

ABMM 2021 Salary Survey

In February 2021, a survey was sent to 490 ABMM Diplomates who reside in the US, and 206 responded (42% response rate). This response rate was slightly lower than the response rate (46%) for the survey distributed in 2016. General demographics were collected for all respondents (Table 1). Forty-five respondents indicated they are not currently employed full-time and were thus removed from the analysis, leaving 161 respondents for analysis (Table 2). Census regions of the US were used in the survey and the percentage of respondents from those areas are indicated in Figure 1 (and Table 2). Not all survey participants responded to every question. An *ad hoc* committee was assembled to analyze and summarize the data. Where applicable, the non-parametric t-test was used to assess significance of results.

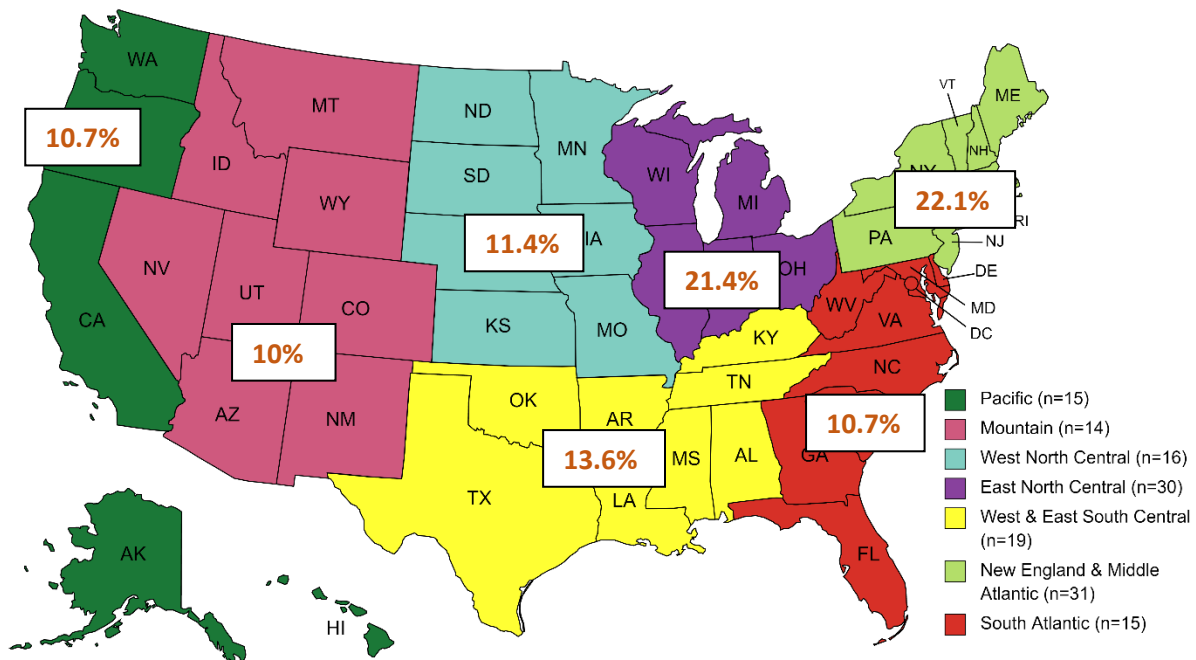


Table 1. General demographics

General Demographic	Number (%) of Respondents
Total	206 (100)
Highest level of education (n=203)	
PhD (DrPH/ScD)	163 (80.3)
MD (DO/MBBS)	18 (8.9)
MD, PhD	20 (9.9)
Other	2 (1)
Gender (n=202)	
Male	104 (51.5)
Female	96 (47.5)
Prefer not to disclose	2 (1)
Race (n=201)	
American Indian or Alaska native	0
Asian	35 (17.4)
Black or African American	4 (2)
Hispanic, Latino or Spanish	10 (5)
Native Hawaiian and Pacific Islander	2 (1)
White	130 (64.7)
Other not listed	7 (3.5)
Biracial/multiracial	3 (1.5)
Prefer not to disclose	10 (5)
Currently employed full-time as a laboratory director (n=206)	
Yes	161 (78.2)
No	45 (21.8)

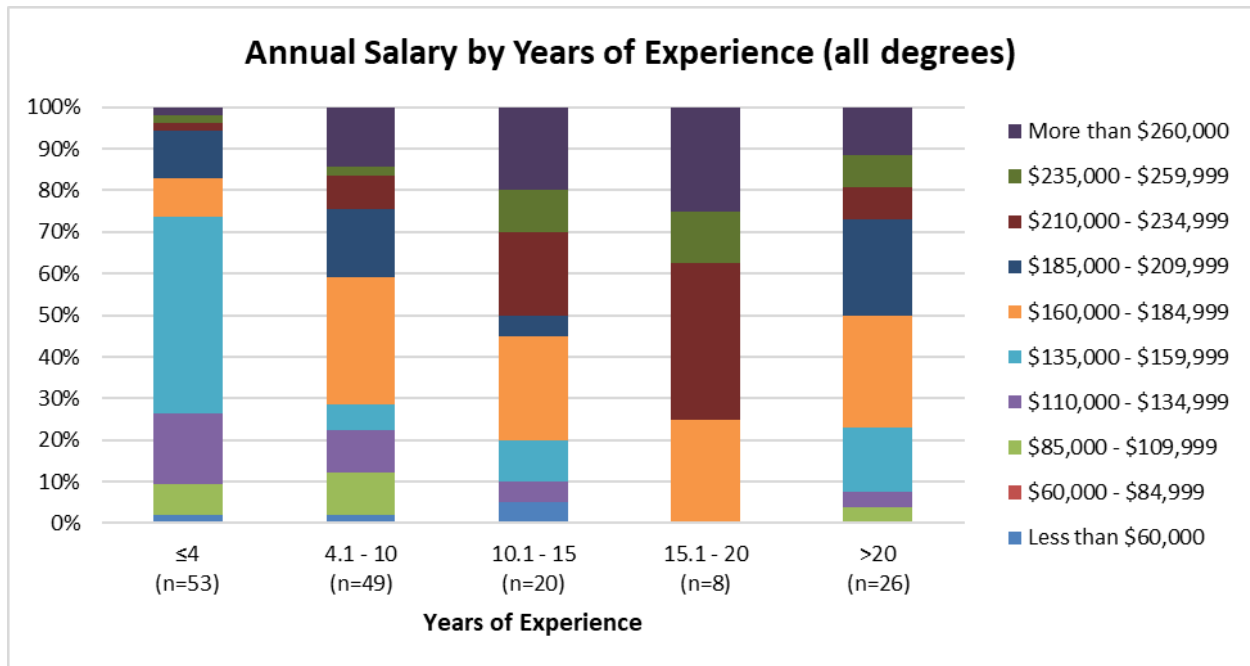
Table 2. Demographics for directors employed full-time

