

Lauren Payne

SCIENTIST II

CONTACT INFORMATION

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PROFESSIONAL PROFILE

Lauren Payne specializes in providing support for a variety of evidence-based analyses involving food ingredients and additives, consumer products, and industrial chemicals. Ms. Payne conducts scoping and systematic literature reviews using PubMed, Embase, ToxPlanet, and other public and proprietary databases. In the systematic review process, Ms. Payne searches and selects studies for inclusion based on pre-defined criteria. She conducts preliminary reviews of titles/abstracts to determine potentially eligible studies for final review, and also participates as an evidence analyst, with roles that include extraction and development of evidence tables and landscape summaries.

Ms. Payne has supported a variety of scientific assessments, including worker and environmental safety assessments on microorganisms and hazard assessments for beauty care products. This process includes identification of toxicological data, as well as integration of regulatory considerations from both US and international agencies to ensure a comprehensive overview of the product. She has also conducted screening-level safety assessments for a variety of products used in the oil and gas industry.

Ms. Payne has assisted in the preparation and development of manuscripts by conceptualizing research questions, searching the literature, performing analyses, creating tables and figures, and writing to describe the study and communicate key findings.

Ms. Payne actively collaborates on projects through the Open Science Framework, an open-source repository that allows her to manage the research work flow, share, and register research projects. Additionally, she has experience registering protocols through Zenodo. She manages references using the bibliography software Zotero and Endnote. Using the systematic review software Distiller, Ms. Payne categorizes and extracts data on the study population, intervention or exposure, comparator, outcomes data, and study design. Ms. Payne has particular expertise in extraction of mechanistic data related to the key characteristics of carcinogenicity, as well as assessment of dose-response.

Ms. Payne's past work has focused on the design and development of survey instruments and data collection forms, data management and data analysis, literature searches and reviews, and other research support related to a wide range of topics, including medical education, resiliency culture in the healthcare workforce, recruitment and retention of medical providers, substance use initiatives addressing the opioid crisis, health disparities in rural areas, disordered eating, pediatric oral health, psychiatric evaluation, and vaginal hysterectomies.

EDUCATION AND DEGREES EARNED

2015 Appalachian State University, B.S., Psychology

SELECTED PROFESSIONAL EXPERIENCE

Literature Searching and Database Management

Created search strategies to map key components of research topics, including syntax development for PubMed and Embase.

Conducted literature research and critical reviews of literature in support of risk assessments and toxicological evaluations.

Developed literature search strategy to identify ecotoxicological data for beauty care ingredients. Created tabular summaries of findings.

Project Management

Project management responsibilities include the coordination and completion of projects on time and within budget and scope.

Performed preliminary reviews of product formulations to develop scopes of work.

Created and revised project-specific standard operating procedures and templates.

Evidence-Based Toxicology

Developed and implemented literature search strategy for developmental endpoints. Validated search strategy, used DistillerSR to screen and synthesize findings to characterize landscape.

Extracted dose-response and reference-dose data from publications to update a database of relative potency estimates (REPs) for dioxin like compounds. Included data from heterogeneous study types, including both *in vivo* and *in vitro* studies in multiple mammalian species, extracted using a variety of tools to record information and obtain dose-response information from graphical reports (e.g., DistillerSR, GraphClick).

Assisted in development of systematic map protocol and subsequent implementation of search. Efforts included validation of search strategy, pilot-study selection process, and full-text screening.

Safety Assessment

Conducted screening-level risk assessments to assess the potential for products to be associated with potential human health or environmental health risk in the oil and gas sector.

Conducted literature searches and assessed potential for hazards to human health (including occupational exposures) and ecological (including bees) receptors associated with organisms used in crop sciences.

Conducted hazard assessments of naturally occurring ingredients (e.g., botanicals) intended for use in dietary supplement formulations. Assessments included review of available information, such as physical and chemical properties, regulated uses and limits, traditional and current uses, and toxicological data.

Conducted preliminary safety evaluations for novel ingredients intended to support sensory testing.

Investigated and summarized risk assessment issues related to uncertainty assessment in the development of toxicity values.

