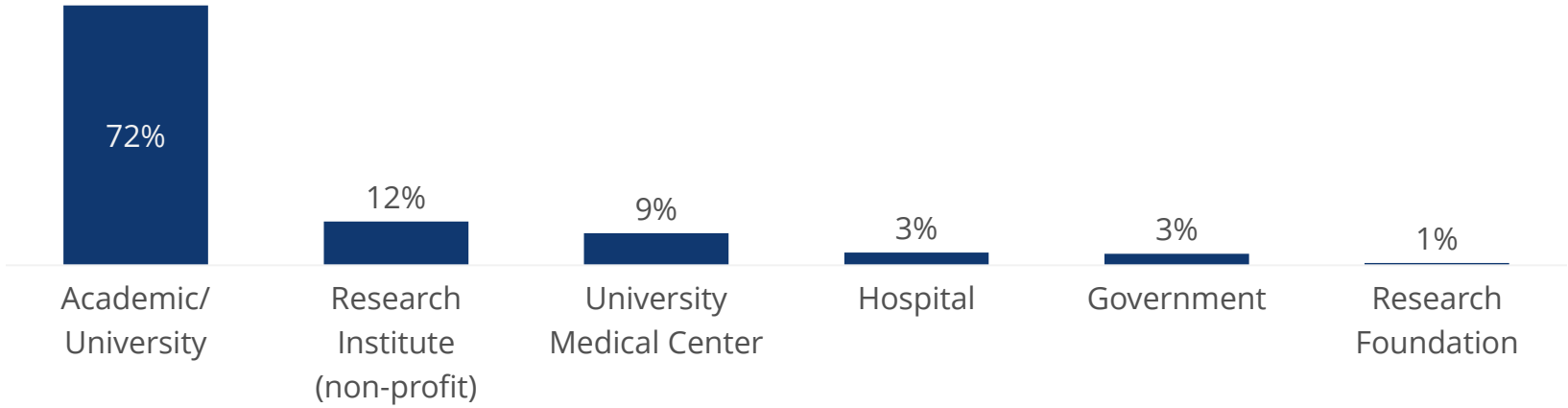


Respondent Profile (n=315)

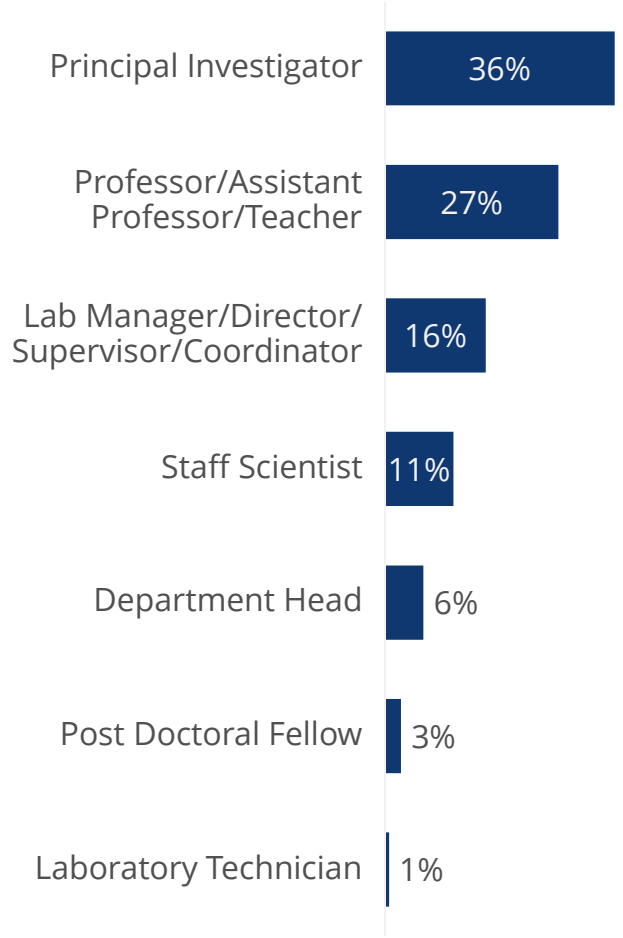
Area of Work



Organization Type



Job Position



Executive Summary

Lab Budget Outlook

Current Funding Levels

Average FY2024 Academic research budgets are estimated to be $659K, $429K, and $285K for North America, Europe, and APAC, respectively.

