Vredenburgh & Associates, Inc.
Human Factors, Safety, Biomechanics and Organizational Consulting

Main Office Address
2588 El Camino Real, F353
Carlsbad, CA 92008
Main Office: (442) 222–8289
Mobile: (760) 712-7366
meriellbench@gmail.com
www.hfexpert.com

MERIEL L. BENCH
Curriculum Vitae

CURRENT POSITION

Biomechanics Consultant, Vredenburgh & Associates, Inc. (2015 - present)
Serves as a forensic (the application of science to law) biomechanics consultant for product liability and personal injury cases. Performs biomechanics analyses, laboratory testing. Conducts original research: prepares scientific papers and presents research at scientific conferences.

EDUCATION

University of California, Berkeley
B.S. Bioengineering (2015)
    Selected Projects:
- Biological Transport Phenomena, Spring 2014
  Used COMSOL to model and run simulated tests on an innovative drug -eluting contact lens.
- Biological Performance Materials Course, Fall 2014
  Design project and mock-sales pitch for a novel biomaterial meant to optimize bone regrowth in maxillofacial defects, applying course concepts including FDA regulations regarding novel medical technologies.
- Cell Biology for Engineers Laboratory Course, Fall 2014
  Observed and quantified effects of magnetic nanoparticles on mammalian cellular growth and migration; prepared research paper.
- BioMEMS and Medical Devices Laboratory Course, Spring 2015
  Performance of design, CAD modelling and fabrication of a microfluidics device purposed for isolating airborne antigens for observation and testing.

WORK EXPERIENCE

Freelance Copyeditor, Engineering and Technology, Cactus Global (02/17 – Present)
Perform copyediting services for engineering, science and technology manuscripts undergoing the publication process such that the final product is in clear, standard scientific English and follows all subject-specific conventions. Convert ESL written documents to final publication form.

Quality Assurance Engineer, Thermo Fisher Life Technologies (03/16 – 03/17)
Maintain quality assurance in South San Francisco site. Weekly and monthly generation of instrument and consumable performance statistics from raw data reports, working in conjunction with remote teams from Singapore, Vilnius, Carlsbad, etc. for complete and

accurate international records; data analysis in Excel and product line performance presentation. KPI generation and analysis for daily meetings. Problem report quality owner, collaborating remotely to track and establish responsibility, investigate root cause, and complete CAPAs. Document control change analyst: review, edit and approve all new and updated documents, change requests. Create and catalog product and vendor documentation, certifications. Run daily tiered meeting for cross-functional operations teams. Experience with audit front and back room responsibilities; ISO, FDA and GLP/GMP standards and requirements. LMS system administrator: managing training creation, notification, assignment and records. Maintain site asset records and schedules; monthly data report generation and review. Organized shift from physical to electronic records. Online database upkeep and file collaboration for multiple groups, local and remote.

Supervisors: Zhengyu (Robert) Deng, zhengyu.deng@gmail.com; John Chen, john.chen@thermofisher.com

Documentation Specialist, Augmedix (08/15 – 03/16)

Palo Alto Medical Foundation division. Assist physicians providing real-time documentation of patient encounters to electronic medical record through evaluation and analysis of physician-patient interaction coupled with insight into medical decision making. Prepare charts and cards for the providers (Internists), assisting task management in EMR.

Supervisor: Erin Wong, erinwong@augmedix.com

Intern, Medical Records Department, National Maternity Hospital (6/23 – 08/07/14)

Summer academic internship in Dublin, Ireland. Consolidated and managed communication of protected patient information within hospital and outside clinics, expediting care and streamlining overall daily function.

Supervisor: Ray Howitt, RHowitt@nmh.ie

PUBLICATIONS

Bench, M.L., Vredenburgh, M.J., Zackowitz, I.B. & Vredenburgh, A.G. (2017). An epidemiological perspective of individual and population health risk prevention. Pedro Arezes (ed.), In *Advances in Safety Management and Human Factors*, (pp. 357-368). Warsaw, Poland: Springer International Publishing.

Bench, M.L., Vredenburgh, M.J., Zackowitz, I.B. & Vredenburgh, A.G. (2017). Risk Communication for Consumer Products. Pedro Arezes (ed.), In *Advances in Safety Management and Human Factors*, (pp. 225-235). Warsaw, Poland: Springer International Publishing.

PRESENTATIONS

- *An epidemiological perspective of individual and population health risk prevention.* Presented at the AHFE 2017 International conference on safety management and human factors, Los Angeles, California, July 20, 2017.

TRAINING AND COURSEWORK

- Corrective and preventative actions (CAPA)
- Equipment calibration & preventative maintenance policy
- Risk management
- Design control
- Information security
- Software lifecycles
- Supplier quality validation
- Project management: planning, decision making, finance & change management
- Good documentation practices and R&D lab notebook policy
- BSL2 biosafety (Blood borne pathogens)
- FDA health care compliance
- FDA & Customs import regulations at port of entry
- Product registration
- ISO 9001:2008
- cGMP
- Accident investigation and root cause analysis
- FDA QSR (21 CFR part 820)
- Statistical process control (SPC)
- Quality management systems (QMS)
- Pre- and Post-Market requirements for product marketing and sustainability
- PPI Root Cause Investigation and Countermeasures

- Green marketing; product stewardship and sustainability
- Biomedical physiology for engineers
- Molecular immunology
- Molecular cell biomechanics
- Probability and risk analysis for Engineers
- Stem cells and technologies
- Effective presentation skills
- Adaptive leadership
- Ops academy: supply chain, product management, manufacturing and quality

LABORATORY SKILLS

- Data analysis
- Phase contrast microscopy
- Image processing
- Fluorescent microscopy
- Mammalian cell culturing
- SDS-PAGE
- Western blotting
- mRNA isolation/quantification
- RT-PCR
- Protein quantification
- PDMS microfluidic device fabrication
- Soft- and photolithography

PERSONAL

- Proficient with TrackWise, JD Edwards E1, SAP, JIRA, Business Objects, Agile, Documentum, Mainsaver, Webex , GCMS, LMS (SAP, Thermo Fisher University), Medallia AutoCAD, COMSOL, MATLAB
- Experience with programming and web design (Python, C++, JavaScript, Ruby, HTML, CSS)
- Developing new bioengineering technologies in large scale research project in Shasta (CA), to help people living in regions that lack infrastructure.
- EMT training
- HIPPA certified