

Supplemental Material

CBE—Life Sciences Education

Martinez et al.

Supplemental Materials

Factors contributing to the *success* of NIH-designated underrepresented minorities in academic and non-academic research positions

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RUNNING TITLE: Factors associated with success of underrepresented minorities

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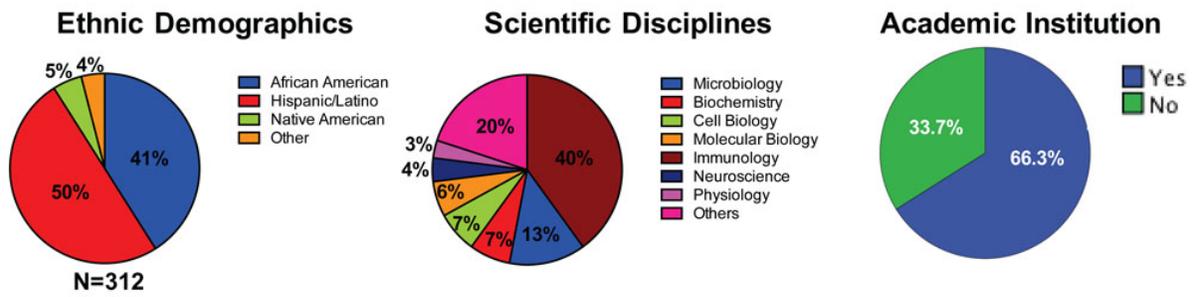
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Supplemental Figures

Supplemental Figure 1. Demographics of survey participants. Self-reported race/ethnic background, disciplines of survey participants and affiliations.

A)

		Years in Career (Post training)					Total
		1-5	5-10	10-15	15-20	>20	
Undergraduate Institution (URM vs. Maj)	URM	33	26	5	7	13	84
	Maj	54	31	29	14	44	172
Total		87	57	34	21	57	256

B)

		Years in Career (Post training)					Total
		1-5	5-10	10-15	15-20	>20	
Did you perform research as an undergraduate	Yes	65	52	27	15	38	197
	No	22	3	7	6	18	56
Total		87	55	34	21	56	253

C)

		Years in Career (Post training)					Total
		1-5	5-10	10-15	15-20	>20	
What best described the size of the laboratory where you gained your PhD?	1-5	37	17	8	10	16	88
	6-10	29	24	18	2	18	91
	11-15	5	5	4	7	5	26
	16-20	6	4	0	1	5	16
	>20	2	1	0	0	6	9
Total		79	51	30	20	50	230

D)

		Years in Career (Post training)					Total
		1-5	5-10	10-15	15-20	>20	
What best described the size of the laboratory where you got your 1st (or only) post-doc?	1-5	17	11	5	3	14	50
	6-10	31	11	13	6	15	76
	11-15	2	10	2	5	6	25
	16-20	4	5	4	3	5	21
	>20	5	0	5	1	3	14
Total		59	37	29	18	43	186

E)

		Years in Career (Post training)					Total
		1-5	5-10	10-15	15-20	>20	
Have you been or are you a member of a professional scientific organization(s)?	Yes	70	53	32	21	55	231
	No	5	0	0	0	0	5
		75	53	32	21	55	236
Total							

F)

		Years in Career (Post training)					Total
		1-5	5-10	10-15	15-20	>20	
Are you currently a faculty member at an academic institution (including the NIH or other similar institution)?	Yes	52	37	27	19	50	185
	No	52	24	8	2	8	94

Total	104	61	35	21	58	279
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G)

Please rate the following from the most (5) to the least (1) important factors which you feel have been important in your career-NIH or NSF funded programs which increase URM participation	Years in Career (Post training)					
	1-5	5-10	10-15	15-20	>20	Total
1	14	8	7	6	26	61
2	7	8	4	4	7	30
3	8	10	8	1	7	34
4	12	5	6	2	3	28
5	25	20	7	7	11	70
Total	66	51	32	20	54	223

Supplemental Figure 2. Analysis of years in career post training and indicated factors.

Respondents' years in career were analyzed and compared with: **A)** Type of undergraduate institution they attended (URM serving vs Majority serving) ($\chi^2(4)=12.918$, $P=0.011$). **B)** Whether they did undergraduate research ($\chi^2(4)=13.187$, $P=0.010$). **C)** Size of the lab in which they received their PhD ($\chi^2(16)=38.872$, $P=0.001$). **D)** Size of the lab in which they received their first (or only) postdoctoral training ($\chi^2(16)=27.894$, $P=0.033$). **E)** Whether they were members of a professional society ($\chi^2(4)=10.966$, $P=0.025$). **F)** Whether they were faculty members at an academic institution (including the NIH) ($\chi^2(4)=30.863$, $P<0.0014$). **G)** The importance they placed NIH/NSF funded programs to increase diversity in biomedical science (rating 1-5, 5 being the highest; $\chi^2(16)=28.395$, $P=0.028$). Pearson Chi Squared Asymptotic Exact Significance (2 sided).