Projected Funding Levels

Budgets are expected to grow globally.

Average FY2025 Academic research budgets are projected to be $788K, $489K, and $312K for North America, Europe, and APAC respectively.

Key Sources of Funding

Government grants are key sources of funding, with individual researcher grants supporting 67% of labs in FY2024. Shared instrument grants, government contracts, and intramural agency funding also provide support.

Current Trends

Partnerships with biopharmaceutical companies have increased since FY2023.

Applications to obtain funding grow increasingly complex and competitive.

Academic Perceptions

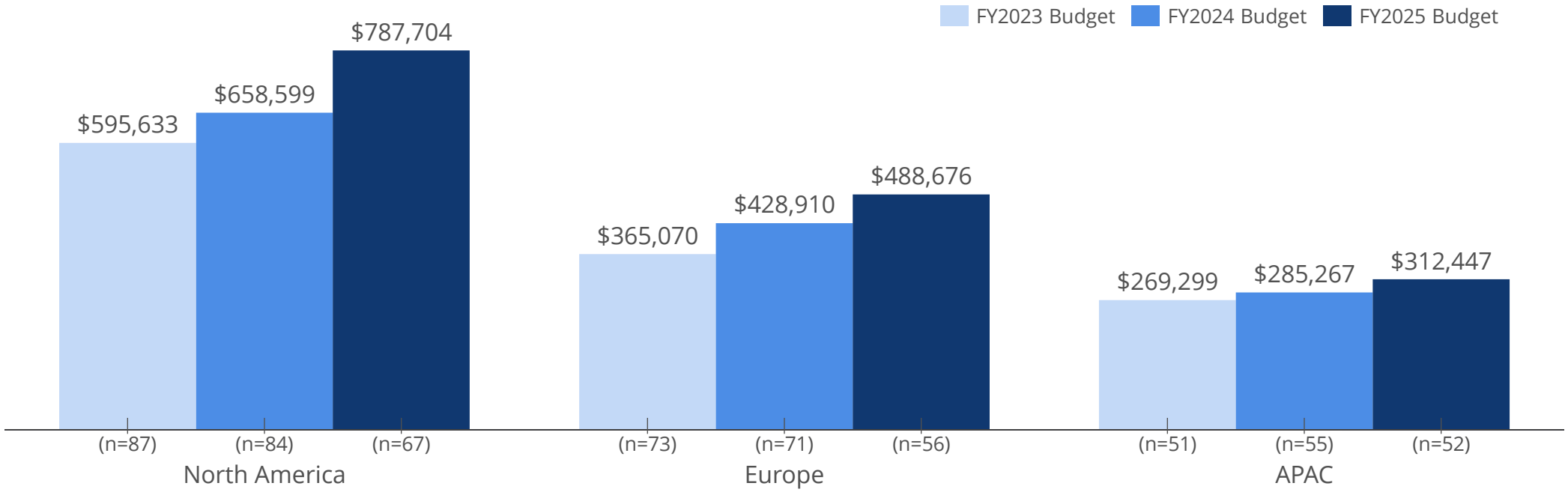
66% of respondents indicate that life science funding is increasingly uncertain.

Respondents are divided in their confidence in the future of lab funding and life science research.

Laboratory Research Budgets and Expenditures

North American respondents estimate higher research budgets than other regions. Global research budgets are expected to increase in FY2025.