Demographic for Directors Employed Full-Time	Number (%) of Respondents
Total	161 (100)
Years of experience as a laboratory director (n=157)	
≤ 4	54 (34.4)
4.1-10	49 (31.2)
10.1-15	20 (12.7)
15.1-20	8 (5.1)
>20	26 (16.6)
Laboratory Type (n=143)	
University/Academic Medical Center	57 (39.9)
Commercial/Reference	21 (14.7)
Private Community Hospital	9 (6.3)
Large Consolidated Healthcare System	29 (20.3)
City/County/State Hospital	3 (2.1)
VA/Military Hospital	4 (2.8)
Public Health	17 (11.9)
Industry	1 (0.7)
Research	0
Other	2 (1.4)
Salary Source (n=152)	
Private Pathology Group	19 (12.5)
Private/Public Hospital	68 (44.7)
Private/Public University	41 (27)
Healthcare System Medical Group	26 (17.1)
VA/Military	4 (2.6)
Research Grants	6 (4)
Local/State/Federal Entity	25 (16.5)
Laboratory Setting (n=127)	
Suburban	24 (18.9)
Rural	2 (1.6)
Urban	101 (79.5)
Laboratory Location (n=140)	
New England and Mid Atlantic	31 (22.1)
East North Central	30 (21.4)
West North Central	16 (11.4)
South Atlantic	15 (10.7)
East and West South Central	19 (13.6)
Pacific	15 (10.7)
Mountain	14 (10)

Salary Statistics

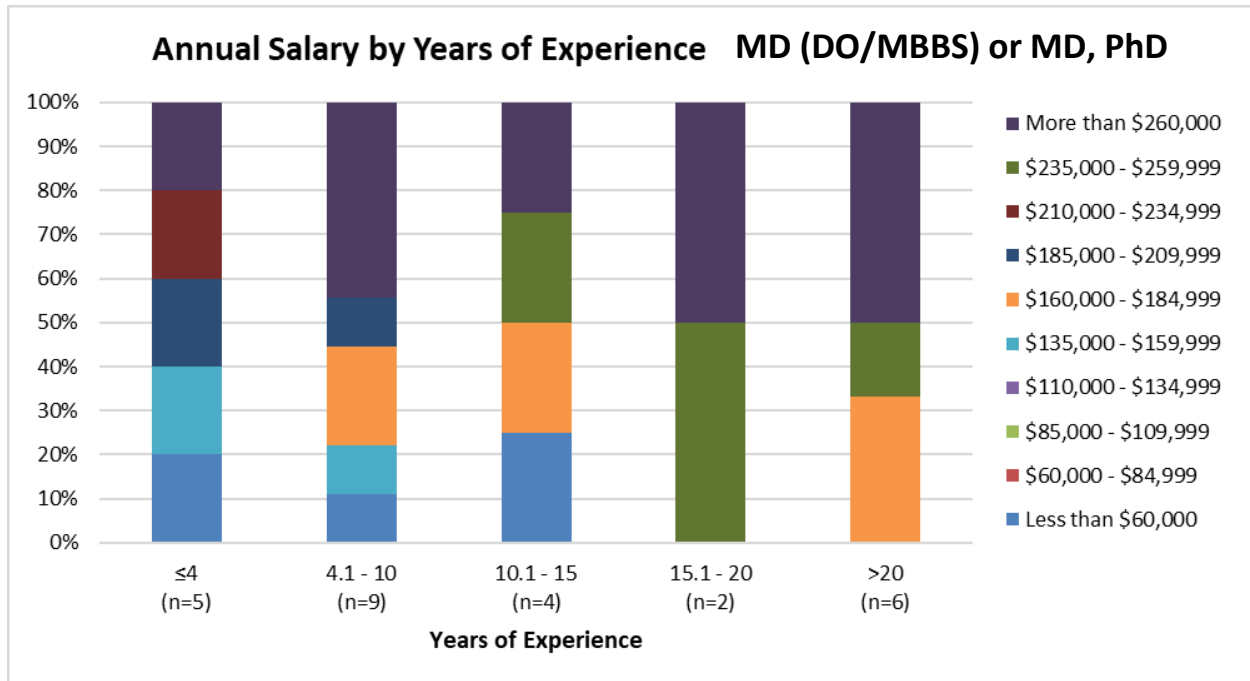
Of the 161 respondents who indicated that they were currently employed full-time as a laboratory director, 156 (96.9%) responded to the salary question. Twenty-six (16.7%) of 156 respondents had an MD (DO/MBBS) degree or MD, PhD degrees and the remainder, 130 (83.3%) had a PhD (DrPH/ScD) degree. Overall salaries broken down by years of experience are shown in Figure 2. In general, clinical microbiology directors with an MD or equivalent degree earned a higher salary than directors with a PhD (DrPH/ScD) degree (Figures 3 and 4).

Figure 2. Annual salary of respondents by years of experience for all degrees



MD (DO/MBBS) and MD, PhD respondents with ≤ 4 and 4.1-10 years of experience had a median salary of \$185,000-\$209,999 (Figure 3). Respondents with 10.1-15 years of experience had a median salary of \$160,000-\$259,999. The median salaries for respondents 15.1-20 and >20 years of experience were \$235,000->\$260,000.