A)

		Please check all that apply concerning your publication record during your undergraduate year				
		Lower impact Journal (IF<3)	Medium impact Journal (IF>3)	Higher impact Journal (IF>7)	No Publication	Total
Which best describes the type of institution where you obtained your undergraduate degree:	Small (<7,000 students) min. serving Inst.	7	4	0	29	40
	Large (>7,000 students) min. serving Inst.	7	1	1	20	29
	Small (<10,000 students) Maj. serving Inst.	5	0	1	34	40
	Large (>10,000 students) Maj. serving Inst.	21	18	3	56	98
Total		40	23	5	139	207

B)

		Please check all that apply concerning your publication record during your undergraduate years				
		Lower impact Journal (IF<3)	Medium impact journal (IF >3)	Higher impact journal (IF>7)	No Publication	Total
Do you think you were well prepared for your transition from undergraduate to graduate school?	Yes	28	17	5	77	127
	No	10	5	0	36	51
	Not Sure	2	1	0	26	29
	Total	40	23	5	139	207

C)

		Please check all that apply concerning your publication record during your graduate years				
		Lower impact Journal (IF<3)	Medium impact journal (IF >3)	Higher impact journal (IF>7)	No Publication	Total
Do you think you were well prepared for your transition from undergraduate to graduate school?	Yes	13	80	37	5	135
	No	11	26	12	2	51
	Not Sure	2	12	10	8	32
Total		26	118	59	15	218

D)

		Please check all that apply concerning your publication record during your postdoctoral years:				
		Lower impact Journal (IF<3)	Medium impact journal (IF >3)	Higher impact journal (IF>7)	No Publication	Total
Please check all that apply concerning your publication record during your graduate years	Lower impact Journal (IF<3)	4	8	6	4	22
	Medium impact journal (IF >3)	4	49	47	10	110
	Higher impact journal (IF>7)	1	5	37	6	49
	No Publication	3	2	5	5	15
	Total	12	64	95	25	196

E)

		Please check all that apply concerning your publication record during your graduate years				
		Lower impact Journal (IF<3)	Medium impact journal (IF >3)	Higher impact journal (IF>7)	No Publication	Total
How many different post-doctoral training appointments did you have (how many post-docs did you do)?	1	15	63	30	6	114
	2	4	32	16	0	52
	3	3	4	0	1	8
	>3	0	0	0	2	2
Total		22	99	46	9	176

F)

		Published in any journal during the specified periods (Yes)			
		Undergraduate	Graduate	Post-Doc	Total
Are you currently a faculty member at an academic institution (including the NIH or other similar institution)?	Yes	0	9	151	160
	No	3	13	48	64
Total		3	22	199	224

G)

		Please check all that apply concerning your publication record during your postdoctoral years				
		Lower impact Journal (IF<3)	Medium impact journal (IF >3)	Higher impact journal (IF>7)	No Publication	Total
Are you currently a faculty member at an academic institution (including the NIH or other similar institution)?	Yes	10	48	83	10	151
	No	2	18	12	16	48
Total		12	66	95	26	199

H)

		Please check all that apply concerning your publication record during your graduate years				
		Lower impact Journal (IF<3)	Medium impact journal (IF >3)	Higher impact journal (IF>7)	No Publication	Total
How long was your 1st (or only) post-doctoral training period?	1-3 yrs.	16	49	27	6	98
	3-5 yrs.	5	42	10	3	60
	>5 yrs.	0	8	7	0	15
Total		21	99	44	9	173

I)

		Please check all that apply concerning your publication record during your graduate years				
		Lower impact Journal (IF<3)	Medium impact journal (IF >3)	Higher impact journal (IF>7)	No Publication	Total
Do you have a family member you would describe as a role model who is not in the field of science?	Yes	19	85	31	10	145
	No	7	33	28	5	73