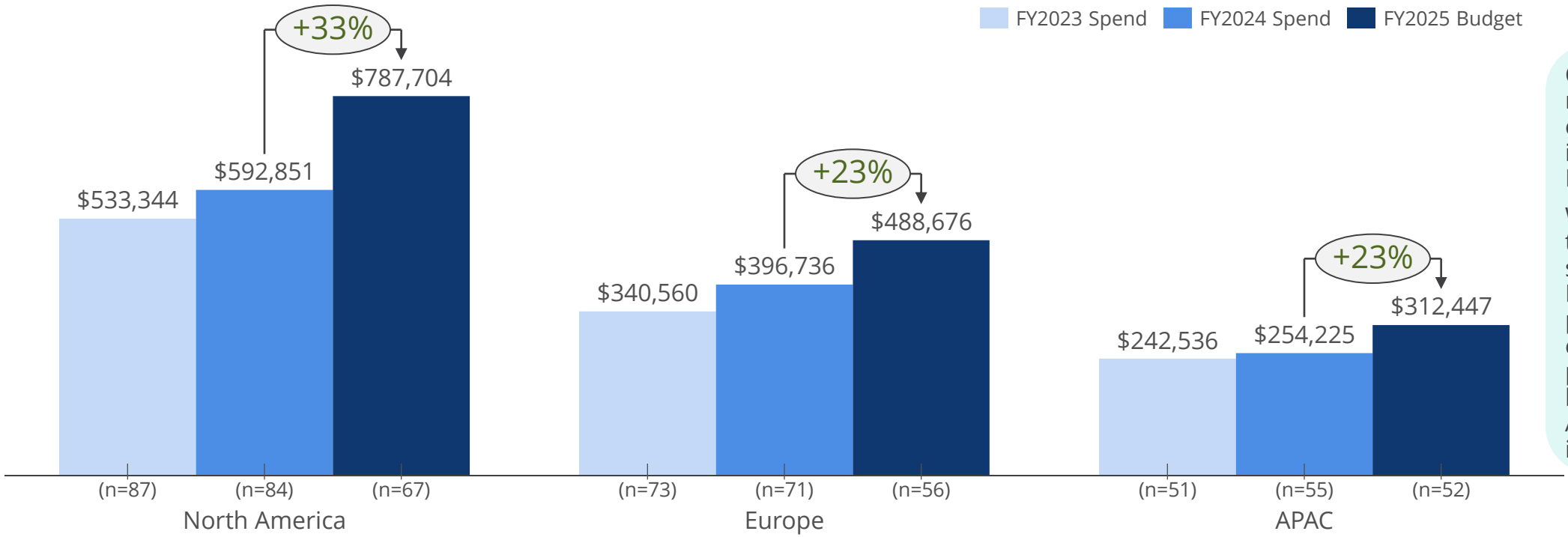
Average Annual Research Budget (USD) by Region



3. What was/is your laboratory's TOTAL annual research budget for FY2023 and FY2024? What do you expect your TOTAL annual research budget to be for FY2025? (please specify an amount for each)
4b. What percentage of your total annual research budget did you spend in FY2023 and expect to spend in FY2024? (please specify a percentage for each)

Respondents indicate that they spent 90% of their research budgets in FY2023 and expect to spend 88% of their research budgets in FY2024.

Average Annual Research Expenditure/Budget (USD) by Region



Overall Academic research expenditures have increased since FY2023.

With the assumption that respondents will spend 100% of their FY2025 budget, potential expenditures are projected to increase by 33% in North America and by 23% in Europe and APAC.

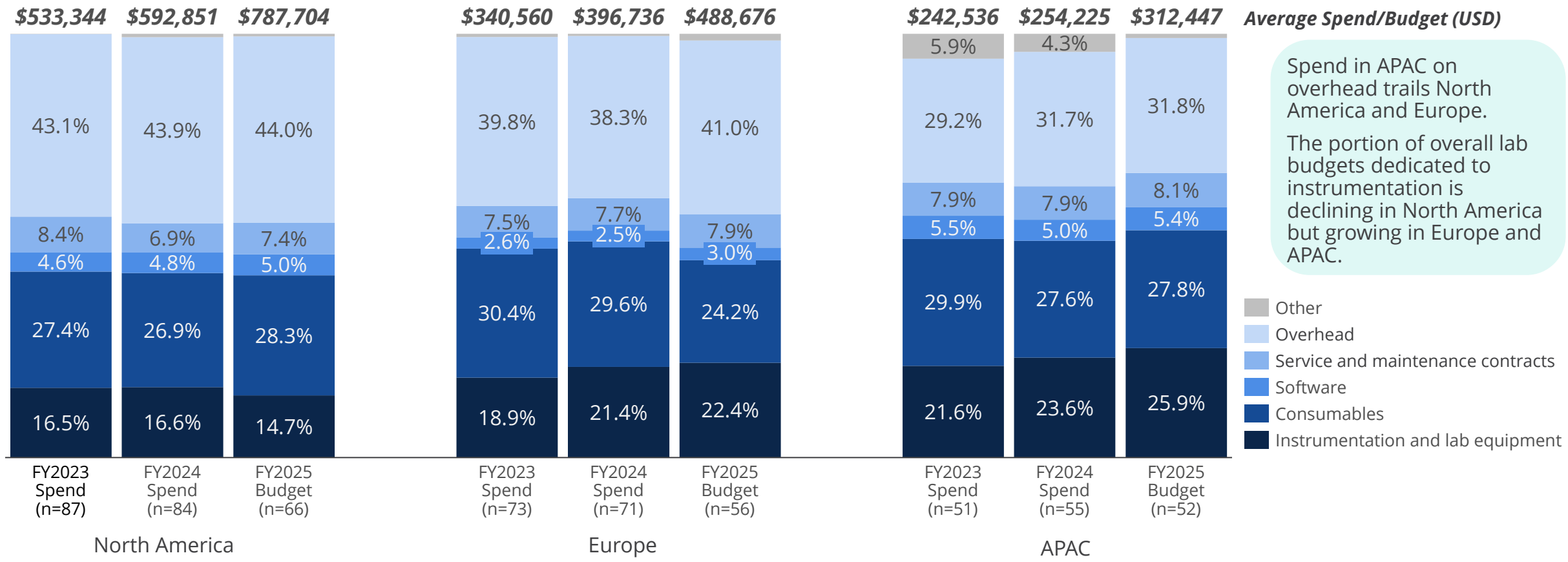
3. What was/is your laboratory's TOTAL annual research budget for FY2023 and FY2024? What do you expect your TOTAL annual research budget to be for FY2025? (please specify an amount for each)

