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The Safety Pharmacology Society salary survey

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ABSTRACT

Introduction: Safety pharmacology is a growing discipline with scientists broadly distributed across international geographical regions. This electronic salary survey is the first to be distributed amongst the entire Safety Pharmacology Society (SPS) membership. An electronic survey was sent to all members of the Society. Categorical survey questions assessed membership employment types, annual incomes, and professional certifications, along with other associated career attributes.

Methods: This survey was distributed to the SPS membership that is comprised of safety pharmacologists, toxicologists and pharmacologists working globally in the pharmaceutical industry, at contract research organizations (CRO), regulatory agencies, and academia or within the technology provider industry. The survey was open for responses from December 2015 to March 2016.

Results: The survey response rate was 28% (129/453). North America (68%) was the region with the largest number of respondents followed by Europe (28%). A preponderance of respondents (77%) had 12 years of industry experience or more. 52% of responders earned annually between $40,000 and $120,000. As expected, salary was generally positively correlated with the number of years of experience in the industry or the educational background but there was no correlation between salary and the number of employee's directly supervised. The median salary was higher for male vs female respondents, but so was median age, indicative of no gender 'salary gap'.

Discussion: Our 2016 SPS salary survey results showcased significant diversity regarding factors that can influence salary compensation within this discipline. These data provided insights into the complex global job market trends. They also revealed the level of scientific specialization embedded within the organization, presently uniquely positioned to support the dynamic career paths of current and future safety pharmacologists.

1. Introduction

This salary survey is the first to be conducted by the Safety Pharmacology Society (SPS) and was conducted in 2016 with 129 members responding. The purpose of the survey was to identify salary patterns and provided data to inform decision making about career progression for safety pharmacologist (SP) scientists. This survey is part of a gathering of global information from SPS members regarding trends in career and employment as safety pharmacologists (SPs) working in all aspects of the pharmaceutical industry, contract research

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organizations (CROs), regulatory agencies, academia, and the technology provider industry, in order to begin development of a database of essential information providing trends within the society with regard to professional affiliation, career development along with employment and income.

The survey was sent to a total of 453 members and 129 (or 28%) of them responded. The survey responses were compiled anonymously after a period (from December 2015 to March 2016) in which members could respond using the online cloud-based software within Survey Monkey. The survey methodology employed conformed to standard procedures using robust analytics (Wright, 2005).

The survey is aimed to allow interrogation of factors that influence salary in the field of SP. The value of such a survey is that it serves as a tool to provide real world information on numerous aspects of SP as a discipline with importance to those in the field of SP.

2. Survey methods

2.1. Survey composition

SP leaders within the pharmaceutical industry and CROs were invited to develop the survey. Those involved have extensive backgrounds in the field and questions were designed to provide a reliable, valid and robust assessment of SP professional experience and factors that influence salary and compensation. This was achieved by composing a multiple choice format electronic survey consisting primarily of 18 closed questions with options for selections of multiple answers or a separate field for free text. Such a format allows for easy coding and scoring of responses. The survey methodology utilized standard procedures with an anticipated response rate for a survey of this nature (Gad & Sullivan, 2016).

This survey was distributed by the SPS to all 453 safety pharmacologists, toxicologists and pharmacologists working globally in the pharmaceutical industry, at CROs, regulatory agencies, academia or the technology provider industry who comprise the society. Survey topics included (a) survey responder demographics, (b) education, training and certifications, (c) primary area of research, (d) professional experience and (e) salary/incentive income. The survey was open for responses from December 2015 to March 2016. After survey completion, responses were collected, reviewed and summarized. All that were involved in composition of the survey agreed that the results of the survey were important to the SP community and informative for those considering the field as a career and that the results should be documented for future reference. Survey questions are reported in the Results section together with the percentages of the answers.

Non-response questions were recorded but data are not presented for each question. All attempts were made to keep the survey questions limited in duration to reduce response degradation that tends to occur toward the end of surveys (Bogen, 1996).