Total		26	118	59	15	218
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Supplemental Figure 3. Analysis of publications as undergraduate or graduate students and indicated factors. The impact factor (IF) of respondents' publications were analyzed and compared with the indicated factors. **A)** The IF of respondents' publications as undergraduates with the type of undergraduate institution they attended (URM serving vs Majority serving, small vs large; $\chi^2(9)=17.080$, $P=0.045$). **B)** The IF of respondents' publications as undergraduates with whether they were prepared to graduate school transition. **C)** The IF of respondents' publications as graduate students with whether they felt prepared for the transition from undergraduate to graduate training ($\chi^2(6)=11.240$, $P=0.081$). **D)** The IF of respondents' publications as graduate students with the IF of respondents' publications as post docs ($\chi^2(9)=44.067$, $P<0.0014$). **E)** The IF of respondents' publications as graduate students with the number of postdoctoral positions they held ($\chi^2(9)=44.483$, $P<0.0014$). **F)** Publishing (regardless of journal IF) as undergraduates, graduate students or postdocs with whether they were currently faculty members at an academic institution (including the NIH) ($\chi^2(2)=19.473$, $P<0.0014$). **G)** The IF of respondents' publications as postdocs with whether they were currently faculty members at an academic institution (including the NIH; $\chi^2(3)=27.463$, $P<0.0014$). **H)** The IF of respondents' publications as graduate students with the length of the first (or only) postdoctoral positions they held ($\chi^2(6)=12.187$, $P=0.056$). **I)** The IF of respondents' publications as graduate students with having a role model who was a family member outside of science ($\chi^2(3)=7.288$, $P=0.063$). Pearson Chi Squared Asymptotic Exact Significance (2 sided).

A)

		Role model or mentor during the indicated:							Total
		HS	UG	Grad	PD	Fac/Prof	None	Other	
Please check all that apply concerning your publication record during your postdoctoral years	Lower impact Journal (IF<3)	0	4	0	3	2	1	2	12
	Medium impact journal (IF >3)	1	2	10	17	32	4	0	66
	Higher impact journal (IF>7)	0	1	8	24	54	6	2	95
	No Publication	0	0	13	3	8	1	1	26
Total		1	7	31	47	96	12	5	199

B)

		Please check all that apply concerning your publication record during your postdoctoral years					Total
		Lower impact Journal (IF<3)	Medium impact journal (IF >3)	Higher impact journal (IF>7)	No Publication		
Are you currently a faculty member at an academic institution (including the NIH or other similar institution)?	Yes	10	48	83	10	151	
	No	2	18	12	16	48	
Total		12	66	95	26	199	

C)

		Years in career (post training)					Total
		1-5	5-10	10-15	15-20	> 20	
Published in any journal during the specified periods (Yes)	Undergrad	3	0	0	0	0	3
	Graduate	8	10	1	0	3	22
	Post-Doc	56	42	31	20	50	199
Total		67	52	32	20	53	224

D)

		Role model or mentor during the indicated:							Total
		HS	UG	Grad	PD	Fac/Prof	None	Other	
Published in any journal during the specified periods (Yes)	Undergrad	1	0	2	0	0	0	0	3
	Graduate	0	1	11	0	6	1	2	21
	Post-Doc	1	7	31	47	96	12	5	199
Total		2	8	44	47	102	13	7	223

E)

		Published in any journal during the specified periods (Yes)			
		Undergraduate	Graduate	Post-Doc	Total
Are you currently a faculty member at an academic institution (including the NIH or other similar institution)?	Yes	0	9	151	160
	No	3	13	48	64
Total		3	22	199	224

Supplemental Figure 4. Analysis of publications as post docs and indicated factors. The impact factor (IF) of respondents' publications were analyzed and compared with the indicated factors. **A)** The IF of respondents' publications as post docs with having a professional role model during the indicated time periods ($\chi^2(18)=79.952$, $P<0.0014$). **B)** The IF of respondents' publications as post docs with whether they were currently faculty members at an academic institution (including the NIH; $\chi^2(3)=27.463$, $P<0.0014$). **C)** Publishing (regardless of journal IF) as undergraduates, graduate students or postdocs with years in career (post training; $\chi^2(8)=17.666$, $P=0.023$). **D)** Publishing (regardless of journal IF) as undergraduates, graduate students or

postdocs with having a professional role model during the indicated time periods ($\chi^2(12)=64.319$, $P<0.0014$). **E)** Publishing (regardless of journal IF) as undergraduates, graduate students or postdocs with whether they were currently faculty members at an academic institution (including the NIH; $\chi^2(2)=19.473$, $P<0.0014$). Pearson Chi Squared Asymptotic Exact Significance (2 sided).

