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Director

*Training, Workforce
Development, and
Diversity*

NIGMS

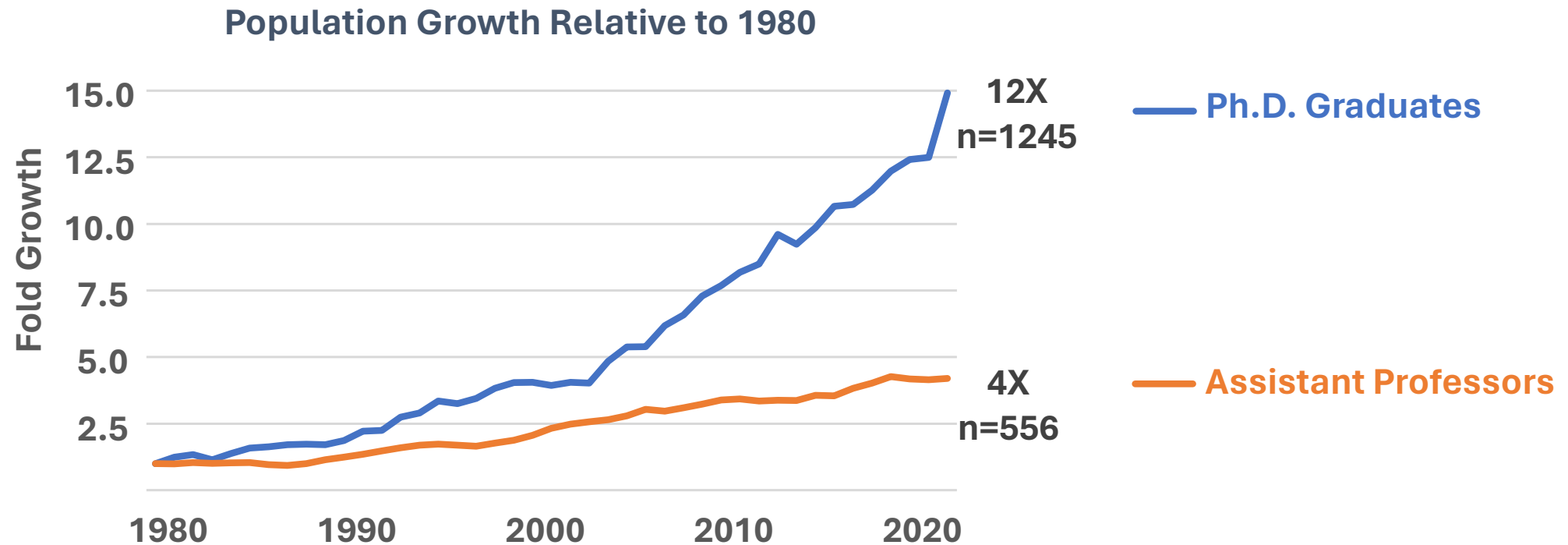
June 13, 2024

MOSAIC

Maximizing Opportunities for Scientific and Academic Independent Careers

Program to Promote Broad Participation at the
Faculty Level

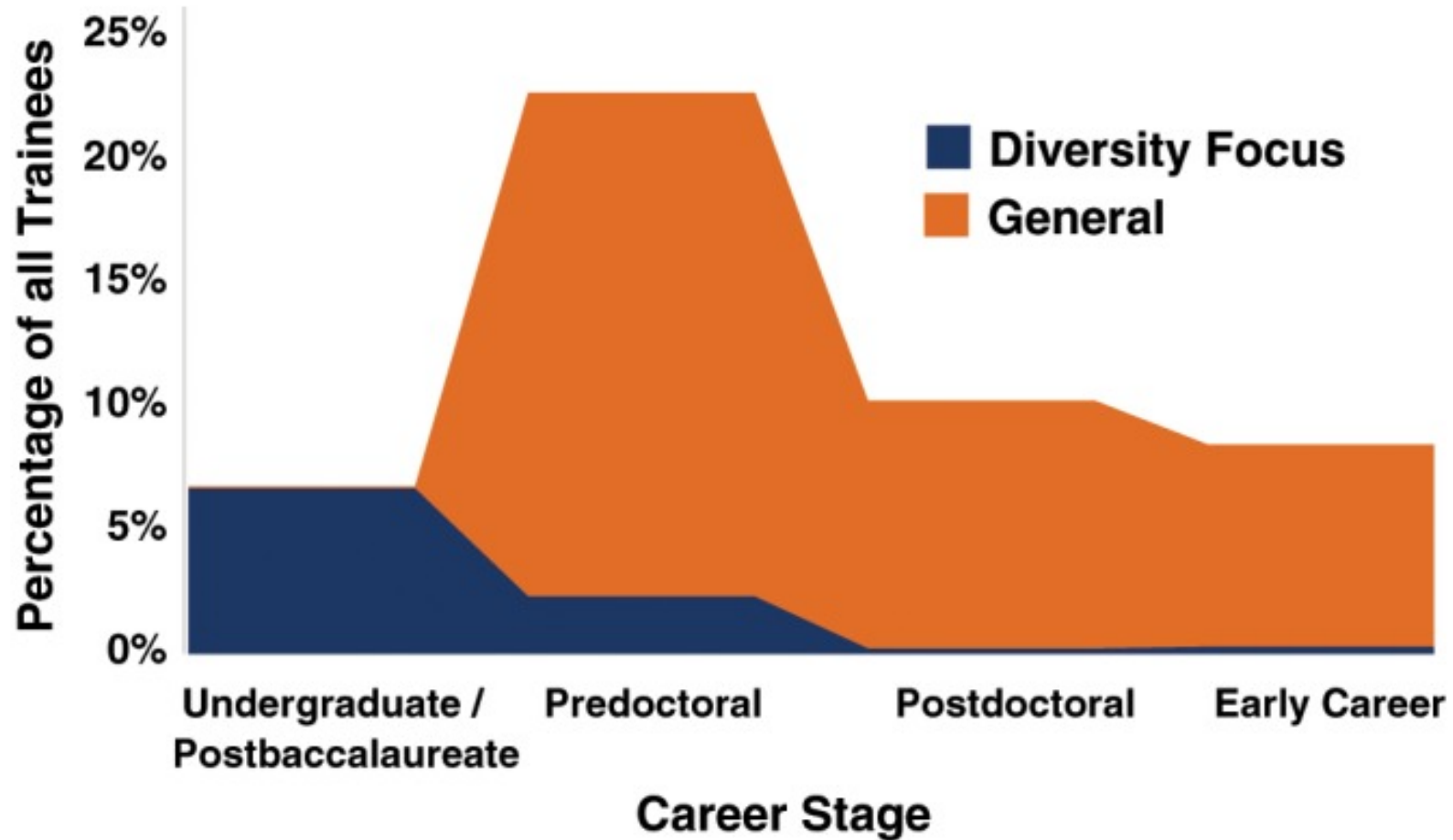
Temporal Trends in Representation of Biomedical Scientists from Underrepresented Groups (1980-2020)



Black or African American, Hispanic, American Indian, Alaska Native, Native Hawaiian, Pacific Islander

Gibbs et al, *eLife* (2016); NIGMS Division of Data Integration, Modeling, and Analytics

NIH Support of Trainees in 2016



CBE Life Sci Educ. 2016 PMID: PMC5008902; Valentine, Lund and Gammie

What Works in Effective Programs to Promote Broad Participation

- Provide oversight and support, particularly at critical transitions
- Give additional mentoring, coaching, and sponsoring
- Encourage skills development
- Provide activities that develop science identity and self-efficacy
- Create a sense of belonging
- Build supportive cohorts
- Provide opportunities to align professional work with personal values

Collections of publications:

<https://diversity.nih.gov/impact/publications-cited-swdss>

<https://www.nigms.nih.gov/training/dpc/Pages/DPC-Publications.aspx>

<https://public.diversityprogramconsortium.org/pages/publications>



MOSAIC

Designed to facilitate the progression of promising postdoctoral researchers from diverse backgrounds into independent, tenure-track or equivalent research-intensive faculty positions.

