


Eighth Triennial Toxicology Salary Survey

Shayne Cox Gad¹ and Dexter Wayne Sullivan Jr¹

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Abstract

This survey serves as the eighth in a series of toxicology salary surveys conducted at 3-year intervals and beginning in 1988. An electronic survey instrument was distributed to 5800 individuals including members of the Society of Toxicology, American College of Toxicology, and 23 additional professional organizations. Question items inquired about gender, age, degree, years of experience, certifications held, areas of specialization, society membership, employment and income. Overall, 2057 responses were received (response rate 35.5%). The results of the 2012 survey provide insight into the job market and career path for current and future toxicologists.

Keywords

salary, toxicologist, compensation, statistics, toxicologist, compensation, 23-year salary trends, current unemployment rates

This is the eighth in a series of salary surveys conducted at 3-year intervals for toxicologists that began in 1988. In addition to presenting the 2011/2012 results (most of which have already been posted on the Society of Toxicology [SOT], American College of Toxicology [ACT], and American Board of Toxicology [ABT] Web sites), herein we are providing additional data and an analysis of the trends for employment and pay in toxicology over the last 23 years.

The 2012 Triennial Toxicology Salary Survey was conducted as a joint project by the ACT and the SOT. In addition to the 2 parent organizations, 23 others (the Teratology Society, the Association of Government Toxicologists, the Safety Pharmacology Society, Society of Environmental Toxicology and Chemistry, ABT, Roundtable of Toxicological Consultants, and 17 regional chapters of the SOT) supported the effort by providing access to the Survey Monkey-based instrument to their membership.

A total of 5800 survey instruments were distributed electronically in January 2012, with responses going to Survey Monkey. As of April 27, 2012, 2057 responses had been received, for a raw response rate of 35.5%. This is an improvement over the response rates for 1988¹, 1991², 1995³, 1998⁴, 2001⁵, 2004⁶, and 2007 (which were posted electronically but not published). Figure 1 provides a summary of the number of doctoral respondents across the quarter century of surveys.

The demographics of responses are summarized in Table 1 panels A through H and include respondents' gender, age, degree, years of experience, certifications held, and areas of specialization. The survey instrument was an upgraded form of the 2007 survey developed in conjunction with the SOT Career Resource and Development Services, with questions added in an attempt to evaluate periods of unemployment. It should be noted that there continues to be a significant increase in the

number of individuals reporting 6-figure incomes and in those receiving significant sums as bonuses, as is reflected particularly in Tables 2 and 3. In addition, about 25% of respondents received additional professional income outside their primary employer, as shown in Table 4. The survey methodology employed conformed to standard procedures,⁷ though the response rate for this survey remains high for such endeavors.

Salary estimates for purposes of calculation were taken to be the midpoint of the range, for example, for the salary range of \$90 000 to 99 999, a mean value of \$95 000 was used in all calculations. In addition, there were a significant number of incomplete responses that required further estimation by statistical methods. The incomplete responses and the methods used to handle them were

- Ninety-one respondents did not indicate a gender. These results were not included in the breakdowns.
- Thirty-eight respondents indicated a salary >\$250 000 without writing in the actual amount in the area provided. The salary used for calculation was \$250 000. This probably led to a bias toward lower average values.
- Two hundred twenty-four (224) respondents indicated they received bonuses, commission, stock options, or profit sharing without indicating the amount. These data were excluded from consideration.
- A total of 1414 of the respondents (894 men; 510 women; 10 no gender designation) were full-time employed

¹ Gad Consulting Services, Cary, NC, USA

Corresponding Author:

Shayne Cox Gad, 102 Woodtrail Lane, Cary, NC 27518, USA.
Email: scgad@gadconsulting.com

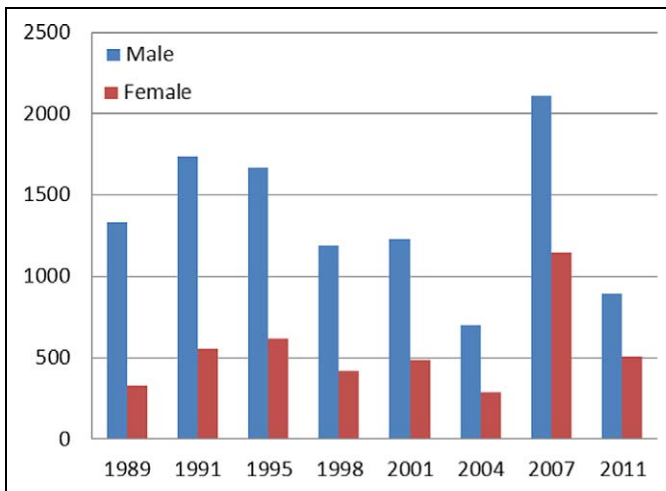


Figure 1. Number of doctoral-level respondents across surveys.