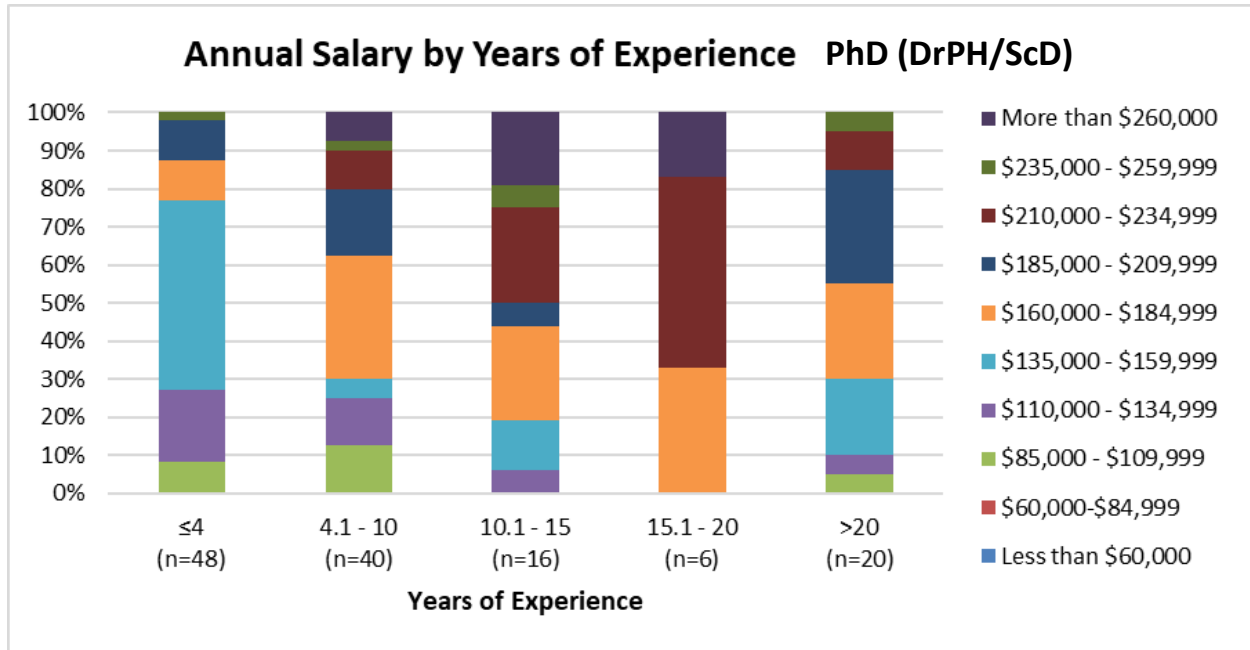
Figure 3. Annual salary by years of experience for respondents with a MD (DO/MBBS) or MD, PhD degree



Due to the small number of respondents with an MD (DO/MBBS) or MD, PhD degrees, a more detailed analysis was carried out only for respondents with a PhD (DrPH/ScD) degree.

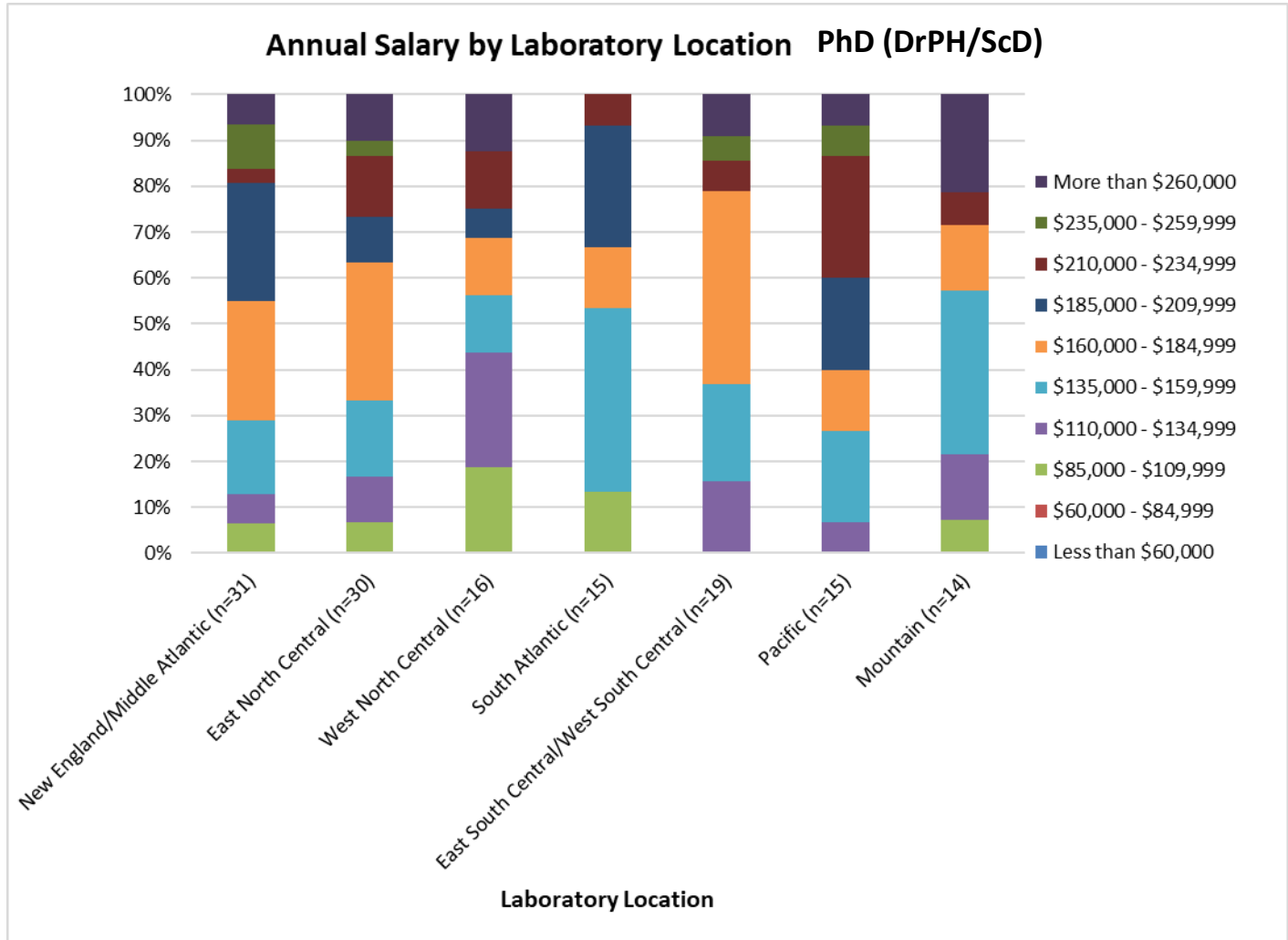
The median salary increased as years of experience increased for directors with a PhD (DrPH/ScD) degree, with the exception of >20 years of experience where the median salary decreased (Figure 4). Respondents with ≤4 years of experience had a median salary of \$135,000-\$159,999, and respondents with 4.1-10 and >20 years of experience had a median salary of \$160,000-\$184,000. The median salaries for respondents with 10.1-15 and 15.1-20 years of experience were \$185,000-\$234,999 and \$210,000-\$234,999, respectively.

