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Executive Summary

- **Strategic leader in life sciences with 27+ years of experience, including a decade of technical and strategic leadership in cell and gene therapy, translating scientific insight into operational and partnership strategy.**
- **Proven track record scaling GMP-grade donor networks, launching blood-derived starting materials and biospecimens, and leading multi-stakeholder collaborations across biotech, CDMOs, and clinical collection sites.**
- **Trusted advisor to allogeneic and autologous cell therapy developers on donor qualification, regulatory compliance, and GMP starting material supply chain integration.**
- **PhD in Immunology; Certified Advanced Biotherapies Professional (CABP); Six Sigma Black Belt.**

Select Leadership Highlights

- Scaled leukapheresis and marrow collections from 100 to >1,000 in 3 years; drove \$3.5M revenue increase
- Launched custom donor database aligned to sponsor specifications; expanded donor pool by 200%
- Principal Investigator for multiple multi-site product collection trials (e.g., GSK, BCA, OBI)
- Eleven years of leadership in independent and corporate consulting services and cross-functional operations
- Committee leadership for the Association for the Advancement of Blood and Biotherapies (AABB)
- Decentralized manufacturing strategy and logistics consulting for emerging CGT platform
- Quality management department and QMS software implementation for clinical cell therapy company

Professional Experience

Cellular Starting Material Consultant

CSM CONSULTING, LLC | NORMAN, OK | 2024-PRESENT

- Scientific consultant specializing in cellular starting material for the development and further manufacture of allogeneic cell therapies.
- www.cellsmatter.com
- **Consulting work:**
 - ~Developed and implemented strategic plans for leukopak collection operational site readiness, enhanced donor database growth, optimized equipment, staffing, space utilization, and authored regulatory-compliant SOPs, validations, and policies.
 - ~Collaborated with cell therapy companies to establish healthy donor recruitment and testing strategies, and quality management.
 - ~Performed Project Management, Portfolio Management, and Business Development duties for multiple CDMOs in the biotherapies space, supporting projects and relationships with multiple partners; assisted with Product Management operations.
 - ~Performed Vein-to-Vein Value Chain Mapping for autologous therapies employing a decentralized manufacturing model.
 - ~Developed educational program modules for cell therapies and biotherapies science, ethics, and manufacturing.
 - ~Strategic planning and product development to support product launch readiness for cell and gene therapy support companies.
 - ~Contributing Editor for Life Science Connect Online: [Leukopaks, Cryopreservation, GMP Regulations, Donor Compensation](#)

Director of Research and Development

OKLAHOMA BLOOD INSTITUTE (OBI) | OKLAHOMA CITY, OK | 2017-2024

- Scientist specializing in growing the blood center's reach in the Research and Cell Therapy/Biotherapy value chain through client engagement and project strategic planning for the procurement of biospecimens, cellular starting material, and cell culture products.
- **Job duties:**
 - ~Led a Research and Development department expanding apheresis and bone marrow collections from 100 to >1,000 in 3 years.
 - ~Increased annual revenue by \$3.5M through strategic expansion of cell therapy product offerings.
 - ~Collaborated cross-functionally with clients and internal departmental stakeholders to implement projects that met client needs, internal policies, GMP standards, and regulatory compliance; optimized cell therapy network.
 - ~Principal Investigator and site enablement for multi-site clinical trial protocols and grant-funded projects.
 - ~Expanded donor database by 200%, enhancing the quality and availability of GMP-grade cellular starting materials.
 - ~Spearheaded the development of four new blood products, resulting in patent filings and the establishment of a new company.
 - ~Established a donor characteristic database to align with client specifications, enhancing product quality and consistency.
- **Awards and accomplishments:**
 - ~Serves on and leads multiple committees for the Association for the Advancement of Blood and Biotherapies (AABB) to help influence standard operations and directions of the growing Cell Therapy/Biotherapy industry 2018-present.
 - ~Obtained board certification in Advanced Biotherapies (CABP), 2022

Chief Scientific Officer

CYTOGROWTH SOLUTIONS, LLC | OKLAHOMA CITY, OK | 2022-2024

- Scientific leader specializing in the manufacture of blood products developed at OBI for the support of cell therapy growth in culture.