Table 1. Distribution of Respondents by Gender.

	Frequency	Percent
A. Distribution of respondents by gender		
Male	1291	63
Female	758	37
B. Distribution of respondents by age		
<30	38	1.9
30-39	404	19.7
40-49	569	27.8
50-59	662	32.3
60-69	336	16.4
>70	40	2.0
C. Highest degree obtained		
No degree	2	0.1
Associates	0	0.0
Bachelors	87	4.2
Masters	239	11.7
Doctoral	1720	84.0
D. Years since completion of highest degree		
0-1	31	1.50
1-3	58	2.90
3-5	96	4.70
5-9	244	12.00
9-19	655	32.20
19-29	550	27.00
29-39	337	16.60
>39	63	3.10
E. Field of highest degree		
Biochemistry	126	6.20
Biomedical systems	16	0.80
Chemistry	32	1.60
Genetics	26	1.30
Human health medical	19	0.90
Molecular engineering	2	0.10
Pathology	177	8.70
Pharmacology	193	9.50
Physiology/biology/zoology	178	8.80
Public health	36	1.80
Toxicology	896	44.20

(continued)

Table 1. (continued)

	Frequency	Percent
Veterinary medicine	94	4.60
Other	232	11.40
F. Years of direct experience in toxicology		
0-1	49	2.40
1-3	68	3.40
3-5	128	6.30
5-9	277	13.70
9-19	657	32.40
19-29	514	25.40
29-39	291	14.40
>39	42	2.10
G. Certifications held		
None	792	38.50
ABVT	10	0.50
ACLAM	7	0.30
ACVP	105	5.20
ATS	86	4.20
CEP	1	0.00
CHES	0	0.00
CIH	10	0.50
DABT	908	44.70
DABVT	18	0.90
DACVP	100	4.90
ERT	54	2.70
FAACT	3	0.10
FACFE	5	0.20
FACMT	1	0.00
FCP	1	0.00
FIBiol	5	0.20
FRC path	12	0.60
MRC path	5	0.20
RPh	22	1.10
Other	187	9.20
H. Current area of specialization		
General toxicology	333	16.50
Aquatic toxicology	28	1.40
Biotechnology	38	1.90
Carcinogenesis	31	1.50
Cardiovascular toxicology	18	0.90
Chemistry	4	0.20
Clinical and translational toxicology	17	0.80
Environmental/ecological toxicology	56	2.80
Food and ingredient toxicology	17	0.80
Genomics	15	0.70
Inhalation	37	1.80
Mechanistic toxicology	97	4.80
Medical devices	32	1.60
Molecular toxicology	55	2.70
Mutagenesis	9	0.40
Nanotoxicology	23	1.10
Occupational safety and health	38	1.90
Ocular toxicology	13	0.60
Pathology	169	8.40
Regulatory toxicology	417	20.60
Reproductive/developmental toxicology	79	3.90
Risk assessment	258	12.80
Safety pharmacology	69	3.40
Stem cells	2	0.10

(continued)

Table 1. (continued)

	Frequency	Percent
Other	168	8.30

Abbreviations: ABVT, American Board of Veterinary Toxicology; ACLAM, American College of Laboratory Animal Medicine; ACVP, American College of Veterinary Pathologists; ATS, Academy of Toxicological Sciences; CEP, Certified Environmental Professional; CHES, Certified Health Education Specialist; CIH, Certified Industrial Hygienist; DABT, Diplomate, American Board of Toxicology; DABVT, Diplomate, American Board of Veterinary Toxicologists; DACVP, Diplomate, American College of Veterinary Pathologists; ERT, European Registered Toxicologist; FAACT, Fellow of the American Academy of Clinical Toxicology; FACFE, Fellow of the American College of Forensic Examiners; FACMT, Fellow of the American College of Medical Toxicology; FCP, Fellow of the American College of Clinical Pharmacology; FIBiol, Fellow of the Institute of Biology; FRC Path, Fellow of the Royal College of Pathologists; MRC Path, Member, Royal College of Pathologists; RPh, Registered Pharmacist

Table 2. Primary Job Base Salary.^a

Salary in USD, \$	Frequency	Percent
<19 999	22	1.10
20 000-29 999	11	0.50
30 000-\$39 999	23	1.10
40 000-49 999	13	0.60
50 000-59 999	46	2.30
60 000-69 999	73	3.60
70 000-79 999	70	3.50
80 000-89 999	120	6.00
90 000-99 999	175	8.70
100 000-109 999	154	7.60
110 000-119 999	156	7.70
120 000-149 999	417	20.70
150 000-199 999	454	22.50
200 000-249 999	189	9.40
>250 000	91	4.50

^a Excludes fees, overtime, bonuses, commission, and secondary employment.

Table 3. Received Bonus, Commission, Stock Gift, or Profit Sharing.