A)

Have you been or are you a member of a professional scientific organization(s)?	Years in career (post training)					Total
	1-5	5-10	10-15	15-20	> 20	
Yes	70	53	32	21	55	231
No	5	0	0	0	0	5
Total	75	53	32	21	55	236

B)

	During which years were you a member of professional scientific organization(s)?					Total
	Member during graduate years	Member during post-doctoral years	Member during faculty or professional appointment	Member during graduate years		
Do you think you were well prepared for your transition from undergraduate to graduate school?	Yes	8	16	121	8	153
	No	11	14	31	11	67
	Not Sure	4	1	25	4	34
Total	23	31	177	23	254	

C)

		Role model or mentor during the indicated time:							Total
		HS	UG	Grad	PD	Fac/Prof	None	Other	
During which years were you a member of professional scientific organization(s)?	Member during graduate years	1	0	12	0	6	0	2	21
	Member during post-doctoral years	1	2	4	14	4	4	0	29
	Member during faculty or professional appointment	0	6	28	32	92	9	5	172
Total		2	8	44	46	102	13	7	222

Supplemental Figure 5. Analysis of membership in a professional society and indicated factors. Respondents' membership in a professional society were analyzed and compared with the indicated factors. **A)** Respondents' membership in a professional society with years in career (post training; $\chi^2(4)=10.966$, $P=0.025$). **B)** Respondents' membership in a professional society during the indicated time periods with whether they felt prepared for the transition from undergraduate to graduate training ($\chi^2(4)=21.339$, $P<0.0014$). **C)** Respondents' membership in a professional society during the indicated time periods with having a professional role model during the indicated time periods ($\chi^2(12)=58.627$, $P<0.0014$). Pearson Chi Squared Asymptotic Exact Significance (2 sided).

A)

		What was the highest degree in your home as you were going through your undergraduate education?						
		Less than High school degree	High school degree	Associate's Degree	Bachelor's degree	Master's degree	Ph.D./M.D. or other terminal degree or professional degree	Total
Undergraduate Institution (URM vs. Maj)	URM	5	29	2	17	15	15	83
	Maj	11	37	21	33	26	44	172
Total		16	66	23	50	41	59	255

B)

		Undergraduate Institution (Large vs. Small)		
		Small (<7,000)	Large (>7,000)	Total
What was the highest degree in your home as you were going through your undergraduate education?	Less than High school degree	2	14	16
	High school degree	32	34	66
	Associate's Degree	6	17	23
	Bachelor's degree	21	29	50
	Master's degree	18	23	41
	Ph.D./M.D. or other terminal degree or professional degree	17	42	59
Total		96	159	255

C)

	Which best describes the type of institution where you obtained your graduate degree:				
	Small (<7,000 students) min. serving Inst.	Large (>7,000 students) min. serving Inst.	Small (<10,000 students) Maj. serving Inst.	Large (>10,000 students) Maj. serving Inst.	Total
What was the highest degree in your home as you were going through your undergraduate education?					
Less than High school degree	1	0	1	12	14
High school degree	4	4	5	50	63
Associate's Degree	0	0	5	15	20
Bachelor's degree	1	1	9	36	47
Master's degree	2	1	7	29	39
Ph.D./M.D. or other terminal degree or professional degree	4	10	10	30	54
Total	12	16	37	172	237

D)

	Which best describes the type of institution where you obtained your graduate degree:				
	Lower impact Journal (IF<3)	Medium impact journal (IF >3)	Higher impact journal (IF>7)	No Publication	Total
What was the highest degree in your home as you were going through					
Less than High school degree	3	8	3	1	15
High school degree	3	18	28	4	53
Associate's Degree	2	3	4	5	14
Bachelor's degree	2	15	18	5	40

your undergraduate education?	Master's degree	0	8	14	7	29
	Ph.D./M.D. or other terminal degree or professional degree	2	14	28	4	48
Total		12	66	95	26	199

E)

		What was the highest degree in your home as you were going through your undergraduate education?						Total
		Less than High school degree	High school degree	Associate's Degree	Bachelor's degree	Master's degree	Ph.D./M.D. or other terminal degree or professional degree	
Did you perform research as an undergraduate student?	Yes	12	13	19	42	32	50	198
	No	4	23	4	8	9	8	56
Total		16	66	23	50	41	58	254

F)

		Do you think you were well prepared for your transition from undergraduate to graduate school?			
		Yes	No	Not Sure	Total
Do you have a family member you would describe as a role model who is not in the field of science?	Yes	103	29	22	154
	No	37	27	10	74
Total		140	56	32	228

Supplemental Figure 6. Analysis of highest degree in the home and indicated factors. The highest degree in respondents' home during their undergraduate years were analyzed and compared with the indicated factors. **A)** The highest degree in respondents' home during their undergraduate years with the type of undergraduate institution they attended (URM serving vs Majority serving; $\chi^2(5)=11.590$, $P=0.040$). **B)** The highest degree in respondents' home during their undergraduate years with the type of undergraduate institution they attended (Large vs Small; $\chi^2(5)=11.970$, $P=0.034$). **C)** The highest degree in respondents' home during their undergraduate years with the type of graduate institution where they received their PhD (URM serving vs Majority serving, large vs small; $\chi^2(15)=26.593$, $P=0.032$). **D)** The highest degree in respondents' home during their undergraduate years with the graduate institution they attended (URM serving vs Majority serving; $\chi^2(5)=16.555$, $P=0.006$). **E)** The highest degree in respondents' home during their undergraduate years with whether they performed undergraduate research ($\chi^2(5)=10.028$, $P=0.073$). **F)** Whether they felt prepared for the transition from undergraduate to graduate training and whether they had a family member as a role model who was not in science ($\chi^2(2)=8.685$, $P=0.013$). Pearson Chi Squared Asymptotic Exact Significance (2 sided).

