

CAROLYN P. JOHNSON

LaPorte, CO 80535

Carolyn@InspiredEngineering.us

Professional excellence achieved through creativity, diplomacy, flexibility, and dedication. Excel at balancing conflicting constraints and acting preemptively versus reactively.

CORE COMPETENCIES:

- Exceptional Communication Skills
 - Business Development
 - Feasibility Investigation
 - Systems Evaluation & Enhancement
 - Project Planning
 - Leadership
 - Big-Picture Perspective
 - Detail-Oriented
 - Focused under Pressure
 - Emotional Intelligence
 - Strategic & Decisive
 - Approachable
 - Transparent
 - Integrity
 - Financial acumen
 - Growth Mindset
 - Resilient
-
-

PROFESSIONAL EXPERIENCE

INSPIRED ENGINEERING LLC (LaPorte, CO) CEO / Senior Mechanical Engineer **May 2018 - Present**

- Mechanical Design Engineer Consultant in Biomedical, Aerospace, and Consumer markets. Augment internal client teams or act as a stand-alone entity to deliver high quality design solutions.

TENSENTRIC (Boulder, CO) Project Director / Systems Engineer / Mechanical Design Engineer **Oct 2013 – April 2018**

- Product Design: mechanisms; high-volume consumables; test fixtures
- Electro-Mechanical integration
- Managed multidisciplinary engineering teams (10+ direct reports) ranging from small R&D efforts to full instrument and consumable design programs
- Built a ground-up multimillion dollar client account through effective project execution and relationship building

ACTIUM BIOSYSTEMS (Boulder, CO) Mechanical Design Engineer **Mar 2011 – Sept 2013**

- Sole mechanical engineer at a biotech startup developing a novel cancer-treatment device
- Designed small-animal and human-scale systems that integrate novel electromagnetic-energy generating electronics with safe and structurally supported patient platforms
- Designed and built mechanical fixtures to support R&D efforts: positioners, electro-mechanical interfaces, electronics packaging, custom waveguides, adjustable Helmholtz coils, etc.
- Conducted stress, strain, and factor of safety analyses
- Created assembly and detail drawings, Bill of Materials, and interface control documents

APPLIED DESIGN CORPORATION (Erie, CO) Associate Mechanical Engineer **Jan 2010 – Mar 2011**

- Responsible for all aspects of design (requirements, design, analysis, documentation, and vendor management)

HIGH PRECISION DEVICES, INC. (Boulder, CO) Mechanical Engineer Intern **May 2009 – Dec 2009**

- Developed math models to analyze heat loads, motor torques, and positional tolerances
- Designed devices, fixtures and created respective engineering drawings
- Played key role in a phase I SBIR NIH proposal composition / compilation

TMJ IMPLANTS, INC. (Golden, CO) Mechanical Engineer Intern **Feb 2008 – Aug 2008**

- Supported Arcam-facilitated part manufacture and 5-axis machine operation
- Patient-specific product development from product design to sterilization

GILEAD, INC. (Westminster, CO) In Vivo Pharmacology Research Associate **Dec 2005 – Aug 2007**

- Assisted development of small-molecule therapies aiming to improve cardiovascular health
- Developed disease models and executed efficacy studies (rats)
- Performed arterial catheterization to determine systemic and cardiac hemodynamics
- Utilized echocardiography as a non-invasive means to collect cardiac performance data over time

- Organized and analyzed data, drafted reports, and presented results at company-wide R&D meetings

BAYLOR COLLEGE OF MEDICINE (Houston, TX) **Research Technician III**

Mar 2003 – Jul 2005

- Created mouse models of human diseases via microinjection of mouse embryos
 - Established transgenic mouse satellite facility
 - Interviewed, trained, and supervised employees
 - Poster presentation: 18th International Mouse Genome Conference (Oct 2004; Seattle, WA)
-
-

PATENTS / PUBLICATIONS

PATENTS:

- “Tube Management Structures for Automatic Drug Compounder” International Patent under the PCT. WO 2017/095666 A1, June 8, 2017.
- “Apparatus for the generation of an energy field for the treatment of cancer in body cavities and parts that are cavity-like,” U.S. Patent US20130053620 A1, Feb 28, 2013.
- “Generator for a Surgical Device” U.S. Patent No. 1813.119.01US. Patent Application Number 29743665 (July 23, 2020)
- “Laboratory Instrument, Cartridge, and Laboratory Instrument with Cartridge” US29/896,343 · Filed Jul 1, 2023

PUBLICATIONS:

- A complex interaction of Imprinted and Maternal-Effect Genes Modifies Sex Determination in Odd Sex (*Ods*) Mice. Genetics 168: 1557-1562 (Nov 2004)
 - A deletion in the gene encoding sphingomyelin phosphodiesterase 3 (*Smpd3*) results in osteogenesis and dentinogenesis imperfect in the mouse. Nat Genet. 2005 Aug; 37(8):803-5
-
-

EDUCATION

COLORADO SCHOOL OF MINES (Golden, CO)

M.S. Dec 2009

- M.S. Major: Mechanical Engineering
- GPA: 3.7 / 4.0

BRANDEIS UNIVERSITY (Waltham, MA)

B.A. May 2002

- B.A. Major: Biology
- GPA 3.5 / 4.0