

Shannon J. Taylor

46484 Anthony St.; Paw Paw MI 49079

Phone: (269) 569-2167 e-mail: shanntaylor82@yahoo.com

Objective: To utilize my professional experience and scientific expertise as a scientist in both regulated and non-regulated environments, exceptional attention to detail, flexibility, adaptive interpersonal skills and a proven ability to rapidly adjust to new situations meeting the continuously evolving demands of the biomedical research industry.

Education and Certifications:

LATG Certification

February 2010

LAT Certification

September 2007

Michigan State University

Bachelor of Science in Zoology

August 2006

Technical Projects:

MSU/EdX Coding Bootcamp —

- Developed and deployed a full-stack weather dashboard application using React, Node.js, and TypeScript, utilizing the OpenWeather API to fetch weather data for cities worldwide.
- Implemented JWT authentication and GraphQL queries to securely save and retrieve user data (city search history).
- Designed an interactive UI using React, enhancing user experience with real-time city weather data and a responsive layout.
- Managed backend logic with Express.js, storing city searches in a JSON file for persistent history.
- Deployed to Render, ensuring seamless functionality and integration across the stack.
- Utilized CSS-in-JS for styling to match the project's design specifications.
- Technologies Used: React, Node.js, Express.js, TypeScript, GraphQL, JWT, OpenWeather API, Render, CSS-in-JS

Experience:

Senior Scientist, VMRD, PSQL- Product Sustainability Quality and Logistics

Zoetis, LLC;

Kalamazoo, MI

June 2024-Present

Scientist, VMRD, ACS-Analytical Sciences

Zoetis, LLC;

Kalamazoo, MI

February 2020-June 2024

Developed and optimized cell-based potency and activity assays. Performed validation and transfer activities for plate-based assays. Worked to promote and incorporate or leverage automation into routinely performed assays or activities.

Scientist II

Eurofins Lancaster Laboratories Professional Scientific Services, LLC.; Kalamazoo, MI August 2018-February 2020

Develop and optimize multi-plex assays on Meso Scale Discovery (MSD) platform utilizing the U-Plex format for both bovine and canine antibodies in a variety of matrices. Isolation of PBMCs from whole blood on multiple species including bovine, porcine and canine. Isolation of total milk leukocytes (TML) from bovine milk or dry cow secretion as well as CD14 +/- cell populations utilizing the MACS magnetic beads. Histone isolation from the TML as well as the CD14 +/- cell populations and performing ELISAs identifying individual acetylation and methylations on each cell population.

Isolation and culture of primary mammary epithelial cells from bovine mammary tissue.

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Performed a variety of cell-based assays utilizing isolated cells with a variety of endpoint assays including cytokine analysis using the MSD platform, BCA protein analysis, cell titer-glo, as well as individual ELISA assays depending on the scientific need.

Research Associate, Biochemistry

Genesis PharmOptima, LLC.

Portage, MI

January 2013- August 2018

Summarized study data for the client via form preparation, tabulation, report preparation, and QC of the data in a Microsoft Word and Excel environments. Performed routine production of developed assays, protein expression and cell culture. Aid the In-Life group by collecting samples, or preparing samples collected internally or received from the client for use in assays. Developed immunoassays on the MSD platform and standard sandwich ELISA format to meet the broad needs of our clients. Maintenance and qualification of laboratory equipment and supply inventory.

Sub-contracted to RealBio Technologies Inc., Kalamazoo, MI (2014) to perform 3-D cell culture utilizing their proprietary culture system. Brought the internal protocol of their specialized tissue culture system into compliance with federal regulations for these devices to support sales and marketing. Responsible for all aspects of laboratory operations including 3-D cell culture of primary cell lines utilizing the RealBio Technology system as well as ordering and maintaining laboratory supplies and reagents. Trained RealBio customers on use and maintenance of purchased systems.

Proficiencies:

- Standard sandwich ELISA Assay development and implementation.
- MSD immunoassay development and implementation.
- Western Blot and SDS PAGE protein analysis.
- Protein purification (affinity chromatography).
- Baculovirus/ insect cell protein expression.
- Insect, mammalian and yeast cell culture and maintenance.
- 3-D cell culture and maintenance through collaboration with RealBio Technology Inc.

Research Associate, In Vivo

PharmOptima, LLC.

Portage, MI

August 2012-January 2013

Dosed and performed clinical observations on animals as required by SOPs and client protocols. Prepared forms for documentation of protocol requirements. Reviewed and edited departmental SOPs. Performed animal husbandry duties, including body weight recording and twice daily observations, feeding, watering and cage changing. Washed and sanitized caging and equipment. Ensured feed and bedding supplies were ordered and stocks maintained. Autoclaved surgical supplies as needed.

Proficiencies:

- Topical dosing of rabbit eyes, rabbit eye enucleation and dissection.
- Oral, IV and subcutaneous dosing of rats.
- Necropsy of rats, mice and rabbits.