Received	Frequency	Percent
Yes	1190	59.10
No	822	40.90

Table 4. Additional Professional Income Outside Primary Employer.

Salary in USD, \$	Frequency	Percent
None	1517	75.40
<499	133	6.60
500-4999	158	7.90
5000-9999	61	3.00
10 000-14 999	39	1.90
15 000-19 999	34	1.70
>20 000	70	3.50

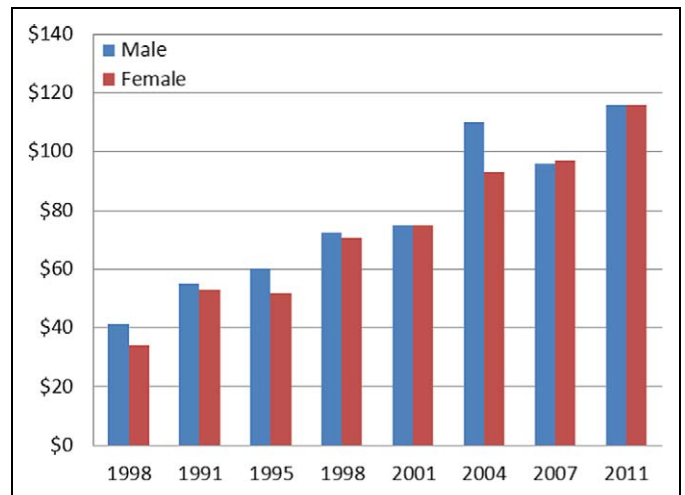


Figure 2. US doctoral annual salaries for respondents with 1 to 3 years of experience post-terminal degree. Values are in 1000s of US dollars.

doctoral degree holders, in the United States. Table 5 presents the mean salaries (± 1 standard deviation [SD]) for these individuals sorted by years of experience after receipt of their degrees, gender, and field of employment. Salaries are in thousands of US dollars per year, with necessary conversions having been made for other currencies. Figure 2 provides an across-survey analysis of doctoral salaries for respondents with 1 to 3 years of experience post-terminal degree.

The mean salaries (± 1 SD) for the 175 master’s level respondents from the United States are presented in Table 6. Likewise, the results from the 66 bachelor’s level respondents are presented in Table 7. The remaining respondents were not employed full time during the reporting period and are characterized as follows:

1. Graduate and postdoctoral students (135)
2. Working part time (76)
3. Unemployed (30)
4. Retired (41)
5. Other (30)

There were no associate degree respondents.

Table 8 presents a summary of data on those 682 (48.2% of all employed) doctoral recipients who received bonuses in addition to salary. Tables 9 to 11 present summaries of the geographic distributions of the survey respondents by country, Canadian province, and American state, respectively. Table 12 summarizes the major professional society memberships of the respondents. Many respondents belong to more than one society. Table 13 provides a summary of the influence of certification on doctoral level salaries.

Table 14 presents a summary of base salaries for doctoral degrees. Table 15 provides an overview of employment with the 2 largest categories, industry and academia, broken down in