Figure 4. Annual salary by years of experience for respondents with a PhD (DrPH/ScD) degree



One hundred forty of 156 (89.7%) respondents with a PhD (DrPH/ScD) degree reported their laboratory location. The median salary was lowest for the West North Central, South Atlantic and Mountain regions (\$135,000-\$159,999) and highest for the Pacific region (\$185,000-\$209,999) (Figure 5). The median salary for the New England/Middle Atlantic, East North Central, East South Central and West South Central regions was \$160,000-\$184,999.

Figure 5. Annual salary by laboratory location for respondents with a PhD (DrPH/ScD) degree



Annual salary for respondents with a PhD (DrPH/ScD) degree by gender and years of experience were analyzed and did not show a statistically significant difference (Figure 6). Median salaries are displayed in Table 3.

Figure 6. Annual salary for males and females by years of experience for respondents with a PhD (DrPH/ScD) degree

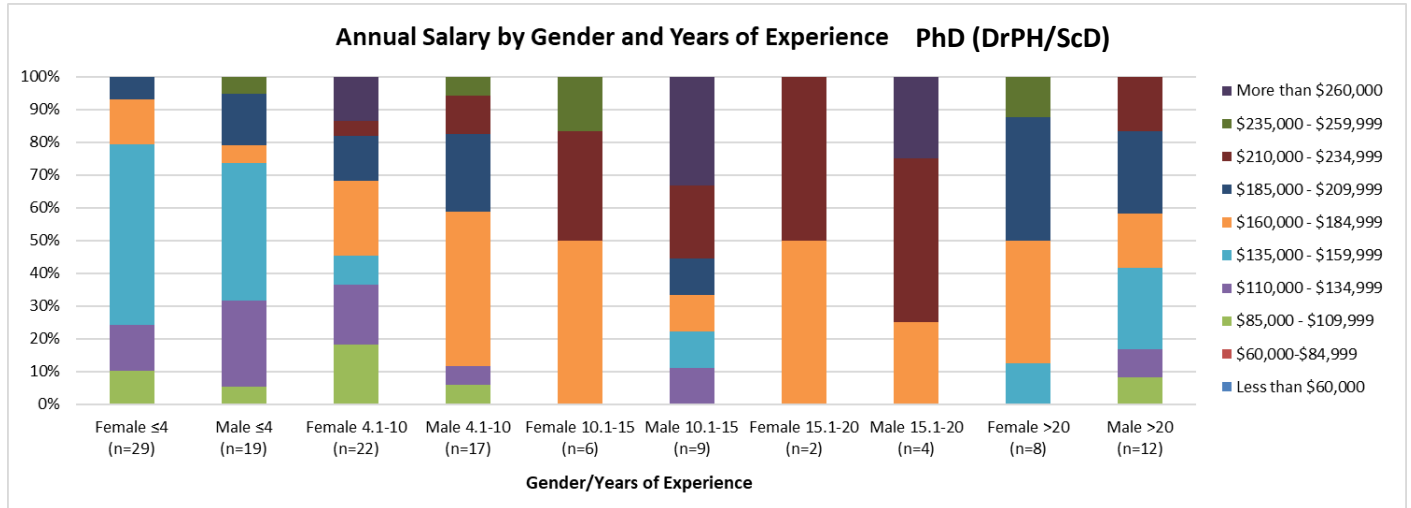


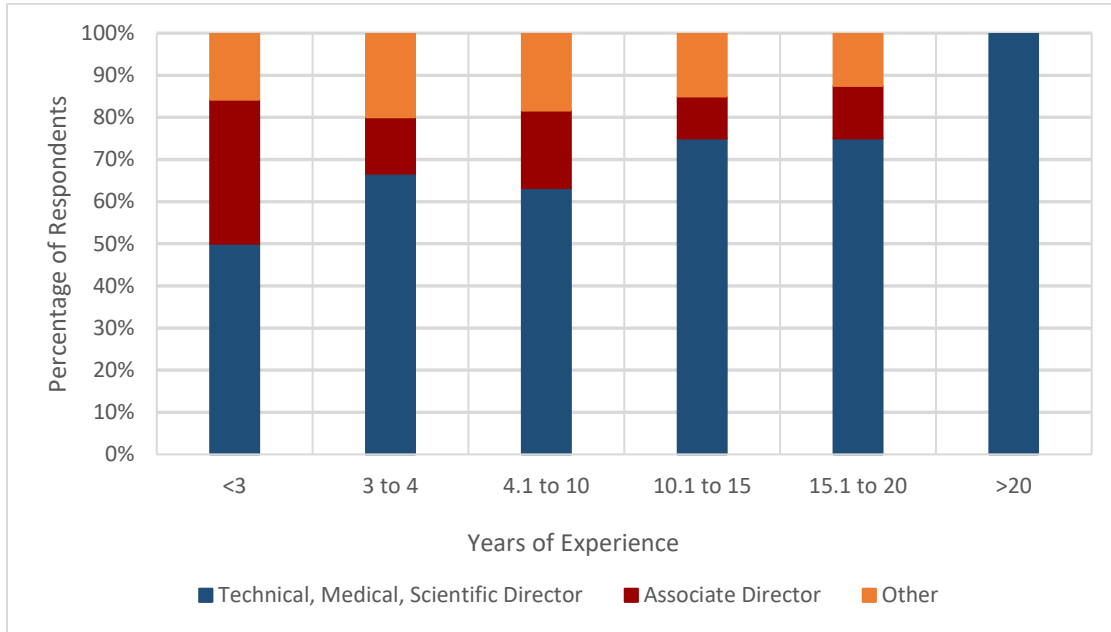
Table 3. Median annual salary for females and males by years of experience for respondents a PhD (DrPH/ScD) degree