MOSAIC Structure: Institutionally Focused Research Education Cooperative Agreement to Promote Diversity (UE5) – PAR-21-277

Designed to equip MOSAIC scholars with professional skills and provide them with the appropriate mentoring and professional networks to allow them to transition into, advance, and succeed in independent, tenure-track or equivalent research-intensive faculty careers.

The current MOSAIC UE5 Awardees to meet the needs of the scholars:

- The American Society for Biochemistry and Molecular Biology (ASBMB)
- The American Society for Cell Biology (ASCB)
- The Association of American Medical Colleges (AAMC)
- The American Society for Microbiology (ASM)



MOSAIC Structure: K99/R00 Pathway to Independence Award



Notices of Funding Opportunities – vary according to clinical trials and experimental studies with humans

- PAR-21-271
- PAR-21-272
- PAR-21-273

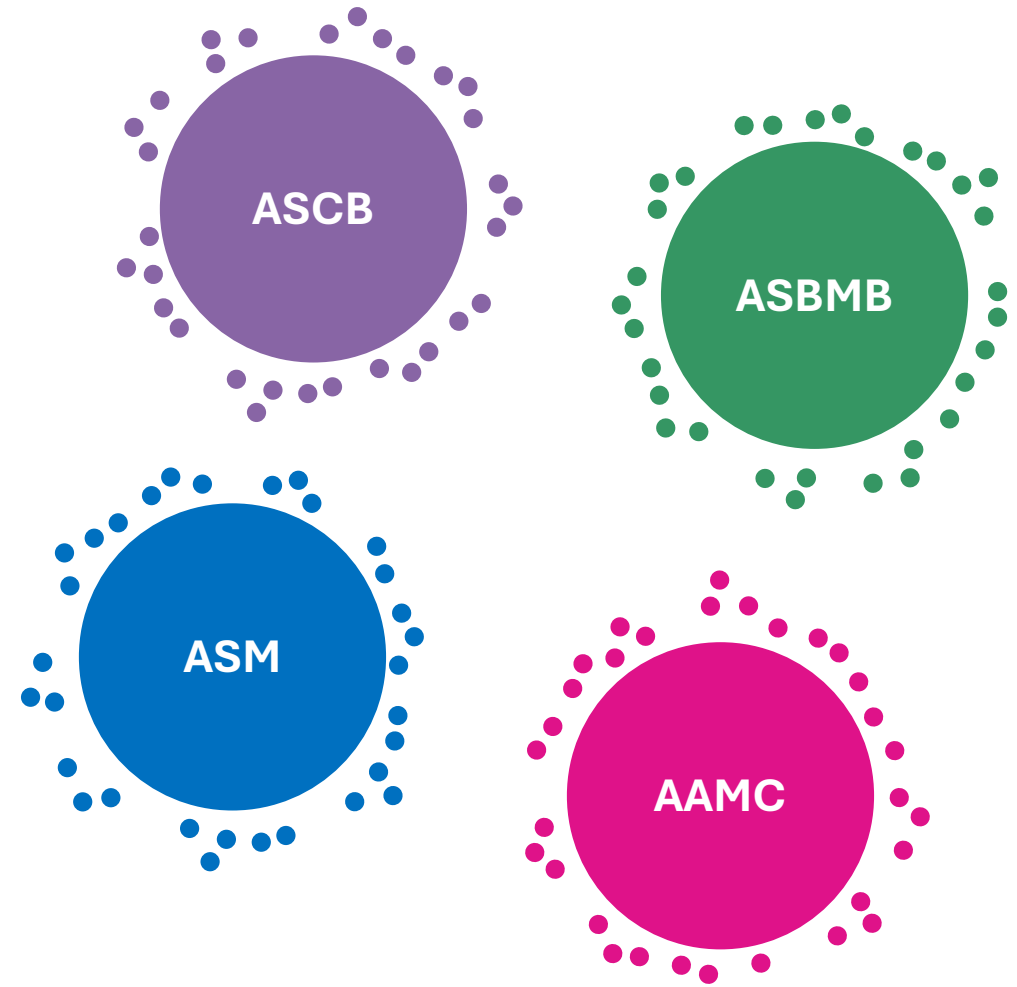
MOSAIC Candidates Submit Applications to NIH