4b. What percentage of your total annual research budget did you spend in FY2023 and expect to spend in FY2024? (please specify a percentage for each)

Note: Lab expenditures are used for FY2023 and FY2024 while expected total budget is used for FY2025 throughout the rest of this section. Please see the methodology for more details.

Overhead continues to account for the largest proportion of lab spend. The allocation towards overhead is expected to remain the same despite overall budget increases in FY2025.

Percent of Research Expenditure/Budget for Product Categories by Year and Region



Spend in APAC on overhead trails North America and Europe.

The portion of overall lab budgets dedicated to instrumentation is declining in North America but growing in Europe and APAC.

5. Of your laboratory's FY2023 and FY2024 TOTAL annual research expenditure(s) and FY2025 TOTAL annual research budget, what proportion was/do you anticipate will be spent on the following categories? (please specify a percentage for each, including "0" if applicable, total should equal 100%)

Spending in FY2025 will depend on funding levels, but may center around genomic technologies and overhead. Respondents also expect consumable spend to increase.

Changes in Research Spending for FY2025

It depends if we get more grant money. Cost of research has gone up. Need to do more high throughput proteomics and genomics test/analysis which are costly.

My lab's research spending to change in FY2025 is expected to increased by 10% in servicing the equipment as most of the equipment are too outdated.

Further focus on [translational research] will mean reduction in manpower and consumables and greater engagement of CROs. We also plan to tap alternative funding geared towards translation.

Spending will be more directed towards consumables and general small lab equipment. the institute hosts a central facility with major equipment of use.

Our genomic analyses (already an expensive part of our budget) is moving towards long-read sequencing, which will increase costs even further.