Table 5. US Doctoral Annual Salaries.^a

Employer	Sex	Years experience post-terminal degree									
		0-1	1-3	3-5	5-9	9-19	19-29	29-39	>39		
Academic	F	35 ± NC (1)	40 ± 15 (2)	105 ± 0 (2)	76 ± 23 (10)	86 ± 26 (26)	118 ± 35 (10)	134 ± 37 (14)	134 ± 37 (14)	263 ± NC (1)	
	M	50 ± 5 (2)	75 ± NC (1)	95 ± 21 (5)	82 ± 20 (13)	109 ± 43 (31)	139 ± 69 (37)	157 ± 41 (44)	172 ± 45 (17)		
Development or sales	F	-	-	-	-	175 ± NC (1)	-	-	-	-	
	M	-	-	-	-	135 ± NC (1)	-	-	-	-	
Consulting (with a firm)	F	85 ± NC (1)	75 ± 0 (2)	80 ± 5 (2)	98 ± 29 (4)	112 ± 28 (11)	172 ± 46 (13)	175 ± 0 (2)	175 ± 0 (2)	250 ± NC (1)	
	M	-	-	80 ± 15 (2)	75 ± 0 (2)	131 ± 43 (10)	174 ± 34 (12)	201 ± 92 (17)	201 ± 92 (17)	250 ± NC (1)	
Consulting (independent)	F	-	-	-	-	115 ± NC (1)	150 ± 72 (8)	140 ± 35 (2)	140 ± 35 (2)	91 ± 43 (4)	
	M	-	-	175 ± NC (1)	-	143 ± 37 (4)	241 ± 145 (14)	200 ± 207 (33)	200 ± 207 (33)	162 ± 76 (13)	
Contract laboratory	F	-	175 ± NC (1)	105 ± 25 (7)	125 ± 41 (10)	139 ± 33 (17)	155 ± 48 (8)	162 ± 19 (3)	162 ± 19 (3)	225 ± NC (1)	
	M	-	135 ± 40 (2)	80 ± 5 (2)	178 ± 66 (3)	125 ± 32 (16)	173 ± 38 (22)	169 ± 14 (7)	169 ± 14 (7)	178 ± 32 (4)	
Federal government (including military)	F	105 ± NC (1)	-	88 ± 5 (4)	95 ± 14 (20)	111 ± 21 (32)	132 ± 18 (21)	149 ± 42 (7)	149 ± 42 (7)	225 ± NC (1)	
	M	75 ± NC (1)	78 ± 12 (3)	110 ± 13 (4)	97 ± 17 (10)	117 ± 20 (29)	132 ± 25 (40)	154 ± 3 4 (31)	154 ± 3 4 (31)	149 ± 36 (10)	
State or local government	F	-	-	-	62 ± 5 (3)	83 ± 4 (4)	98 ± 8 (4)	65 ± NC (1)	65 ± NC (1)	-	
	M	-	-	-	70 ± 15 (2)	88 ± 4 (4)	95 ± 14 (4)	95 ± 10 (6)	95 ± 10 (6)	-	
Industry	F	130 ± 45 (2)	116 ± 39 (14)	114 ± 29 (14)	124 ± 35 (40)	161 ± 34 (85)	183 ± 51 (52)	187 ± 38 (12)	187 ± 38 (12)	-	
	M	95 ± 0 (2)	116 ± 28 (8)	117 ± 27 (21)	139 ± 41 (48)	162 ± 40 (157)	188 ± 40 (114)	211 ± 70 (56)	211 ± 70 (56)	-	
Nonprofit research institution	F	105 ± 30 (2)	-	65 ± 0 (2)	95 ± NC (1)	121 ± 33 (10)	128 ± 31 (4)	180 ± 45 (2)	180 ± 45 (2)	-	
	M	-	35 ± NC (1)	175 ± NC (1)	-	138 ± 44 (7)	200 ± 25 (6)	222 ± 43 (5)	222 ± 43 (5)	200 ± 25 (2)	
Other	F	-	-	-	-	151 ± 51 (6)	-	-	-	-	
	M	-	-	-	-	135 ± NC (1)	200 ± 25 (2)	155 ± 20 (2)	155 ± 20 (2)	-	

Abbreviation: NC, not calculable.

^a All numbers are mean ± standard deviation (number of respondents); values in 1000s of US dollars. Highest mean salaries by years of experience are in boldface.

Table 6. US Masters Annual Salaries.^a

Employer	Sex	Years experience post-terminal degree									
		0-1	1-3	3-5	5-9	9-19	19-29	29-39	>39		
Academic	F	-	-	45 ± NC (1)	-	85 ± NC (1)	-	-	-	-	
	M	-	-	-	-	-	-	-	-	-	
Development or sales	F	-	-	-	-	-	-	-	-	-	
	M	-	-	-	-	-	-	-	-	-	
Consulting (with a firm)	F	55 ± NC (1)	55 ± NC (1)	-	75 ± 10 (2)	76 ± 33 (4)	120 ± 40 (6)	105 ± NC (1)	-	-	
	M	65 ± NC (1)	65 ± NC (1)	65 ± NC (1)	-	85 ± 6 (6)	165 ± 60 (2)	135 ± 0 (2)	-	-	
Consulting (independent)	F	-	-	-	-	-	155 ± 70 (2)	78 ± 58 (2)	-	-	
	M	-	-	-	-	-	-	85 ± NC (1)	135 ± NC (1)	-	
Contract laboratory	F	-	135 ± NC (1)	65 ± NC (1)	65 ± NC (1)	88 ± 29 (4)	227 ± 122 (2)	-	-	-	
	M	-	-	95 ± NC (1)	70 ± 15 (2)	100 ± 5 (2)	145 ± 30 (2)	-	-	-	
Federal government (including military)	F	-	55 ± NC (1)	55 ± NC (1)	78 ± 12 (3)	-	110 ± 19 (6)	-	-	-	
	M	-	-	-	-	-	-	-	-	-	
State or local government	F	-	-	-	55 ± NC (1)	60 ± 5 (2)	65 ± 0 (2)	-	-	-	
	M	95 ± NC (1)	-	-	-	65 ± NC (1)	80 ± 15 (2)	-	-	-	
Industry	F	-	82 ± 9 (3)	110 ± 13 (4)	94 ± 20 (7)	109 ± 20 (12)	135 ± 34 (14)	65 ± NC (1)	-	-	
	M	95 ± 0 (2)	85 ± NC (1)	175 ± NC (1)	113 ± 40 (4)	118 ± 29 (16)	183 ± 43 (6)	149 ± 42 (16)	-	-	
Nonprofit research institution	F	-	45 ± NC (1)	-	-	45 ± NC (1)	-	115 ± NC (1)	95 ± NC (1)	-	
	M	-	-	-	-	-	100 ± 35 (2)	-	-	-	
Other	F	-	-	-	-	-	75 ± NC (1)	-	-	-	
	M	-	-	-	-	135 ± NC (1)	-	-	135 ± NC (1)	-	

Abbreviation: NC, not calculable.