- Postdoctoral Research and Career Development Plans (K99)
- Research Transition Award (R00)



K99/R00 Candidates
Breadth of Biomedical Topics

MOSAIC Cohorts Assigned by Topic Areas

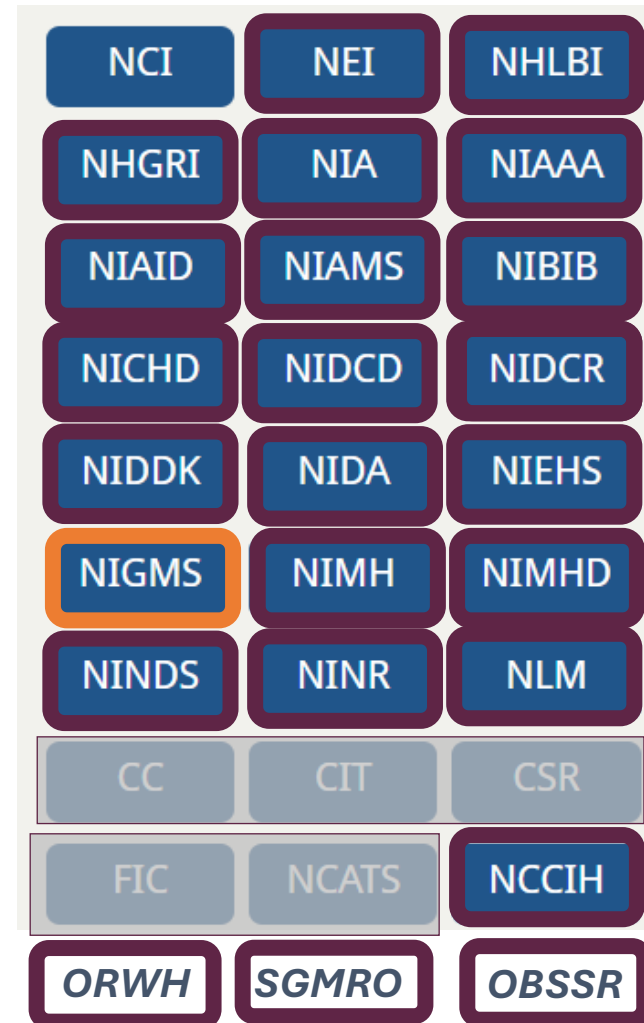


MOSAIC Hubs

- **Cohort Building Activities**
- **Skills Development**
 - Faculty search
 - Research team management
 - Grant writing
 - Communication & scientific publishing
- **Mentoring and Networking**
- **Career Visibility & Enhancement**
- **Institutional Engagement**