Years of Experience	Female	Male
≤4	\$135,000-\$159,999	\$135,000-\$159,999
4.1-10	\$160,000-\$184,999	\$160,000-184,999
10.1-15	\$160,000-\$234,999	\$210,000-\$234,999
15.1-20	\$160,000-\$234,999	\$210,000-\$234,999
>20	\$160,000-\$209,999	\$160,000-\$184,999

Job Title

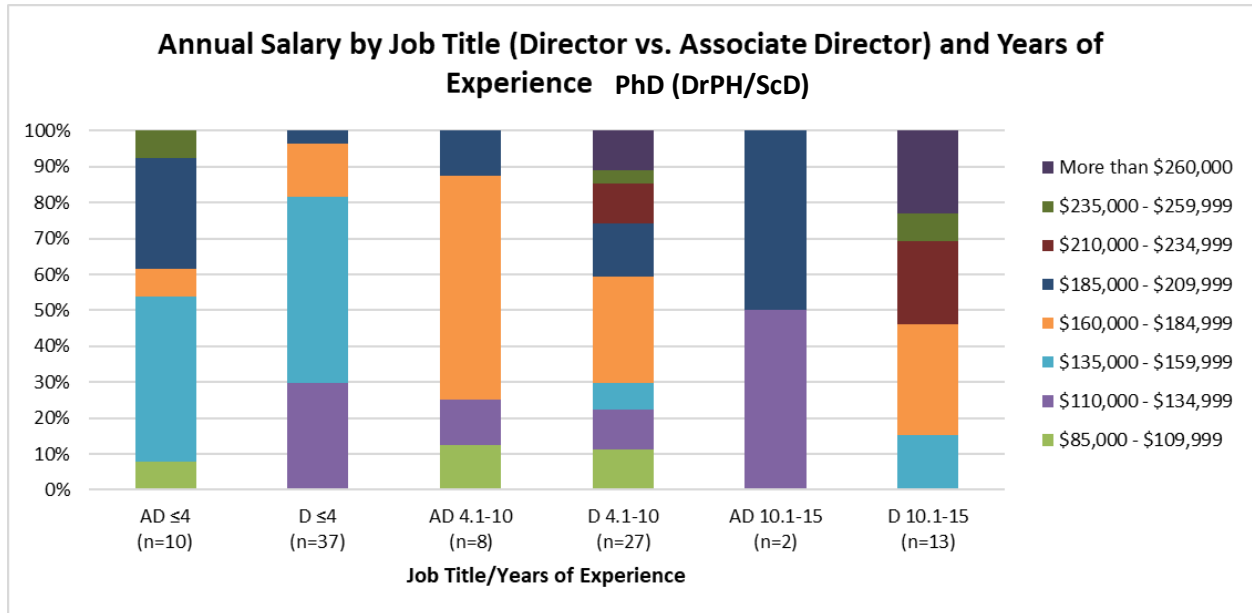
A total of 156 responses were collected for primary job title in the laboratory. There were 107 (68.5%) responders that indicated that technical/medical/scientific director as their job title while only 27 (17.3%) and 22 (14.1%) indicated that they were associate director or other titles, respectively. This response was analyzed based on the years of experience (Figure 7) and respondents were more likely to be technical directors if they had more than 10 years of experience directing a laboratory ($p=0.006$).

Figure 7. Primary job title of respondents by years of experience



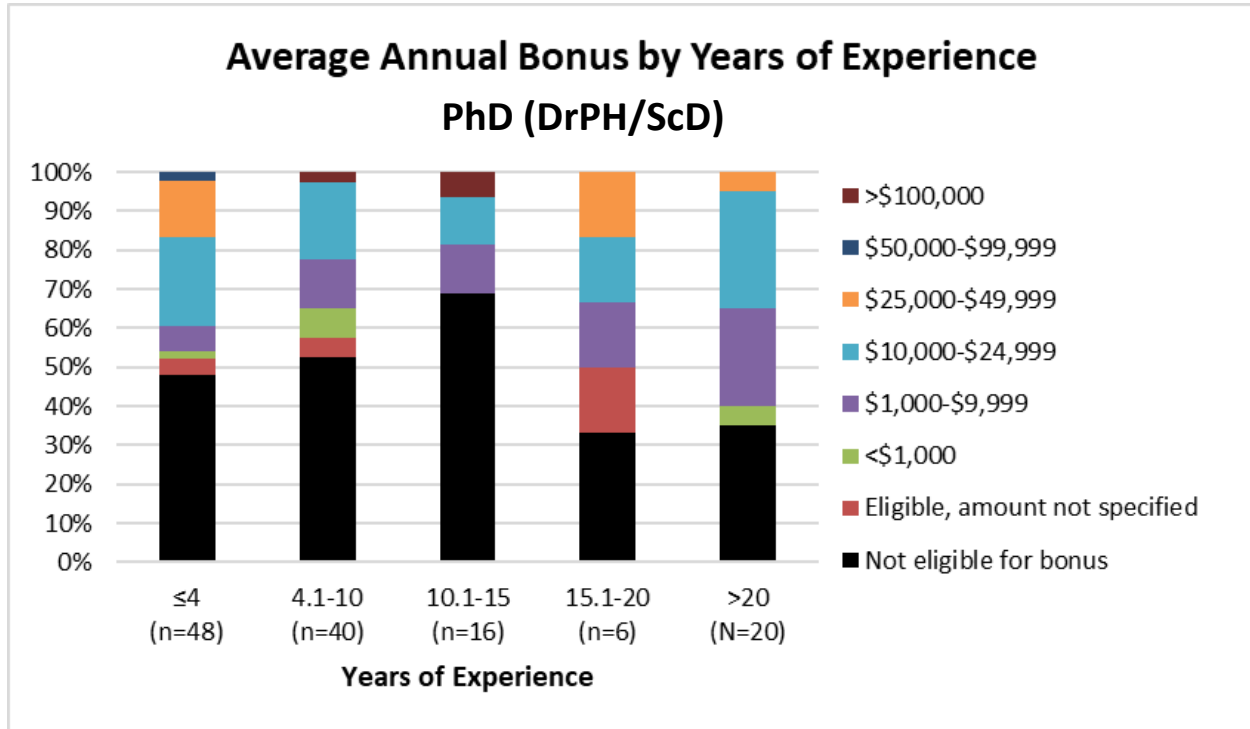
The median salaries for PhD (DrPH/ScD) degree respondents by job title, associate director or director, did not differ for those with ≤4 years of experience (\$135,000-\$159,999) and those with 4.1-10 years of experience (\$160,000-\$184,999). There were two respondents with 10.1-15 years of experience and a title of associate director, so a comparison could not be made to respondents with 10.1-15 years of experience and a title of director. None of the PhD (DrPH/ScD) respondents with >15 years of experience held the title of associate director. (Figure 8)