A)

	What was the highest degree in your home as you were going through your undergraduate education?							
	Less than H.S. degree	H.S. degree	A.A. degree	B.S. degree	M.S. degree	Ph.D./M.D. or other terminal degree or professional degree	Total	
Are you currently a faculty member at an academic institution (including the NIH or other similar institution)?	Yes	13	50	12	33	22	47	177
	No	3	16	11	17	19	12	78
Total		16	66	23	50	41	59	255

B)

	Which best describes the type of institution where you obtained your PhD degree (URM vs Maj):			
	URM	Maj	Total	
Are you currently a faculty member at an academic institution (including the NIH or other similar institution)?	Yes	15	150	165
	No	13	59	72
Total		28	209	237

C)

	Do you think you were well prepared for your transition from undergraduate to graduate school?				
	Yes	No	Not Sure	Total	
Are you currently a faculty member at an academic institution (including	Yes	117	33	23	173
	No	37	28	11	76

the NIH or other similar institution)?				
Total	154	61	34	249

D)

		Did you get post-doctoral training (post-doc)?		
		Yes	No	Total
Are you currently a faculty member at an academic institution (including the NIH or other similar institution)?	Yes	145	22	167
	No	46	25	71
Total		191	47	238

E)

		Rated as important in career:					Total
		Mentorship	Financial Support	NIH or NSF funded Programs which increase URM participation	Peers	Opportunities for exploring science (conferences etc.)	
Are you currently a faculty member at an academic institution (including the NIH or other similar institution)?	Yes	5	3	41	18	8	75
	No	6	2	8	8	9	33
Total		11	5	49	26	17	108

Supplemental Figure 7. Analysis of differences between respondents working in academic institutions vs. non-academic institutions. A) The highest degree in respondents' home during their undergraduate years with whether or not they currently work in an academic institution ($\chi^2(5)=13.512, P=0.018$). **B)** The type of graduate institution where they received their PhD (URM serving vs Majority serving) with whether or not they currently work in an academic institution

($\chi^2(1)=3.867$, $P=0.078$). **C**) Whether they felt prepared for the transition from undergraduate to graduate school with whether or not they currently work in an academic institution ($\chi^2(2)=9.922$, $P=0.007$). **D**) Whether they did postdoctoral training with whether or not they currently work in an academic institution ($\chi^2(1)=15.267$, $P<0.0014$). **E**) Whether they rated as important the indicated factors as important for their career development with whether or not they currently work in an academic institution ($\chi^2(4)=11.884$, $P=0.016$). Pearson Chi Squared Asymptotic Exact Significance (2 sided).

Supplemental Table 1. Odds ratio estimates by logistic regressions involving being in an academic position and other factors for URM success.

Specific factors	Odds ratios	Comparisons	P value
<i>Feeling prepared for transition from undergraduate to graduate school</i>	2.202	for those who felt prepared vs those who did not feel prepared or were unsure.	<0.005 [¶]
<i>Education and training</i>	0.319	for respondents who received PhDs at large min. serving inst. vs large maj. serving inst.	<0.031
	0.454	for respondents who received PhDs at min. serving inst. regardless of size	<0.05
	3.582	for those who did a postdoc vs those who did not	<0.001
<i>Publication Record</i>	4.545	for having published as a postdoc compared to having published as graduate students	<0.004 [¶]
	8	for those with publications in lower IF journal vs no publication	<0.02
	4.267	for those with publications in medium IF journal vs no publication	<0.003
	11.067	for those with publications in high IF journal vs no publication	<0.001
<i>Professional Society Membership</i>	0.022	for membership as a graduate student vs membership as faculty	<0.001 [¶]
	0.061	for membership as a postdocs vs membership as faculty	<0.001 [¶]
<i>Level of education in home during undergraduate</i>	0.279	for those where highest degree was AA vs those who had a PhD/MD or other prof degree	<0.02
	0.296	for those where highest degree was MS vs those who had a PhD/MD or other prof degree	<0.007

[¶]Bonferroni correction for multiple comparisons, p<0.05 as significant.

Supplemental Table 2. Odds ratio estimates by logistic regressions involving being in a non-academic position and other factors for URM success.