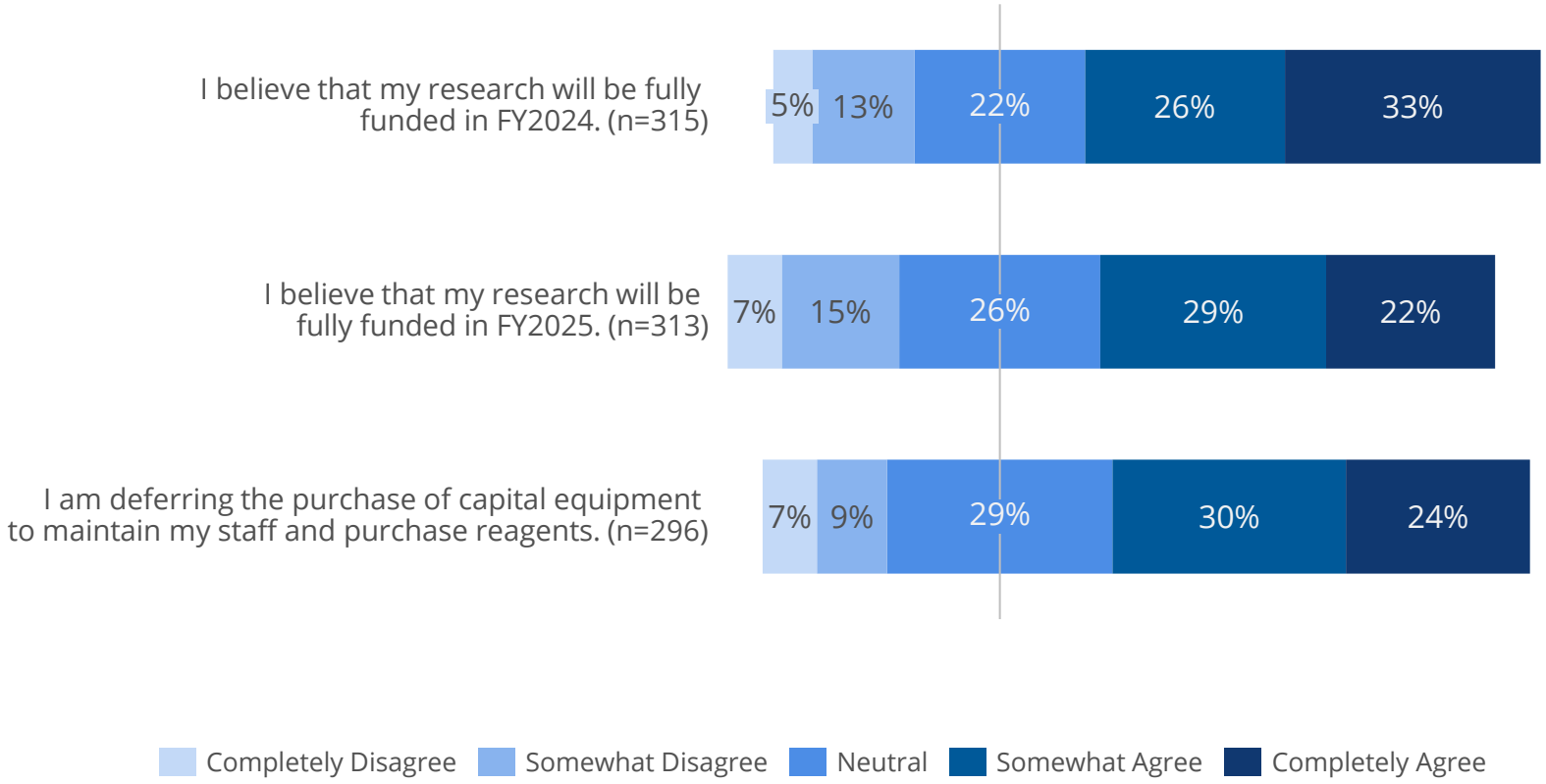
About a 5% change year to year, primarily due to the increased costs of consumables and labor.

3b. How do you expect your lab's research spending to change in FY2025 and beyond? What factors do you think will drive these changes? (please elaborate)

Funding Sources and Trends

Though less certain than in FY2024, most Academics believe that their research will be fully funded in FY2025.

Level of Agreement with Statements About Lab Funding



54% of respondents are deferring the purchase of equipment.

44. Please indicate how much you AGREE or DISAGREE with the following statements. (choose only one for each)

Note: Results exclude respondents who indicated "not applicable" (n=0-19 of all respondents). "Agree" refers to the percent of respondents who indicate "somewhat agree" or "completely agree".

Government contracts (individual researchers), institutional funds, grants from private foundations, and department funds are top sources of funding across all regions.

Funding Sources by Region

More respondents obtain funding from external sources than internal sources.

Intramural agency funding is a key source in NA. Funding from international organizations/agencies and biopharmaceutical companies is higher in APAC and Europe.