^a All numbers are mean ± standard deviation (no. of respondents); values in 1000s of US dollars.

Table 7. US Bachelors' Annual Salaries.^a

Employer	Sex	Years experience post-terminal degree											
		0-1	1-3	3-5	5-9	9-19	19-29	29-39	>39				
Academic	F	-	-	-	-	-	-	-	-	-	-	-	-
	M	-	35 ± NC (1)	-	-	-	-	-	-	-	-	-	-
Development or sales	F	-	-	-	-	-	-	-	-	-	-	-	-
	M	-	-	-	55 ± NC (1)	-	-	-	-	-	-	-	-
Consulting (with a firm)	F	-	35 ± NC (1)	-	-	-	85 ± NC (1)	-	115 ± NC (1)	-	-	-	-
	M	-	-	-	-	-	175 ± NC (1)	-	-	-	-	-	-
Consulting (independent)	F	-	-	-	-	-	-	-	-	-	-	-	-
	M	-	-	-	-	-	-	-	175 ± NC (1)	-	-	-	-
Contract laboratory	F	-	-	-	55 ± 0 (2)	-	105 ± 30 (2)	-	-	-	-	-	-
	M	-	-	-	55 ± NC (1)	-	112 ± 21 (3)	-	119 ± 34 (5)	-	-	-	-
Federal government (including military)	F	-	-	-	35 ± NC (1)	-	135 ± NC (1)	-	-	-	-	-	-
	M	-	-	-	-	-	-	-	120 ± 15 (2)	-	-	-	-
State or local government	F	-	55 ± NC (1)	-	-	-	-	-	-	-	-	-	-
	M	-	65 ± NC (1)	-	-	-	-	-	-	-	-	-	-
Industry	F	-	-	55 ± NC (1)	70 ± 5 (4)	93 ± 23 (4)	88 ± 5 (3)	110 ± 5 (2)	-	-	-	-	-
	M	-	35 ± NC (1)	-	72 ± 5 (3)	65 ± 0 (2)	120 ± 32 (6)	130 ± 9 (4)	105 ± NC (1)	-	-	-	-
Nonprofit research institution	F	-	-	-	-	-	-	-	-	-	-	-	-
	M	-	-	-	-	-	-	-	-	-	-	-	-
Other	F	-	-	-	-	-	-	-	-	-	-	-	-
	M	-	-	-	-	-	-	-	-	-	-	-	-

Abbreviation: NC, not calculable.

^a All numbers are mean ± standard deviation (number of respondents); values in 1000s of US dollars.

Table 8. US Doctoral Bonus Amounts.^a

Employment Category	Sex	Years experience post-terminal degree									
		0-1	1-3	3-5	5-9	9-19	19-29	29-39	>39		
Academic	F	-	-	10 ± NC (1)	2 ± NC (1)	4 ± 4 (3)	6 ± 4 (2)	6 ± NC (1)	-	-	
	M	-	-	-	16 ± NC (1)	15 ± 7 (3)	12 ± 10 (3)	9 ± 10 (3)	0 ± NC (1)	-	
Development or sales	F	-	-	-	-	0 ± NC (1)	-	-	-	-	
	M	-	-	-	-	-	-	-	-	-	
Consulting (with a firm)	F	-	0 ± 0 (2)	2 ± NC (1)	8 ± 5 (3)	48 ± 31 (3)	83 ± 120 (9)	10 ± NC (1)	-	-	
	M	-	-	3 ± NC (1)	6 ± 5 (2)	24 ± 13 (7)	19 ± 19 (9)	63 ± 88 (13)	200 ± NC (1)	-	
Consulting (independent)	F	-	-	-	-	-	-	-	-	-	
	M	-	-	-	-	-	-	-	-	-	
Contract laboratory	F	-	-	7 ± 5 (4)	13 ± 10 (5)	8 ± 9 (12)	200 ± NC (1)	17 ± 1 (2)	13 ± NC (1)	-	
	M	-	7 ± 3 (2)	-	75 ± NC (1)	18 ± 10 (6)	11 ± 8 (5)	4 ± 3 (3)	13 ± NC (1)	-	
Federal government (including military)	F	-	-	1 ± NC (1)	1 ± 0 (5)	4 ± 4 (8)	1 ± 0 (3)	5 ± NC (1)	9 ± 7 (4)	-	
	M	-	-	15 ± NC (1)	3 ± 1 (3)	2 ± 1 (10)	2 ± 1 (5)	3 ± 3 (11)	2 ± NC (1)	-	
State or local government	F	-	-	-	-	-	-	-	-	-	
	M	-	-	-	-	-	-	-	-	-	
Industry	F	50 ± NC (1)	21 ± 20 (8)	14 ± 9 (10)	21 ± 23 (28)	35 ± 25 (67)	67 ± 61 (43)	50 ± 46 (11)	-	-	
	M	12 ± NC (1)	9 ± 5 (6)	19 ± 21 (13)	27 ± 20 (31)	42 ± 40 (115)	58 ± 61 (89)	78 ± 57 (43)	-	-	
Nonprofit research institution	F	-	-	-	-	13 ± 9 (4)	-	25 ± NC (1)	-	-	
	M	-	1 ± NC (1)	-	-	5 ± NC (1)	20 ± 5 (5)	45 ± 30 (2)	4 ± 4 (2)	-	
Other	F	-	-	-	-	5 ± 3 (4)	-	-	-	-	
	M	-	-	-	-	-	35 ± 10 (2)	15 ± NC (1)	-	-	