Research Associate II Experimental Therapeutics

MPI Research

Mattawan, MI

September 2008- September 2011

As the primary technician for concurrent multiple studies, responsible for organizing and managing study schedules, coordinated with other departments involved in the studies, ensured the required equipment and personnel were available. Regularly communicated with study directors, managers, sponsors and scientists. Developed and reviewed departmental SOPs to ensure federal regulations and GLP requirements were met.

Research Associate I Experimental Therapeutics

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MPI Research Mattawan, MI

September 2006- September 2008

Developed basic laboratory skills and aseptic technique. Acquired proficiency in animal husbandry, dosing and sampling techniques on a variety of animal species including immunocompromised rodents under GLP guidelines. Reviewed study data for accuracy and completeness prior to submission to the report group.

Previous Work Experience

Animal Care Technician

May 2001-August 2006

University Laboratory Animal Resources

Michigan State University

East Lansing, MI

Performed animal husbandry duties for species including dogs, puppies, cats, kittens, rats, mice and immunocompromised mice. Maintained immunocompromised mouse breeding colonies and associated records.

Dog Handling and Treatment (Contractor)

Cheri-Hill Kennel and Supply Inc.,

Stanwood, MI

April 2006

Assisted with handling and treatment of dogs in the evaluation of a flea and tick insecticide preparation.

Undergraduate Teaching Assistant, Integrated Studies in Biology

Michigan State University

East Lansing, MI

August 2004-May 2005

Organized & lead weekly study sessions for classes as large as 160 students within a diverse student body. Assisted in solving ongoing problems of student/professor relations which required consistent liaison activities and communications. Interpreted student comprehension by incorporating my background and training in the sciences as well as good judgment.

Environmental Intern

CORALations

Culebra, PR

May 2004-August 2004

Guided volunteers (Spanish and English speaking) to help the DNR with nightly Leatherback Sea Turtle nesting census. Assisted with community outreach activities including a children's educational summer camp (shoreline workshop, snorkeling instruction, and guided explorations of the local flora/fauna). Supported fund-raising efforts and improved office efficiency.

Additional Skills:

Proficient in the use of Standard Laboratory equipment including but not limited to:

Autoclave, Pipettors, Incubators, Hemacytometer, Sonicator, Automated cell counter, Centrifuge, Vortex Mixer, Cryosafe, Vaporizers, SDS PAGE Gel systems, UV/VIS, MSD platform, Spectrophotometer, Microscope and Pressurized gas tanks

Programming Languages: React, JavaScript, TypeScript, Node.js

Tools and Technologies: Express.js, GraphQL, JWT, Render, CSS-in-JS

Proficient in Microsoft Office Suite

Limited working proficiency of the Spanish language

Publications/Presentation:

Age-dependent SMN expression in disease-relevant tissue and implications for SMA treatment

Daniel M. Ramos, IConstantin d'Ydewalle, Vijayalakshmi Gabbeta, Amal Dakka, Stephanie K. Klein,

Daniel A. Norris, John Matson, **Shannon J. Taylor**, Phillip G. Zaworski, Thomas W. Prior, Pamela J.

Snyder, David Valdivia, Christine L. Hatem, Ian Waters, Nikhil Gupte, Kathryn J. Swoboda, Frank Rigo,

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C. Frank Bennett, Nikolai Naryshkin, Sergey Paushkin, Thomas O. Crawford, and Charlotte J. Sumner
J Clin Invest. 2019;129(11):4817–4831. <https://doi.org/10.1172/JCI124120>

Normalization of Patient-Identified Plasma Biomarkers in SMN Δ 7 Mice following Postnatal SMN Restoration.

Arnold WD, Duque S, Iyer CC, Zaworski P, McGovern VL, **Taylor SJ**, von Herrmann KM, Kobayashi DT, Chen KS, Kolb SJ, Paushkin SV, Burghes AH.

PLoS One. 2016 Dec 1;11(12):e0167077. doi: 10.1371/journal.pone.0167077. eCollection 2016.

SMN Protein Can Be Reliably Measured in Whole Blood with an Electrochemiluminescence (ECL) Immunoassay: Implications for Clinical Trials.

Zaworski P, von Herrmann KM, **Taylor S**, Sunshine SS, McCarthy K, Risher N, Newcomb T, Weetall M, Prior TW, Swoboda KJ, Chen KS, Paushkin S.

PLoS One. 2016 Mar 8;11(3):e0150640. doi: 10.1371/journal.pone.0150640. eCollection 2016.

Method qualification for the quantitative determination of SMN protein in human whole blood.

Zaworski, P.G.; **Taylor, S. J.**; McCarthy, K.; von Herrmann, K.; Paushkin, S.; Chen, K.S.; Decker, D.E.; Poorman, R. A. Presented at the 2014 Families of Spinal Muscular Atrophy International Conference, June 2014.

References available upon request.