Figure 8. Annual salary for directors and associate directors by years of experience for respondents with a PhD (DrPH or ScD) degree



Sixty-six (50.8%) of 130 respondents with a PhD (DrPH/ScD) degree were eligible for bonuses. The amount of bonus received did not correlate with years of experience. The median annual bonus for eligible respondents was \$10,000-\$24,999. (Figure 9)

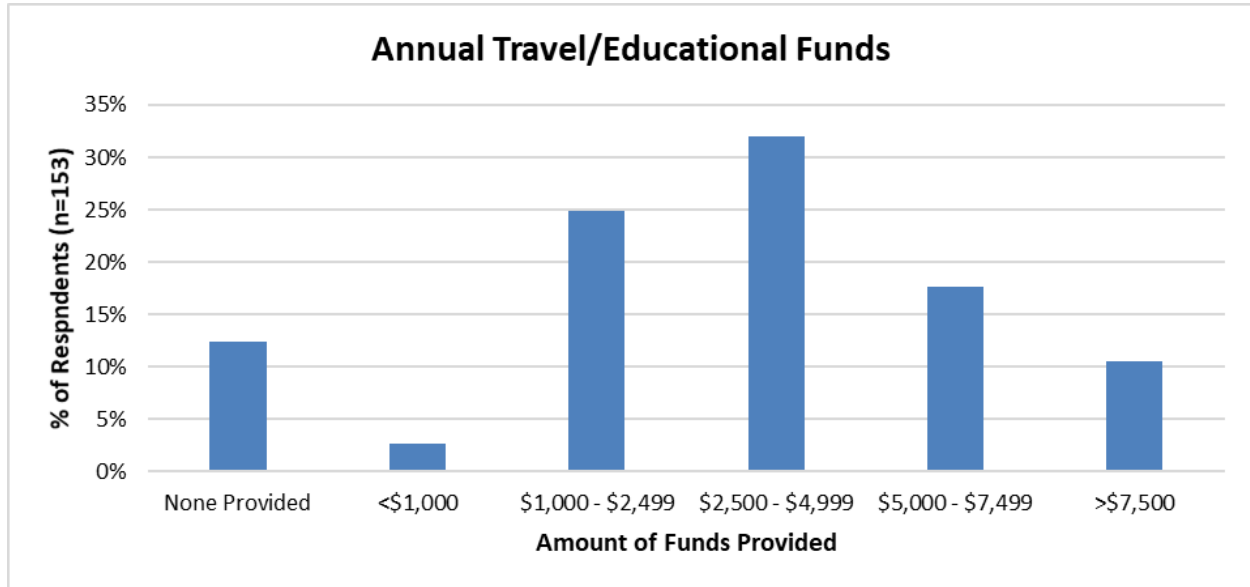
Figure 9. Average annual bonus for PhD (DrPH/ScD) degree respondents by years of experience



Travel/Educational Funds

One hundred thirty-four (87.6%) of 153 respondents were provided travel/educational funds. The median amount of travel/educational funds provided was \$2,500-\$4,999. (Figure 10).

Figure 10. Annual travel and educational funds provided to respondents



Employment Setting

In 2016, 138 (95%) of survey respondents had indicated their employment sector whereas in 2021 143(88%) responded (Figures 11 and 12). The three top areas of employment in both surveys were academic medical centers (n=66, 47.8% in 2016 and n=57, 39.8% in 2021) followed by healthcare systems (n=24, 17.4% in 2016 and n=29, 20.2% in 2021) and reference laboratories (n=19, 13.7% in 2016 and n=21, 14.6% in 2021). The other sectors included public health laboratory (n=16, 11.6% in 2016 and n=17, 11.8% in 2021). Community hospital laboratories and county or state hospital together accounted for 6.5% (n=9) and 8.4% (n=12) in 2016 and 2021, respectively. In both 2016 and 2021 surveys, four respondents indicated the Veterans affairs/military as their employment sector (2.8%). In 2021 there was one respondent each in the following settings: federal government laboratory (n=1) and clinical research laboratory (n=1) and industry (n=1). There was no statistically significant difference between the number of responses in each category between 2016 and 2021.