Abbreviation: NC, not calculable.

^a All numbers are mean ± standard deviation (number of respondents); values in 1000s of US dollars.

Table 9. Distribution of Respondents by Country.

Country	Frequency	Percent	Country	Frequency	Percent
Afghanistan	1	0.10	Netherlands	8	0.50
Australia	4	0.20	New Zealand	2	0.10
Austria	1	0.10	Nigeria	2	0.10
Belgium	9	0.50	Norway	3	0.20
Bulgaria	1	0.10	Pakistan	1	0.10
Canada	48	2.90	Panama	1	0.10
China	7	0.40	Singapore	2	0.10
Denmark	8	0.50	South Africa	1	0.10
Finland	1	0.10	Spain	1	0.10
France	20	1.20	Sweden	7	0.40
Germany	13	0.80	Switzerland	22	1.30
India	19	1.20	Thailand	1	0.10
Italy	8	0.50	United Kingdom	31	1.90
Japan	25	1.50	United States	1390	84.50
South Korea	2	0.10	Uruguay	1	0.10
Mexico	4	0.20	No response	413	25.10

Table 10. Distribution of Employed Canadian Respondents by Province.

Province	Frequency	Percent
Alberta	4	6.1
British Columbia	4	6.1
Manitoba	2	3.1
Ontario	31	47.7
PEI	1	1.5
Quebec	21	32.3
Saskatchewan	2	3.1

Table 11. Distribution of Employed US Respondents by State.

State	Frequency	Percent	State	Frequency	Percent
Alabama	3	0.19	Montana	1	0.06
Alaska	0	0.00	Nebraska	5	0.31
Arizona	16	1.00	Nevada	7	0.44
Arkansas	19	1.18	New Hampshire	1	0.06
California	169	10.54	New Jersey	167	10.41
Colorado	14	0.87	New Mexico	10	0.62
Connecticut	57	3.55	New York	47	2.93
Delaware	13	0.81	North Carolina	168	10.47
District of Columbia	39	2.43	North Dakota	1	0.06
Florida	14	0.87	Ohio	83	5.17
Georgia	25	1.56	Oklahoma	3	1.87
Idaho	0	0.00	Oregon	11	0.69
Illinois	48	2.99	Pennsylvania	70	4.36
Indiana	45	2.81	Rhode Island	5	0.31
Iowa	8	0.50	South Carolina	4	0.25
Kansas	8	0.50	Tennessee	13	0.81
Kentucky	10	0.62	Texas	55	3.43
Louisiana	8	0.50	Utah	10	0.62
Maine	6	0.37	Vermont	0	0.00
Maryland	104	6.48	Virginia	49	3.05
Massachusetts	92	5.74	Washington	43	2.68
Michigan	47	2.93	West Virginia	7	0.44
Minnesota	32	2.00	Wisconsin	47	2.93
Mississippi	5	0.31	Wyoming	1	0.06
Missouri	14	0.87			

Table 12. 2012 Society Membership of Respondents.

