

A Survey of Compensation of Life Scientists in the USA, 2011

By *The Scientist*

E-mail invitations to participate in this survey were sent to subscribers to the print edition of *The Scientist*, and to registrants on *The Scientist* web site who identified themselves as U.S.-based professional life scientists. Advertising was included on *The Scientist* web site encouraging visitors to participate.

Data were collected from March 7 and June 26, 2011. Usable responses were received from 4,665 individuals in the United States. Since many individuals are subscribers to *The Scientist*, and/or registrants on their web site, it is not possible to compute an accurate rate of response.

Respondents were asked to provide demographic data about themselves in 18 categories, and give their base annual salary and other cash compensation. The responses were carefully filtered to eliminate duplicate or misleading responses

It should be noted that not every participant provided all of the information requested. If the participant provided income data, plus information concerning at least one demographic characteristic, the questionnaire was included in the study. The result of this decision is that the total number of cases varies among the analyses.

For each parameter, the following data were computed:

No	Refers to the usable number of responses from which the statistics were derived for the data line in which that specific number appears.
Mean	Indicates the annual compensation of all individuals in a group were added together and the total divided by the number of cases involved. This measure of central tendency can be unduly influenced by a few very high or very low data. While the mean is more convenient for the purpose of certain calculations, greater consideration should be given to the median for comparison purposes, especially when the sample size is small.
10%	First Decile: Income below which 10% of the incomes fall
25%	First Quartile: Income below which 25% of the incomes fall
50%	Median: The value of the middle item (or the average of the two middle items) of a group of values when they are arrayed from largest to smallest. The advantage of the median is that it provides a measure of central tendency that is not unduly influenced by a few very high or very low. The median value is most useful for comparison purposes and has been highlighted in yellow on all pages.
75%	Third Quartile: Income below which 75% of the incomes fall.
90%	Ninth Decile: Income below which 90% of the incomes fall

THRESHOLDS	
If there are less than 5 responses	No values are given
If there are less than 10 responses	Only mean and median values are given
If there are less than 5 responses	Only mean, median and quartile values are given
If there are more than 20 responses	Mean, median, quartile and first and ninth decile value are given

The information regarding compensation which is presented herein should be considered in its entirety before any final interpretations are made. Usually, the larger the sample size, the more “stable” and valid the statistics which are reported. Consequently, greater confidence can usually be placed in data for which sample sizes are larger.

Occasionally, the current salary and/or total compensation reported by one or more respondents in a group will be considerably higher or lower than that of other respondents. When the sample size for that group is very small, the mean for the group will be influenced unduly and the inter-decile range extended greatly. However, the medians reported will not be influenced by such isolated cases. Therefore, whenever the sample size is small, the inter-decile range is extremely large, and there is a considerable difference between the mean and the median in a line of data, greater confidence should usually be placed in the median rate reported than in the mean rate.

As the definitions imply, one-half of the respondents in a group are in positions where the salary currently paid and the total compensation are above the median rates reported, one-quarter are above the third quartile rates reported, and one-tenth above the ninth decile. As a matter of policy, many employers deliberately set salary ranges above the “going rate” in order to attract and retain the best possible employees. Further, an individual’s length of service and performance in his or her position play parts in determining that individual’s current salary, since the value of a job tends to increase when the job is performed and “molded” by an exceptionally able individual. Therefore, the fact that an individual’s salary is above some otherwise-appropriate statistic need not necessarily be a matter of concern.

The survey was conducted and the analysis carried out by *The Scientist*.