3. Results

The rate of complete response is expressed as a percent and it refers to the number of actual responders for each question in the survey divided by the number of responders participating in the survey. Response rates are considered an important indicator of data quality. Almost all questions were answered by almost all respondents (98%). The range of response rates was from 100% (for 5/18 questions) to 74% (for 1/18 questions that asked details about the responder's annual secondary income received as either part time or consulting income).

3.1. Survey responder demographics

All SPS members (n = 453) (Fig. 1A) were invited to participate in the survey and 129 (or 28%) responded. Of the 129 responders, most were from North America (68%) distinguished by location on the West (11%), Midwest (18%) or East (39%) coast. Those from Europe (30%) were the second largest group of responders followed by those from Asia (2%). Responders originated from various sized companies (Fig. 1B) with 40% employed at companies with > 10,000 employees, likely large pharmaceutical companies or CROs. Interestingly, 23% of responders were from small companies (10–100 employees). With regard to age demographics, 52% of responders were 31–49 years of age while only 4% were < 30 years of age (Fig. 1C). However, 45% of responders were ≥ 50 years of age. Responders were predominantly male (64%) with base salary distributions similar between genders, albeit with a lower median for females (Fig. 2).

To supervise/manage, for the purpose of this survey, means to oversee employees and work as part of a management team in order to achieve and maintain productivity. When responders were asked about how many employees they supervise/manage, the majority (53%) reported not having any direct line management responsibility (Fig. 1D). For those that manage employees, 39% of responders supervise/manage fewer than 20 employees.

3.2. Education, training and certifications held by responders

The majority of survey responders were PhD graduates (68%) while 39% were BSc graduates and 30% hold a graduate MSc degree (Fig. 3). Other responders had degrees in veterinary medicine (DVM) (14%) and Medicine (MD) (3%). The PhD versus BSc discrepancy represents what in hindsight may be a shortcoming in the survey, since almost all responders with a PhD will have a BSc implying that responders noted the higher of their degrees, yet in total responses were > 100% meaning that some responders noted both their degrees. This renders this part of the survey result ambiguous since only one answer (the respondent's higher degree) should have been allowed.

Some responders (10%) indicated that they have educational distinctions that include certification by the American College of Veterinary Pathology (ACVP), Master of Business Administration (MBA) and Doctorates in Pharmacy (Pharm.D).

Similar to an apparent diverse educational background, responders had a broad spectrum of areas of expertise. Cardiovascular SP was the preponderant area of expertise (83%). Experience in remaining core battery SP areas were similar at 41% for CNS and 40% for respiratory. A large proportion of responders conduct GLP compliant studies (58%) as per ICHS7A, ICHS7B and ICHM3 (R2) guidance documents. Many responders also identified toxicology (40%) and development of NCE's (35%) as areas of expertise (Fig. 4).

SPS has established a process for discipline certification which evaluates and documents competency within the field of SP. Becoming a 'Diplomate in Safety Pharmacology' (DSP) is achieved by success at the certification examination (Authier et al., 2015). The DSP was developed to evaluate knowledge that is directly related to the practice of SP in drug development. Only 25% of responders reported holding a DSP certificate; however, the certification process has only been in existence for 4 years. A number of other professional organizations have developed equivalent certification programs including The American Board of Toxicology who developed the 'Diplomate of the American Board of Toxicology' (DABT) (Brock, Woolley, & Sugimoto, 2009). Only 18% of responders reported holding a DABT certificate. However, only 41% of Society of Toxicology (SOT) members hold DABT certifications and 316% hold no certification (Gad & Sullivan, 2016). Similarly, The Association of European Toxicologists and European Societies of Toxicology (EUROTOX) developed the 'European Registered Toxicologist' (ERT) certification program (Fowler & Galli, 2007). Only 3% of responders had this certification. For pathologists, the American College of Veterinary Pathologists (ACVP) is the organization that established the standard for veterinary pathology in the United States by Dip. ACVP accreditation. Only 1% of responders had this certification.