	FY2023			FY2024			FY2025		
	North America (n=108)	Europe (n=112)	APAC (n=91)	North America (n=107)	Europe (n=112)	APAC (n=92)	North America (n=101)	Europe (n=89)	APAC (n=80)
External Sources	91%	96%	93%	89%	95%	93%	87%	94%	94%
Internal Sources	65%	69%	70%	62%	71%	68%	58%	66%	70%
External...									
Government contract(s)	13%	25%	24%	11%	27%	21%	18%	31%	25%
Government grants (individual researcher)	58%	64%	76%	58%	63%	82%	60%	66%	83%
Government grants (shared instrument grants)	21%	24%	34%	21%	17%	30%	26%	25%	36%
Intramural agency funding	29%	12%	9%	23%	12%	10%	27%	10%	18%
Grant(s) from private foundations or other sources	34%	45%	32%	35%	38%	34%	40%	42%	41%
Funding from an international organization or agency	3%	10%	4%	3%	11%	3%	6%	13%	13%
Funding from a biopharmaceutical company	8%	18%	16%	11%	21%	16%	14%	17%	23%
Via a consortium/alliance with a corporate partner	4%	7%	9%	4%	7%	12%	5%	8%	16%
Via a consortium/alliance with a non-profit partner	5%	10%	7%	6%	12%	3%	8%	13%	11%
Licensing/royalties	2%	1%	4%	2%	2%	2%	4%	4%	9%
Venture capital fund(s)	4%	1%	4%	4%	0%	4%	3%	3%	8%
Other external source(s)	0%	3%	0%	0%	3%	0%	0%	1%	0%
Internal...									
Institutional fund(s)	42%	43%	52%	40%	45%	51%	41%	43%	53%
Departmental fund(s)	44%	49%	36%	43%	49%	38%	42%	48%	41%
Other internal source(s)	1%	1%	0%	1%	2%	0%	1%	2%	0%

25. What sources of funding have supported/will support your lab's research/work for FY2023 and FY2024? (check all that apply for each)
27. Approximately, what percent of your TOTAL annual research budget for FY2023, FY2024, and FY2025 was supported by/will likely be supported by the following sources? (please specify a percentage for each; total must sum to 100%)

Note: Results exclude respondents who indicated "do not know" (n=1-24 respondents for a region or year).

Individual government grants account for 39.9% of FY2025 Academic budgets.

North American Allocation of Funding by Support Sources and Year

	FY2023 (n=85)	FY2024 (n=83)	FY2025 (n=63)
External Sources	84.2%	80.4%	80.7%
Government contract(s)	5.6%	3.3%	4.9%
Government grants (individual researcher)	35.3%	34.8%	39.9%
Government grants (shared instrument grants)	4.8%	6.3%	8.3%
Intramural agency funding	27.0%	22.4%	14.1%
Grant(s) from private foundations or other sources	6.6%	8.3%	8.4%
Funding from an international organization or agency	0.1%	1.5%	0.7%
Funding from a biopharmaceutical company	2.5%	1.9%	2.5%
Via a consortium/alliance with a corporate partner	0.8%	0.9%	0.0%
Via a consortium/alliance with a non-profit partner	0.6%	0.4%	0.5%
Licensing/royalties	0.7%	0.0%	0.6%
Venture capital fund(s)	0.1%	0.5%	0.7%
Other external source(s)	0.0%	0.0%	0.0%
Internal Sources	15.8%	19.6%	19.3%
Institutional fund(s)	8.5%	12.2%	14.2%
Departmental fund(s)	6.8%	6.8%	4.4%
Other internal source(s)	0.5%	0.6%	0.7%

Budget distribution between external and internal sources for NA Academics have remained stable since FY2024. Nearly 80% of funding is supported via external sources. Individual research grants have increased, while the fraction of funding supported by intramural agencies has decreased.

27. Approximately, what percent of your TOTAL annual research budget for FY2023, FY2024, and FY2025 was supported by/will likely be supported by the following sources? (please specify a percentage for each, including "0" if applicable, total should equal 100%)

European Academic research is mostly supported by individual researcher government grants and private foundations.

European Allocation of Funding by Support Sources and Year

	FY2023 (n=74)	FY2024 (n=72)	FY2025 (n=53)
External Sources	79.8%	81.9%	82.7%
Government contract(s)	11.3%	14.6%	10.0%
Government grants (individual researcher)	26.5%	26.0%	25.3%
Government grants (shared instrument grants)	5.9%	6.9%	10.6%
Intramural agency funding	3.3%	2.6%	2.6%
Grant(s) from private foundations or other sources	18.4%	13.9%	19.1%
Funding from an international organization or agency	2.2%	2.4%	4.7%
Funding from a biopharmaceutical company	6.2%	7.9%	3.1%
Via a consortium/alliance with a corporate partner	2.4%	2.0%	2.1%
Via a consortium/alliance with a non-profit partner	2.7%	4.3%	3.4%
Licensing/royalties	0.2%	0.3%	0.3%
Venture capital fund(s)	0.3%	0.0%	0.3%
Other external source(s)	0.5%	1.0%	1.3%
Internal Sources	20.2%	18.1%	17.3%
Institutional fund(s)	14.4%	11.9%	12.2%
Departmental fund(s)	5.5%	5.9%	4.8%
Other internal source(s)	0.2%	0.2%	0.3%