Society	Doctoral	Masters	Bachelors	No degree
AACR	149	1	0	
ACS	184	13	2	
ACT	379	53	25	1
ASPE	118	1	0	
EMS	84	7	1	
ISSX	99	7	2	
SPS	86	11	17	
SRA	147	22	4	1
SOT (national)	1399	156	46	1
SOT (regional but not national)	25	13	6	1
SETAC	164	43	10	
STP	235	15	3	
Teratology	99	11	4	1
Other	714	88	21	1

Table 13. Board Certification and Doctoral Salaries.^a

Certification status	Sex	Years experience post-terminal degree							
		0-1	1-3	3-5	5-9	9-19	19-29	29-39	>39
Certified	F	127 ± 70 (5)	122 ± 41 (7)	115 ± 32 (29)	128 ± 36 (50)	150 ± 44 (137)	159 ± 45 (77)	165 ± 50 (25)	225 ± NC (1)
	M	171 ± 62 (6)	127 ± 36 (11)	128 ± 39 (26)	132 ± 46 (63)	155 ± 47 (225)	173 ± 50 (209)	172 ± 57 (138)	163 ± 59 (23)
Not certified	F	82 ± 35 (15)	91 ± 26 (21)	86 ± 24 (26)	90 ± 24 (45)	117 ± 44 (84)	144 ± 46 (46)	173 ± 37 (8)	—
	M	121 ± 59 (7)	86 ± 20 (14)	105 ± 36 (25)	117 ± 43 (61)	135 ± 52 (103)	153 ± 48 (99)	150 ± 49 (55)	165 ± 55 (10)

Abbreviation: NC, not calculable.

^a All numbers are mean ± standard deviation (number of respondents); values in 1000's of US dollars.

Table 14. US Doctoral Degree Primary Job Base Salary.

Salary in USD, \$	Male (%tot), n = 894	Female (%tot), n = 510	Total (%tot), n = 1404
<19 999	3 (0.21)	1 (0.07)	4 (0.28)
20 000-29 999	0 (0.00)	1 (0.07)	1 (0.07)
30 000-39 999	5 (0.36)	1 (0.07)	6 (0.43)
40 000-49 999	4 (0.28)	2 (0.14)	6 (0.43)
50 000-59 999	6 (0.43)	7 (0.50)	13 (0.9)
60 000-69 999	14 (1.00)	19 (1.35)	33 (2.5)
70 000-79 999	21 (1.50)	19 (1.35)	40 (2.85)
80 000-89 999	39 (2.78)	39 (2.78)	78 (5.56)
90 000-99 999	53 (3.77)	54 (3.85)	107 (7.62)
100 000-109 999	50 (3.56)	49 (3.49)	99 (7.05)
110 000-119 999	73 (5.20)	43 (3.06)	116 (8.26)
120 000-149 999	191 (13.60)	114 (8.12)	305 (21.72)
150 000-199 999	259 (18.45)	109 (7.76)	368 (26.21)
200 000-249 999	118 (8.40)	41 (2.92)	159 (11.32)
>250 000	58 (4.13)	11 (0.78)	69 (4.91)

Table 15. Description of Employment.

Employer	Frequency	Percent
Academic	279	13.60
Business development and/or sales of equipment or services	5	0.20
Clinical practice	2	0.10
Consulting—as an employee of a consulting firm	147	7.10
Consulting—independent	110	5.40
Contract laboratory	200	9.70
Government—federal (inc military)	255	12.40
Government—state or local	48	2.30
Industry	937	45.60
Nonprofit research institution	56	2.70
Other	17	0.80

Table 16. Industry Employment Breakdown.

Employer	Frequency	Percent
Pharmaceutical	627	67.10
Chemical	113	12.10
Consumer product	80	8.60
Food/food ingredients	20	2.10
Petroleum	35	3.70
Medical devices	28	3.00
Other	32	3.40

Table 17. Academic Employment Breakdown.

Employer	Frequency	Percent
Public research university	172	62.10
Public teaching college/university	36	13.00
Private research university	39	14.10
Private teaching college/university	26	9.40
Other	4	1.40

Table 18. Industry Salaries for Doctoral Respondents.^a

Employer	Sex	Years experience post-terminal degree							
		0-1	1-3	3-5	5-9	9-19	19-29	29-39	>39
Pharmaceutical	F	157 ± 52 (5)	114 ± 39 (8)	124 ± 32 (14)	137 ± 31 (24)	169 ± 41 (86)	197 ± 44 (30)	250 ± 23 (3)	
	M	112 ± 59 (6)	124 ± 38 (7)	134 ± 44 (23)	152 ± 44 (44)	175 ± 47 (153)	198 ± 45 (79)	220 ± 52 (25)	
Chemical	F		87.5 ± 10 (4)	85 ± NC (1)	102 ± 12 (6)	120 ± 15 (11)	146 ± 28 (9)	135 ± NC (1)	
	M		95 ± NC (1)	112 ± 21 (3)	109 ± 21 (10)	124 ± 20 (13)	149 ± 29 (25)	167 ± 18 (5)	
Consumer product	F		105 ± 8 (4)	90 ± 26 (4)	113 ± 17 (4)	139 ± 36 (7)	165 ± 20 (4)	208 ± 29 (3)	
	M		95 ± NC (1)	108 ± 10 (4)	117 ± 20 (6)	135 ± 35 (10)	166 ± 25 (8)	172 ± 25 (10)	
Food/food ingredients	F			95 ± NC (1)	105 ± NC (1)	135 ± NC (1)			
	M		85 ± NC (1)		115 ± 20 (3)	175 ± NC (1)	178 ± 37 (4)	180 ± 64 (2)	
Petroleum	F			115 ± NC (1)	133 ± 31 (4)	175 ± NC (1)	175 ± 0 (3)		
	M		135 ± NC (1)		135 ± NC (1)	209 ± 54 (8)	217 ± 39 (3)	225 ± 0 (2)	
Medical devices	F			105 ± NC (1)	115 ± NC (1)	135 ± 40 (3)	162 ± 23 (3)		
	M			115 ± NC (1)	115 ± NC (1)	151 ± 35 (9)	170 ± 78 (2)	180 ± 64 (2)	
Other	F	95 ± NC (1)		115 ± NC (1)	92 ± 25 (3)	175 ± 0 (4)	175 ± NC (1)		
	M			115 ± NC (1)		135 ± 40 (3)	167 ± 38 (6)	155 ± 28 (2)	