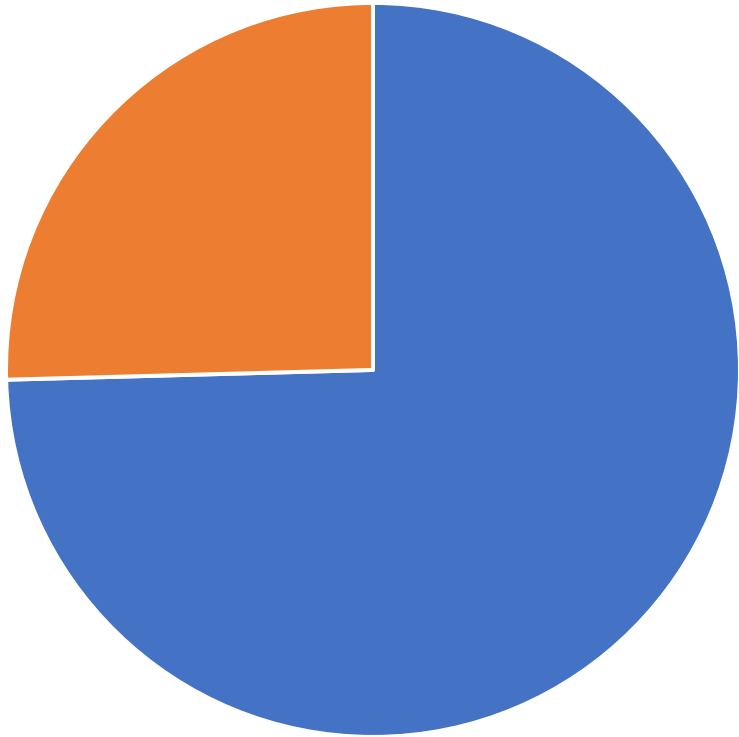


MOSAIC Program Supported Across NIH

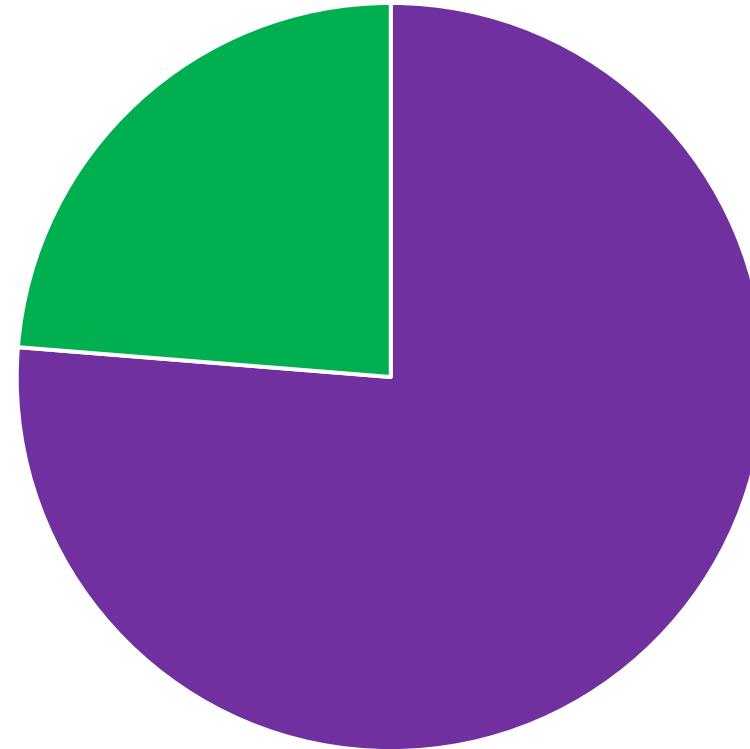


Lead Institute
Participating NIH Institutes,
Centers and Offices

MOSAIC Candidate Demographics (Self-ID)



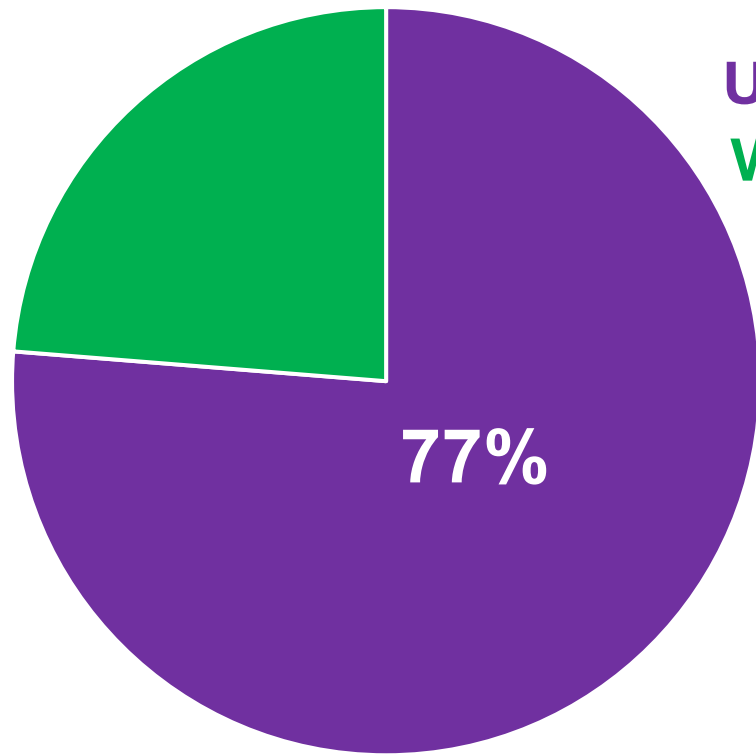
Female (n=82; 76%)
Male (n=26; 24%)