Specific factors	Odds ratios	Comparisons	P value
<i>Feeling prepared for transition from undergraduate to graduate school</i>	0.454	for those who felt prepared compared to those who did not feel prepared or were unsure	<0.005 [¶]
<i>Education and training</i>	3.137	for respondents who received PhDs at large min. serving inst. vs large maj. serving inst.	<0.031
	0.454	for respondents who received PhDs at min. serving inst. regardless of size	<0.05
	0.279	for those who did a postdoc vs those who did not	<0.001
<i>Publication Record</i>	4.545	for having published as a graduate student compared to having published as a postdoc	<0.003 [¶]
	0.125	for those who have publications in lower IF journal vs no publication	<0.02
	0.234	for those who publications in medium IF journal vs no publication	<0.003
	0.090	for those who publications in high IF journal vs no publication	<0.001
<i>Level of education in home during undergraduate</i>	3.590	for those where highest degree was AA vs those who had a PhD/MD or other prof degree	<0.02
	3.383	for those where highest degree was MS vs those who had a PhD/MD or other prof degree	<0.007

[¶]Bonferroni correction for multiple comparisons, p<0.05 as significant.

SURM Study

Project Title: Factors contributing to the success of underrepresented minorities in the life sciences (Success of Underrepresented Minorities Survey, SURM Survey)

Principal Investigator: Prof. Avery August

Department of Microbiology & Immunology

Cornell University

Email: aa749@cornell.edu

Phone: 607-253-3401

What the study is about

The purpose of the research study is to identify the factors that are responsible for the success of life scientists from underrepresented minority (URM*) groups (*as defined by the guidelines of the National Institutes of Health (NIH)).

What we will ask you to do

We will ask you to complete a survey about your career. You will also be asked to provide brief comments regarding your career. This survey will take approximately 10 minutes of your time.

Risks and discomforts

We do not anticipate any risks from participating in this study.

Benefits

Information from this survey may lead to the development of more effective strategies for increasing the number of underrepresented minorities in the life sciences. However, there are no direct benefits to the participant.

Alternatives

N/A

Payment for participation

There is no payment for taking part in the study.

Audio/Video Recording

No audio/video recording will be used.

Privacy/Confidentiality

All information will be collected in a de-identified manner and the aggregated responses analyzed. The results of the survey may be presented, published or disseminated. We

anticipate that your participation in this survey presents no greater risk than everyday use of the Internet.

Taking part is voluntary

Participating in the survey is voluntary, and you may refuse to participate before the study begins. If you chose to continue with the survey, you will be required to answer all survey questions.

If you have questions

The main researchers conducting this study are Drs. Avery August (Cornell University), Arturo Casadevall (Albert Einstein College of Medicine), Dwayne Boucaud (Quinnipiac University) and Luis Martinez (New York Institute of Technology). The main contact for IRB purposes is Dr. Avery August. Please ask any questions you have now. If you have questions later, you may contact Dr. August at aa749@cornell.edu or at 607-253-3401. If you have any questions or concerns regarding your rights as a subject in this study, you may contact the Institutional Review Board (IRB) for Human Participants at 607-255-6182 or access their website at <http://www.irb.cornell.edu>. You may also report your concerns or complaints anonymously through Ethicspoint online at www.hotline.cornell.edu or by calling toll free at 1-866-293-3077. Ethicspoint is an independent organization that serves as a liaison between the University and the person bringing the complaint so that anonymity can be ensured.

Statement of Consent

I have read the above information, and have received answers to any questions I asked. I consent to take part in the study, indicating by clicking the "I agree" button.

This consent form will be kept by the researcher for at least five years beyond the end of the study.

I agree (1)

I do not agree (2)

If I do not agree Is Selected, Then Skip To End of Survey

Answer If Project Title: Factors contributing to success of underrepresented biomedical scientists Principal Investigator: Prof. Avery August Department of Microbi... I agree Is Selected

Q1 How many years have you been in your career post (training post, excluding post-doctoral training period)?

- 1-5 (1)
- 5-10 (2)
- 10-15 (3)
- 15-20 (4)
- greater than 20 (5)

Q2 How many years have you been at your current institution?

- 1-5 (1)
- 6-10 (2)
- 11-15 (3)
- 16-20 (4)
- greater than 20 (5)

Q33 What is your primary scientific discipline?

- Anatomy (1)
- Biochemistry (2)
- Cell Biology (3)
- Molecular Biology (4)
- General Biology (5)
- Ecology & Evolution (6)
- Developmental Biology (7)
- Microbiology (8)
- Immunology (9)
- General Medical Sciences (10)
- Computational Biology (11)
- Genetics (12)
- Neuroscience (13)
- Physiology (14)
- Other (15) _____

Q29 Are you currently a faculty member at an academic institution (including the NIH or other similar non-profit institutes)?