Used published frameworks and guidance documents to support hazard, safety, and risk assessments to meet regulatory requirements of international authorities such as US Food and Drug Administration (FDA), US Environmental Protection Agency (EPA), European Food Safety Authority (EFSA), JECFA/WHO, Health Canada, ECHA/REACH, and OECD.

Assisted in the preparation of a Generally Recognized as Safe (GRAS) evaluation to assess hazard associated with the use of proposed ingredient.

Medical Education

Collaborated with physicians and researchers to design the Community Health Professional Preceptors Survey, which identified factors contributing to primary care preceptor motivation and satisfaction; programmed and distributed survey instrument; managed database of 3000 participants; conducted non-responder phone interviews; merged and analyzed survey results in SAS across 3 years of data to assess change over time; co-author of manuscript submitted for publication.

Healthcare Workforce

Served as project manager of research examining the impacts of a workplace resiliency intervention in multiple healthcare settings; developed and programmed survey instruments; managed longitudinal survey database to assess changes over time; contributed to design of interview guide.

Disordered Eating

Collaborated with Sports Medicine physician on research to understand disordered eating among youth in Massachusetts; cleaned data file and created data dictionary for data set; worked with team to develop data analysis plan; conducted analysis.

Hepatitis C

Worked with team of medical residents and researchers to conduct a critical literature review for treating hepatitis C in active drug users.

PUBLICATIONS

Henderson RG, Franke KS, **Payne LE**, Franzen A. 2022. Cannabidiol safety data: A systematic mapping study. *Cannabis Cannabinoid Res* ([epub ahead of print](#)), doi: 10.1089/can.2022.0100, PMID: 36251454.

Fitch SE, **Payne LE**, van de Ligt JLG, Doepker C, Handu D, Cohen SM, Anyangwe N, Wikoff D. 2021. Use of acceptable daily intake (ADI) as a health-based benchmark in nutrition research studies that consider the safety of low-calorie sweeteners (LCS): A systematic map. *BMC Public Health* 21(1):956, doi: 10.1186/s12889-021-10934-2.

Krehnbrink M, Patel K, Byerley J, Tarantino H, Peyser B, **Payne L**, Foley K, Latessa R. 2020. Physician preceptor satisfaction across curricula: Comparing longitudinal integrated clerkships and traditional block rotations. *Teach Learn Med* 32(2):176–183. doi: 10.1080/10401334.2019.1687304.

Latessa R, Keen S, Byerley J, Foley K, **Payne L**, Conner K, Tarantino T, Peyser B, Steiner D. 2019. The North Carolina community preceptor experience: Third study of trends over twelve years. *Acad Med* 94(5):715–722. doi: 10.1097/ACM.0000000000002571.

Presentations

Fitch S, Klaren WD, **Payne L**, Wikoff D. Comparison of public and private literature databases for toxicological investigations. Poster presented at Society of Toxicology Annual Meeting, San Diego, CA, March 2022.

Wikoff D, Edwards S, Angrish M, Baumgartner, Bever R, Borghoff S, Chappell G, Chew R, Fitch S, Hench G, Hamernik K, Henderson D, Kirk A, Lea I, Mandel M, **Payne L**, Shapiro S, Urban J, Williams D, Markey K. Application of systematic methods to characterize thyroid adverse outcome pathways (AOPs). Presented at 10th annual meeting of American Society for Cellular and Computational Toxicology (virtual), October 2021.

Protocol

Wikoff D, Fitch SE, **Payne L**, Doepker C, van de Ligt J. 2019. Systematic map: Use of the acceptable daily intake (ADI) values in nutrition research studies that consider the safety of low-calorie sweeteners. Open Science Framework, <https://osf.io/6x3ks/>.

Poster

Henderson RG, Franzen A, Franke K, **Payne L**, Schmitt D, Wikoff D. Creating a literature database for cannabidiol (CBD): Systematic evidence mapping. Poster for Society of Toxicology, Virtual Annual Meeting, 2020, <https://eventpilotadmin.com/web/page.php?page=Session&project=SOT20&id=P1236>.

CERTIFICATIONS AND TRAINING

January 2020	Joanna Briggs Institute (JBI) Comprehensive Systematic Review Course, Jackson, MS
February 2018	Programming 2, SAS Institute, Cary, NC
January 2018	Programming 1, SAS Institute, Cary, NC