Underrepresented Minority (n=83; 77%)
Well-Represented (n=25; 23%)

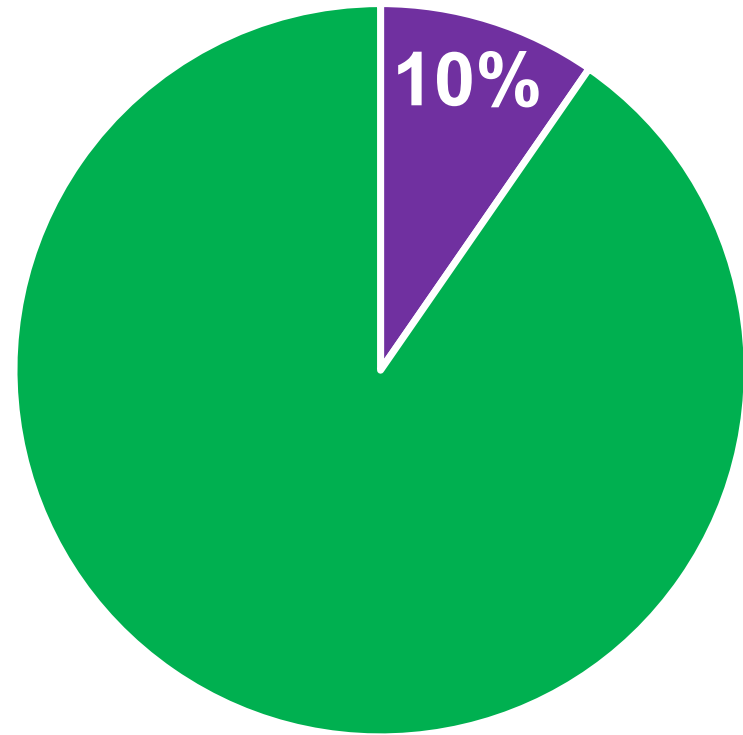
Demographics Comparison

MOSAIC Scholars



Underrepresented
Well Represented

Research Project Grants NIH Investigators



NIGMS Data Integration, Modeling, and Analytics

<https://report.nih.gov/nihdatabook>

NIGMS found similar results for the “parent” K99/R00
(See NIGMS feedback loop blog Jan 2021)

First MOSAIC Cohort 2021

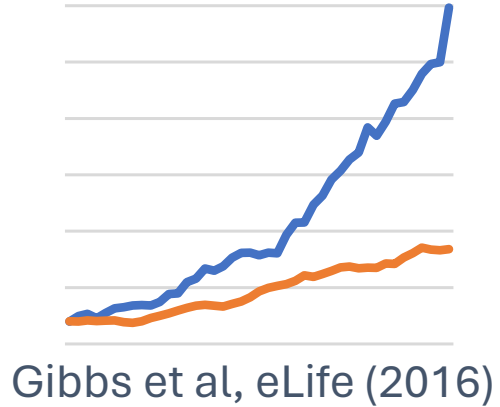


- 79% have progressed to independence
- 21% still in career development

For 2022 cohort, 49% have already progressed to independence

Thanks to the MOSAIC Team Members Across NIH

Kenneth Gibbs, MOSAIC Team Lead



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| NCI | NEI | NHLBI |
| NHGRI | NIA | NIAAA |
| NIAID | NIAMS | NIBIB |
| NICHD | NIDCD | NIDCR |
| NIDDK | NIDA | NIHES |
| NIGMS | NIMH | NIMHD |
| NINDS | NINR | NLM |
| CC | CIT | CSR |
| FIC | NCATS | NCCIH |
| ORWH | SGMRO | OBSSR |

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