Abbreviations: NC, not calculable.

^a All numbers are mean ± standard deviation (number of respondents); values in 1000s of US dollars.

Table 19. Academic Salaries for Doctoral Respondents.^a

Employer	Sex	Years experience post-terminal degree							
		0-1	1-3	3-5	5-9	9-19	19-29	29-39	>39
Public research university	F	58 ± 31 (3)	70 ± 49 (2)	107 ± 41 (5)	76 ± 20 (7)	84 ± 34 (15)	115 ± 60 (9)	162 ± 23 (3)	
	M	148 ± 46 (3)	75 ± NC (1)	70 ± 21 (2)	97 ± 45 (13)	112 ± 45 (31)	159 ± 71 (32)	157 ± 52 (27)	
Public teaching college/university	F	105 ± NC (1)	55 ± NC (1)	135 ± NC (1)	75 ± NC (1)	68 ± 38 (3)	110 ± 7 (2)		
	M	225 ± NC (1)	55 ± NC (1)	115 ± NC (1)	75 ± 18 (4)	77 ± 26 (6)	111 ± 47 (8)	95 ± 49 (4)	
Private research university	F	35 ± NC (1)	95 ± NC (1)	65 ± NC (1)	115 ± NC (1)	79 ± 36 (5)	145 ± 42 (2)	175 ± NC (1)	
	M	350 ± NC (1)	95 ± NC (1)	75 ± 14 (2)	65 ± 17 (3)	165 ± 60 (5)	171 ± 44 (8)	143 ± 37 (6)	192 ± 29 (3)
Private teaching college/university	F	55 ± NC (1)			88 ± 36 (4)	112 ± 57 (3)	135 ± NC (1)	135 ± NC (1)	
	M					89 ± 52 (5)	122 ± 50 (3)	155 ± 28 (2)	
Other	F						135 ± NC (1)		
	M					65 ± NC (1)	95 ± NC (1)		

Abbreviation: NC, not calculable.

^a All numbers are mean ± standard deviation (number of respondents); values in 1000s of US dollars.

Table 20. Academic Status.

Status	Frequency	Percent
Full professor	142	50.70
Associate professor	56	20.00
Assistant professor	49	17.50
Research scientist/associate	25	8.90
Technician	2	0.70
Other	6	2.10

Table 21. Years Worked for Current Employer.

Years	Frequency	Percent
0-1	158	7.70
1-3	296	14.50
3-5	301	14.70
5-9	414	20.30
9-19	493	24.10
19-29	275	13.50
>29	107	5.20

Table 22. 2011 Unemployment.^a

Interval Unemployed in 2011	Doctoral	Masters	Bachelors
<3 months	16	4	
3-6 months	14	4	1
>6-9 months	7	2	2
>9 months	3		

^a Two respondents indicated unemployment during 2011 but did not provide degree information and were excluded.

Tables 16 and 17, respectively. Doctoral level salaries for industrial and academic subcategories are reported in Tables 18 and 19, respectively. Table 20 summarizes academic employee status. Table 21 presents an overview of the number of years respondents have worked for their current employer. Finally, Table 22 provides a summary of unemployment and unemployment intervals during 2011.

Discussion and Conclusions

The 2012 survey results point to a number of different trends that deserve attention by major professional societies and add some insights into the job market, career path, and the conduct of future studies. First, although the situation continues to improve for most entry-level and early career positions, women continue to be compensated at a lower level than their male counterparts. Second, salaries as a whole have increased in the field, but the most impressive differences are not by geographic location of place of employment, but rather by type of employer. Additionally, certification continues to play a significant positive role in compensation. Finally, an evaluation of periods of unemployment revealed that 2.7% of respondents were unemployed during at least a portion of 2011, with most unemployment lasting 6 months or less.

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