- Yes (1)
- No (2)

Answer If Are you currently a faculty member at an academic institution (including the NIH or other similar non-profit institutes)? (revised to include NIH etc) Yes Is Selected

Q28 Which best describes the type of institution where you currently work:

- small (less than 7,000 students) minority serving institution (1)
- large (more than 7,000 students) minority serving institution (2)
- small (less than 10,000 students) majority serving institution (3)
- large (more than 10,000 students) majority serving institution (4)
- Not applicable (5)

Answer If Which best describes the type of institution where you currently work. (new question) small (less than 10,000 students) majority serving institution Is Selected Or Which best describes the type of institution where you currently work. (new question) large (more than 10,000 students) majority serving institution Is Selected

Q17 Is there a significant URM population at your current institution?

- Yes (1)
- No (2)

Answer If Are you currently a faculty member at an academic institution (including the NIH or other similar non-profit institutes)? (revised to include NIH etc) No Is Selected

Q32 Which best describes the type of non-academic institution where you currently work:

- Small company (1)
- Large company (2)
- Non-Profit (3)
- Other (4) _____

Q34 Did you attend a community college?

- Yes (1)
- No (2)

Q6 Which best describes the type of institution where you obtained your undergraduate degree:

- small (less than 7,000 students) minority serving institution (1)
- large (more than 7,000 students) minority serving institution (2)
- small (less than 10,000 students) majority serving institution (3)
- large (more than 10,000 students) majority serving institution (4)

Q8 What was the highest degree in your home as you were going through your undergraduate education?

- Less than High school degree (1)
- High school degree (2)
- Associate's Degree (3)
- Bachelor's degree (4)
- Master's degree (5)
- Ph.D./M.D. or other terminal degree or professional degree (6)

Q27 Did you perform research as an undergraduate student?

- Yes (1)
- No (2)

Q7 Which best describes the type of institution where you obtained your Ph.D.:

- small (less than 7,000 students) minority serving institution (1)
- large (more than 7,000 students) minority serving institution (2)
- small (less than 10,000 students) majority serving institution (3)
- large (more than 10,000 students) majority serving institution (4)

Q31 Do you think you were well prepared for your transition from undergraduate to graduate school?

- Yes (1)
- No (2)
- Not sure (3)

Q4 Which best describes the size of the laboratory group where you gained your Ph.D.?

- 1-5 individuals (1)
- 6-10 individuals (2)
- 11-15 individuals (3)
- 16-20 individuals (4)
- Greater than 20 individuals (5)

Q3 Did you get post-doctoral training (post-doc)?

- Yes (1)
- No (2)

Answer If Did you get post-doctoral training (post-doc)? Yes Is Selected

Q37 How many different post-doctoral training appointments did you have (how many post-docs did you do)?

- 1 (1)
- 2 (2)
- 3 (3)
- more then 3 (4)

Answer If How many different post-doctoral training appointments did you have (how many post-docs did you do)? 1 Is Selected Or How many different post-doctoral training appointments did you have (how many post-docs did you do)? 2 Is Selected Or How many different post-doctoral training appointments did you have (how many post-docs did you do)? 3 Is Selected Or How many different post-doctoral training appointments did you have (how many post-docs did you do)? more then 3 Is Selected

Q26 How long was your first (or only) post-doctoral training period?

- 1-3 years (1)
- 3-5 years (2)
- greater than 5 years (3)

Answer If How many different post-doctoral training appointments did you have (how many post-docs did you do)? 2 Is Selected Or How many different post-doctoral training appointments did you have (how many post-docs did you do)? 3 Is Selected Or How many different post-doctoral training appointments did you have (how many post-docs did you do)? more then 3 Is Selected

Q38 How long was your second post-doctoral training period?

- 1-3 years (1)
- 3-5 years (2)
- greater than 5 years (3)

Answer If How many different post-doctoral training appointments did you have (how many post-docs did you do)? 3 Is Selected Or How many different post-doctoral training appointments did you have (how many post-docs did you do)? more then 3 Is Selected

Q39 How long was your third (or more) post-doctoral training period?

- 1-3 years (1)
- 3-5 years (2)
- greater than 5 years (3)

Answer If How many different post-doctoral training appointments did you have (how many post-docs did you do)? 1 Is Selected Or How many different post-doctoral training appointments did you have (how many post-docs did you do)? 2 Is Selected Or How

many different post-doctoral training appointments did you have (how many post-docs did you do)? 3 Is Selected Or How many different post-doctoral training appointments did you have (how many post-docs did you do)? more then 3 Is Selected

Q5 Which best describes the size of the laboratory group where you got your first (or only) post-doctoral training?