Figure 11. Respondent employment setting in the 2016 ABMM salary survey

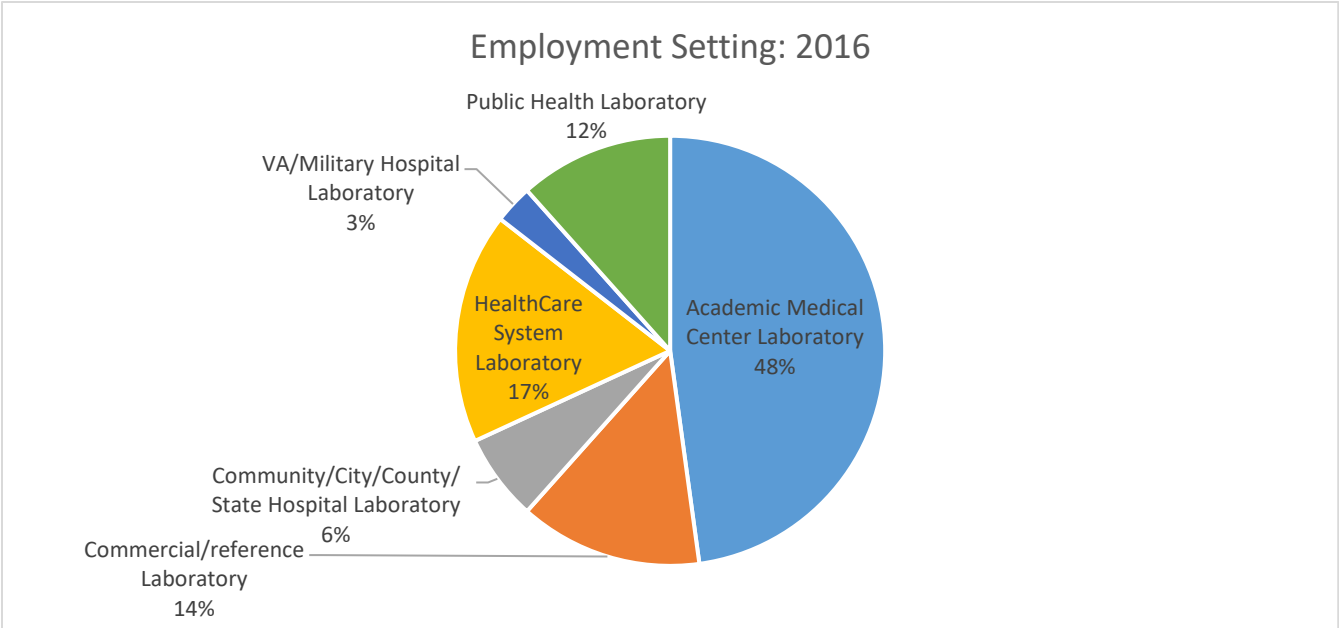
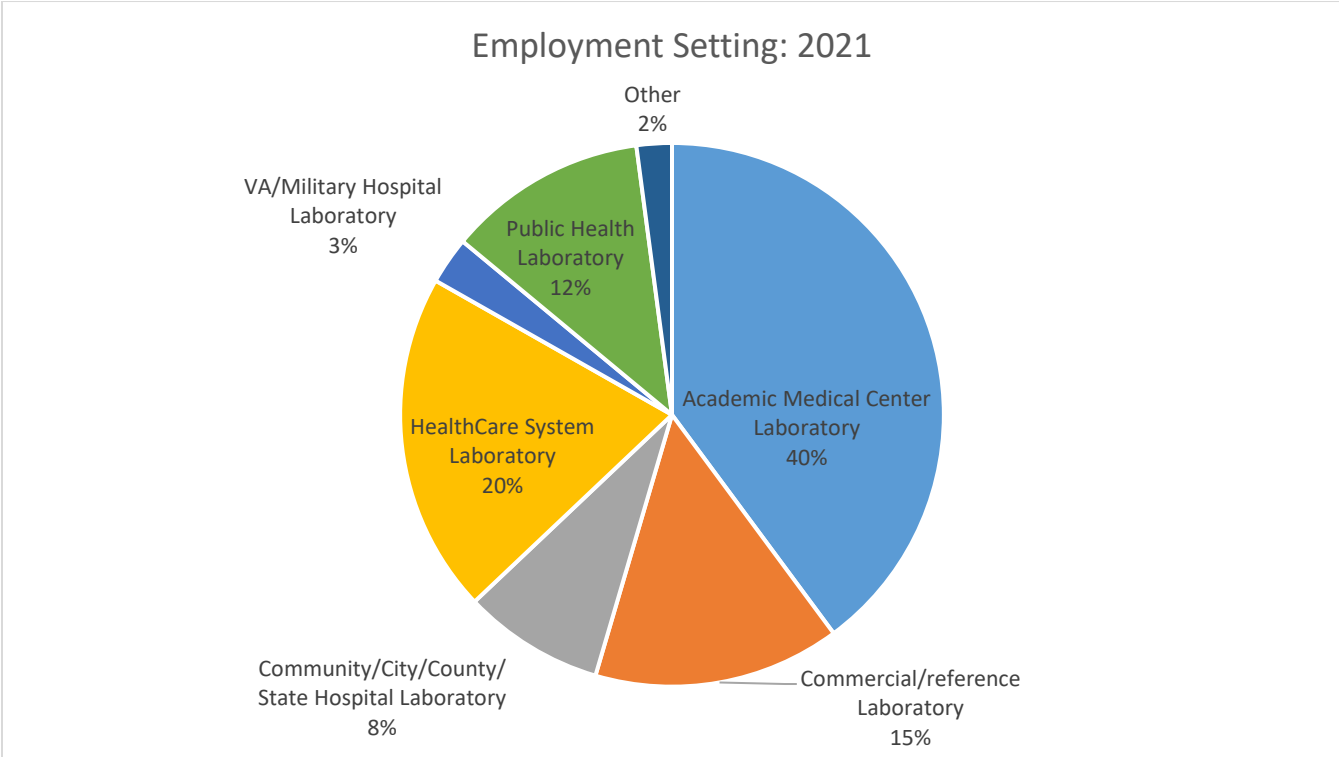


Figure 12. Respondent employment setting in the 2021 ABMM salary survey



In the 2021 salary survey, the location of the laboratory was also indicated by the respondents and of the 128 respondents, 102 (80%) indicated that their laboratory was located in an urban area, 24 (19%) in a suburban location and <2% in the rural area. The two respondents that indicated a rural location of the laboratory were an academic medical center (n=1) and a healthcare system laboratory (n=1). One significant observation in the 2021 survey was that 80% of the laboratories were located in urban areas and only two respondents indicated being in a rural setting.

Supervisors and FTEs

A total of 142 survey respondents provided information on the number of technical full-time employees (FTEs), supervisors/managers and doctoral level directors employed in their microbiology laboratory. Table 4 summarizes the number of supervisors/managers per the number of FTEs. The most frequently reported number of FTEs per laboratory was 25-49 (n=54, 38%) followed by 10-24 FTEs (n=34, 23.8%). The most frequent reported number of supervisors/managers per FTEs were as follows: for <10 (n=5) and 10-24 (n=29) FTEs was 1-2 supervisors/managers, for 25-49 (n=25) and 50-75 FTEs (n=14) was 3-5 supervisors/managers, and for >75 FTEs (n=19) was >5 supervisors/managers.

