Career trajectories
Using NIH grant data to understand the job paths of biomedical researchers

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Director
Rescuing Biomedical Research
New Ph.D.s who do a postdoc: 79%

Postdocs who want a faculty position: 60%

Postdocs who get a faculty position: 10%

Factors Influencing Postdoc Attrition:
- Funding
- Publications

Sauermann and Roach, 2016
“I have to get my K99 before I can go on the job market!”
Percent FTR01 awardees with NIH training award

With F or K award before R01

With no NIH award before R01

Percent FTR01 awardees with NIH training award

2000 2006 2012 2018
<table>
<thead>
<tr>
<th></th>
<th>Fellowship Type</th>
<th>PhD, MD</th>
</tr>
</thead>
<tbody>
<tr>
<td>F32</td>
<td>NRSA postdoctoral fellowship</td>
<td>PhD, MD</td>
</tr>
<tr>
<td>K01</td>
<td>Research scientist CDA</td>
<td>PhD</td>
</tr>
<tr>
<td>K08</td>
<td>Clinical scientist research CDA</td>
<td>MD</td>
</tr>
<tr>
<td>K23</td>
<td>Patient-oriented research CDA</td>
<td>MD</td>
</tr>
<tr>
<td>K99</td>
<td>Pathway to Independence</td>
<td>PhD, MD</td>
</tr>
<tr>
<td>Quartile 1</td>
<td>Quartile 2</td>
<td>Quartile 3</td>
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<td>------------</td>
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</tr>
<tr>
<td>12 institutions</td>
<td>23 institutions</td>
<td>46 institutions</td>
</tr>
<tr>
<td>25%</td>
<td>50%</td>
<td>75%</td>
</tr>
</tbody>
</table>

First Time R01 awards

Stanford
Dartmouth
Princeton

No preference
Q1, Q2 prefer
Q3, Q4 prefer
Institutional preference for training awardees

% of FTR01 awardee pool

- F32
- K01
- K08
- K23
- K99
- None
What percentage of FTR01 awardees got their F/K at the same institution as their first R01?

Conte & Omary
2018 J Clin Invest

Percent staying at same institution

<table>
<thead>
<tr>
<th></th>
<th>F32</th>
<th>K01</th>
<th>K08</th>
<th>K23</th>
<th>K99</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>50</td>
<td>75</td>
<td>85</td>
<td>30</td>
</tr>
</tbody>
</table>

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Institutional preference for training awardees

Percent of FTR01 awardee pool

F32  K01  K08  K23  K99  None

Percent of FTR01 awardee pool

1 2 3 4
K99 institutions

K99 awards
39%
(405 awards)
(12 schools)

R00 institutions
64%
(145 schools)
R00 conversion rate

White  Multiracial  Asian  Black

Percent

K99 success rate
- How well do other grant mechanisms support underrepresented scientists?
- How do trainees affect these values?
- What are the dynamics in retention versus external hiring?
- How do K awards factor into early lab funding?
- What can small groups of universities do to diversify the research enterprise?
- How well do other grant mechanisms support underrepresented scientists?
Thank you!

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