Shared instrument grants have shifted to 10.6% of FY2025 budgets. Grants from private foundations have rebounded to FY2023 proportions.

27. Approximately, what percent of your TOTAL annual research budget for FY2023, FY2024, and FY2025 was supported by/will likely be supported by the following sources? (please specify a percentage for each, including "0" if applicable, total should equal 100%)

APAC Academic research is primarily supported by individual researcher government grants.

APAC Allocation of Funding by Support Sources and Year

	FY2023 (n=54)	FY2024 (n=55)	FY2025 (n=48)
External Sources	84.8%	87.3%	89.4%
Government contract(s)	11.6%	11.4%	12.5%
Government grants (individual researcher)	40.5%	43.7%	31.8%
Government grants (shared instrument grants)	7.3%	8.6%	8.1%
Intramural agency funding	2.6%	3.5%	5.0%
Grant(s) from private foundations or other sources	13.7%	11.1%	12.8%
Funding from an international organization or agency	1.3%	1.1%	1.6%
Funding from a biopharmaceutical company	3.4%	4.5%	9.1%
Via a consortium/alliance with a corporate partner	2.7%	2.2%	3.1%
Via a consortium/alliance with a non-profit partner	0.2%	0.4%	1.7%
Licensing/royalties	1.0%	0.4%	1.1%
Venture capital fund(s)	0.5%	0.4%	2.4%
Other external source(s)	0.0%	0.0%	0.0%
Internal Sources	15.2%	12.7%	10.6%
Institutional fund(s)	8.4%	6.1%	6.0%
Departmental fund(s)	6.8%	6.6%	4.6%
Other internal source(s)	0.0%	0.0%	0.0%

Funding from biopharmaceutical companies account for 9.1% of budgetary support in APAC, up from 3.4% in FY2023.

Support from VC funds have also increased dramatically, despite only accounting for 2.4% of APAC Academic research budgets.

27. Approximately, what percent of your TOTAL annual research budget for FY2023, FY2024, and FY2025 was supported by/will likely be supported by the following sources? (please specify a percentage for each, including "0" if applicable, total should equal 100%)

Complexity and competitiveness are key trends in funding applications. Many may shift from government funding towards the private sector.

Trends in Type of Research Funded (n=200)

The application processes become more complex. Things around the research (data protection, control of expenses, and many other things) are now more important than the research.

Calls for hypothesis-driven (or curiosity-driven) research become fewer and fewer. Instead, almost all calls are for translational and application-oriented research.

Governmental funding is increasingly scarce and more competitive. Pursuing non-governmental funding is [a] better use of time and resources.

Technology driven. If you aren't using the latest technology, very difficult to obtain funds. Results don't really support this approach.

Public research funds have grown increasingly less reliable. Universities all push to form better industry alliances. Both to sponsor research and for tech-transfer of IP.

45. Are there any trends in research funding sources that you have recently observed? For example, have grant application processes become more simple or more complex? Are more foundations or companies looking to sponsor research? (please elaborate)

Note: Results have been themed to facilitate analysis. Respondents were not required to answer this question, percent are based on the number of respondents who provided a response.


Questions?

Publications and Reports

- ***Recent Titles***
  - Benchmarking for 2024: Understanding the Life Science Customer Experience
  - 2024 Market Report for Research Antibodies
  - 2024 Perceptions in Environmental Sustainability in the Life Sciences
  - The Science of Service: Elevating Customer Support in the Life Sciences 2024
  - 2024 Customer Loyalty and Switching: Library Prep Kits
  - 2024 Digital Marketing & Advertising in the Life Sciences
  - 2024 Trends in Conferences & Exhibit Strategies in the Life Sciences

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Thank you!

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