Table 4. Number of technical full-time employee (FTEs) by the number of supervisors/managers (not doctoral level staff) employed in respondents' laboratories

Number of Supervisors/Managers	< 10 FTEs	10 - 24 FTEs	25 - 49 FTEs	50 - 75 FTEs	>75 FTEs
1 - 2	5	29	22	5	0
3 - 5	1	4	25	14	5
>5	0	1	7	6	19

Table 5 summarizes the number of doctoral level directors per the number of FTEs. The most frequently reported number of doctoral level directors per FTEs were as follows: for <10 FTEs was one (n=3) and two (n=3) directors, for 10-24 (n=23) and 25-49 FTEs (n=24) was one director, for 50-75 FTEs was two directors, and for >75 FTEs (n=11) was >3 directors.

Table 5. Number of technical full-time employee (FTEs) by the number of doctoral level directors employed in respondents' laboratories

Number of Doctoral Directors	< 10 FTEs	10 - 24 FTEs	25 - 49 FTEs	50 - 75 FTEs	>75 FTEs
1	3	23	24	6	4
2	3	9	21	11	4
3	0	0	6	6	5
>3	0	2	3	2	11

ABMM Certified Directors with ≤ 4 Years of Experience

Data for new ABMM clinical microbiology directors, which included those with ≤4 years of laboratory director experience, were analyzed. A total of 54 respondents had ≤4 years of experience, of which 49 (90.7%) reported as PhD degrees, three (5.6%) as MD and PhD degrees, and two (3.7%) as MD (DO/MBBS) degrees.

The geographic distribution of respondents with ≤4 years of laboratory experience are shown in Table 6. The two geographic regions with the highest numbers of respondents were the East North Central (n=11, 20.4%) and New England and Middle Atlantic (n=11, 20.4%). This same group of respondents provided data on the type of laboratory for which they work and is provided in Table 7. Most respondents work in university/academic medical center laboratories (n=23, 42.6%), followed by commercial/reference laboratories (n=8, 14.8%), and public health laboratories (n=7, 13%).

Table 6. US geographic region for ABMM respondents with ≤4 years of work experience

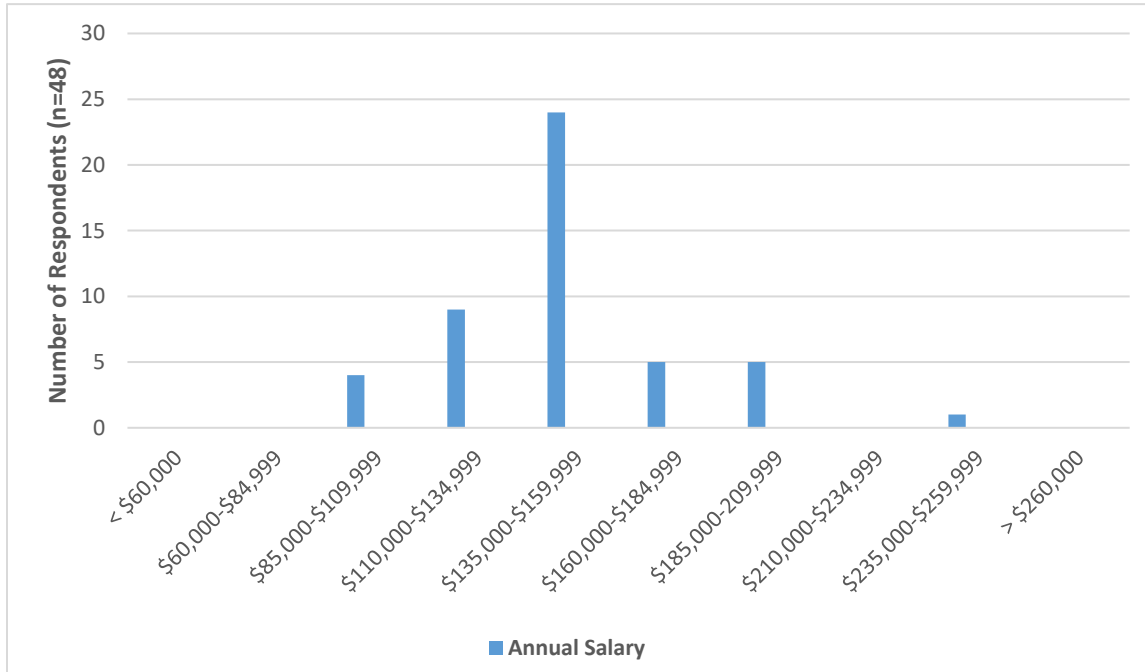
Geographic Region of USA	N
East North Central	11
New England and Middle Atlantic	11
Not Indicated	7
West North Central	7
Mountain	6
South Atlantic	5
East South Central	4
Pacific	3
Total	54

Table 7. Type of laboratory for ABMM respondents with ≤4 years of work experience

Type of Laboratory	N
University/Academic Medical Center	23
Commercial/Reference	8
Public Health	7
Not Indicated	6
Large Consolidated Healthcare System	5
Private Community Hospital	2
City/County/State Hospital	1
Industry	1
VA/Military Hospital	1
Total	54

Finally, the salary survey data was analyzed for those with ≤ 4 years of experience, looking at the PhD (DrPH/ScD) cohort (n=49) since there were only five respondents with an MD degree and ≤ 4 years of experience. The data are shown in Figure 12, with one respondent not indicating their salary. Nearly half of respondents' salary were in the \$135,000-\$159,999 range (n=24, 49%), followed by those in \$110,000-\$134,999 range (n=9, 18.4%), the \$160,000-\$184,999 range (n=5, 10.2%), the \$185,000-\$209,999 range (n=5, 10.2%), the \$85,000-\$109,999 (n=4, 8.2%) and the \$235,000-\$259,999 range (n=1, 2.0%).

Figure 13. Salary range for PhD (DrPH/ScD) ABMM respondents with ≤ 4 years of work experience



Many thanks to...

The ABMM Diplomates who took the time to complete the survey and the *ad hoc* committee who analyzed the results. The *ad hoc* committee members were Yvette McCarter, PhD, D(ABMM), Chair, Gerald Capraro, PhD, D(ABMM), Sanchita Das, MD, D(ABMM), Mark Gonzalez, PhD, D(ABMM), and Morgan Pence, PhD, D(ABMM).