- 1-5 individuals (1)
- 6-10 individuals (2)
- 11-15 individuals (3)
- 16-20 individuals (4)
- Greater than 20 individuals (5)

Answer If How many different post-doctoral training appointments did you have (how many post-docs did you do)? 2 Is Selected Or How many different post-doctoral training appointments did you have (how many post-docs did you do)? 3 Is Selected Or How many different post-doctoral training appointments did you have (how many post-docs did you do)? more then 3 Is Selected

Q40 Which best describes the size of the laboratory group where you got your second post-doctoral training?

- 1-5 individuals (1)
- 6-10 individuals (2)
- 11-15 individuals (3)
- 16-20 individuals (4)
- Greater than 20 individuals (5)

Answer If How many different post-doctoral training appointment did you have (how many post-docs did you do)? 3 Is Selected Or How many different post-doctoral training appointment did you have (how many post-docs did you do)? more then 3 Is Selected

Q41 What best describes the size of the laboratory group where you got your third or more post-doctoral training?

- 1-5 individuals (1)
- 6-10 individuals (2)
- 11-15 individuals (3)
- 16-20 individuals (4)
- Greater than 20 individuals (5)

Q10 Have you been or are you a member of a professional scientific organization(s)?

- Yes (1)
- No (2)

Answer If Have you been or are you a member of a professional scientific organization(s). Yes Is Selected

Q9 Please check all of the following that apply regarding your time as a member of the professional scientific organization(s):

- Member during undergraduate years (1)
- Member during graduate years (2)
- Member during post-doctorate years (3)
- Member during faculty appointment/professional appointment (4)

Answer If Have you been or are you a member of a professional scientific organization(s). Yes Is Selected

Q11 Is there a significant URM population in the professional society which you are most active?

- Yes (1)
- No (2)

Answer If Have you been or are you a member of a professional scientific organization(s). Yes Is Selected

Q12 Are you or have you been a member of a underrepresented minority (URM) group/committee in a professional organization?

- Yes (1)
- No (2)

Answer If Are you or have you been a member of a underrepresented minority (URM) group/committee in a prof... Yes Is Selected

Q13 During which phase(s) of your career were you a member of a URM group/committee in a professional organization?

- Member during undergraduate years (1)
- Member during graduate years (2)
- Member during post-doctorate years (3)
- Member during faculty appointment/professional appointment (4)

Answer If Have you been or are you a member of a professional scientific organization(s). Yes Is Selected

Q14 Do you attribute your success to participation in a professional society?

- Yes (1)
- No (2)

Q15 Please rate the following activities coming from participation in a professional committee (URM or majority) that contributed to your success.

	Not Helpful (1)	Somewhat Helpful (2)	Helpful (3)	Very Helpful (4)	Not Applicable (5)

Q16 Please rate the following from the most (5) to the least (1) important factors which you feel have led to your career success.

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)

Q18 Do you have a family member you would describe as a role model who is faculty at an institute of higher education?

- Yes (1)
- No (2)

Q19 Do you have a family member you would describe as a role model who is a scientist at something other than an academic institution?

- Yes (1)
- No (2)

Q20 Do you have a family member you would describe as a role model who is not in the field of science?

- Yes (1)
- No (2)

Answer If Do you have a family member whom you would describe as a role model who is faculty at an institu... Yes Is Selected Or Do you have a family member whom you would describe as a role model who is a scientist at someth... Yes Is Selected Or Do you have a family member whom you would describe as a role model who is not in the field of s... Yes Is Selected

Q21 Please list the relationship of the family member(s) whom were your role models.

Q22 Please pick from the list below any areas where you had a prominent professional role model or mentor:

- High School (1)
- Undergraduate School (2)
- Graduate School (3)
- Post doctoral Position (4)
- Faculty Position/Professional position (5)
- Had no role model (6)
- Other: (7) _____

Q23 Please pick from the list below any areas where you had a prominent role model or mentor who is not in the field of science:

- High School (1)
- Undergraduate School (2)
- Graduate School (3)
- Post doctoral Position (4)
- Faculty Position/Professional position (5)
- Had no role model (6)
- Other: (7) _____

Q24 Please check all that apply concerning your publication record during the specified periods:

	lower impact journal (IF	medium impact journal (IF >3	higher impact journal (IF>7) (3)	no publication (4)

Q30 Do you think you were well prepared for your transition to your current position?

- Yes (1)
- No (2)

Q42 Are you a member of any of the following groups:

- American Indian or Alaska Native (1)
- Black or African American (2)
- Hispanic or Latino (3)
- Native Hawaiian or Other Pacific Islander (4)
- Other (5) _____

Q25 Are there any other enablers of your success which you feel were not mentioned in this survey? Please explain them below.