- **Job duties:**

- ~Directed scientific and technical aspects of new product development, manufacturing, testing, and process improvement, aligning with strategic business goals.
- ~Product Manager leading client and distributor relationships to ensure product specifications met market needs.

Founder and Chief Scientist

EXPERIMENTAL SOLUTIONS, LLC | NORMAN, OK | 2016-2021

- Consultant assisting scientists, physicians, and biotech entrepreneurs to start up and grow their laboratories, train staff, develop new techniques, and manufacture new products through R&D consulting and writing services.
- **Consulting Services Performed (select):**
 - ~Designed flow cytometry, cell isolation, and cryopreservation techniques to support bio-product development.
 - ~Technical training and competency certification of staff in flow cytometry practice
 - ~R&D toward new commercial autoimmune serological diagnostic testing panels
 - ~Writing support: technical SOPs, new product technical branding, publication writing and editing, SBIR grant draft writing.

Research and Development Scientist

MOLECULERA LABS, INC | OKLAHOMA CITY, OK | 2014-2016

- **Job duties:**
 - ~Basic, translational, and clinical research to optimize current diagnostic testing platforms and establish new platforms.
 - ~Clinical laboratory leadership: Sample receiving and testing, quality control and quality assurance, results reporting.
 - ~Secured \$300,000 in funding for R&D projects through grant proposal writing.
 - ~Prepared budgets and cost analyses for potential scientific endeavors and research plans.
 - ~Managed relationships with vendors, collaborators, customers to organize equipment purchases, research plans, understand testing needs and deliver clinical results.
- **Awards and accomplishments:**
 - ~Re-established and clinically-validated a key diagnostic test from new material source 2014.
 - ~Awarded an Applied Research Support grant from the Oklahoma Center for the Advancement of Science and Technology (OCAST) as Principal Investigator 2015-2017.

Education and Scientific Training

Postdoctoral Research Fellow

UNIVERSITY OF COLORADO DENVER | AURORA, CO | 2011-2013

- **Research project:** Characterize cell surface expression, cytokine profile, proliferative potential, and activated signaling molecules on CD4+ memory T cells in the lungs of patients with either Chronic Beryllium Disease (an occupational autoimmune disorder) or HIV using multiparameter flow cytometry, cell stimulation and culture, ELISA and bead array, and molecular biology research techniques.
- **Awards and accomplishments:**
 - ~Student Loan Repayment Grant from the NIH for project design 2012-2014.

Postdoctoral Fellow

NATIONAL JEWISH HEALTH | DENVER, CO | 2006-2011

- **Research Project:** To identify ligands for $\gamma\delta$ T cells using new cDNA library construction, infection, transfection, protein purification, cell culture, flow cytometry, and mouse work.
- **Awards and accomplishments:**
 - ~Individual NRSA fellowship grant (F32) from the NIH 2007-2010

Doctor of Philosophy

UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER | OKLAHOMA CITY, OK | 2000-2005

- Department of Microbiology and Immunology, laboratory of Linda Thompson, PhD.
- **Thesis research:** To elucidate the mechanism of human $\alpha\beta$ vs $\gamma\delta$ T lineage decision and determining the developmental pathway of human $\gamma\delta$ T cells by performing molecular biology research techniques, cell culture, flow cytometry, designed single cell PCR method.
- **Awards and accomplishments (select):**
 - ~Robert A Patnode Award for Outstanding Senior Graduate Student in the Department of Microbiology and Immunology 2005.

Bachelor of Science in Biology and Chemistry

SOUTHERN NAZARENE UNIVERSITY | BETHANY, OK | 1996-2000

- Cum Laude
- Mortar Board Honor Society
- **Research Technician** at the Oklahoma Medical Research Foundation 1998-2000
- **Summer Undergraduate Research Intern** for the Howard Hughes Medical Institute 1999