

# BRYAN HOWARD PH.D., CQE, CQA

## Engineer / Research Scientist / Educator

### Quality Professional / Entrepreneur

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Smithfield, UT 84335  
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#### EDUCATION

Ph.D., Mechanical Engineering (December 2007)

University of Utah, Salt Lake City, UT

Dissertation Title: Response of Lumbar Physiology to Chronic Occupation Whole Body Vibration Exposure

M.S., Bioengineering (August 2005)

University of Utah, Salt Lake City, UT

Thesis Title: Ultrasonically Enhanced Delivery of Paclitaxel for the Treatment of Breast Cancer

B.S., Biomedical Engineering (December 2002)

Michigan Technological University, Houghton, MI



#### EXPERIENCE

##### PROFESSIONAL

Director of Regulatory Affairs & Quality Assurance

Quansys Biosciences

June 2018 - Present

Senior Design Assurance Engineer

Fresenius Medical Care – North America

April 2016 – June 2018

Design Assurance Engineer

Fresenius Medical Care – North America

April 2015 – April 2016

Adjunct Professor

Utah State University, Department of Biological Engineering

(February 2012 – Present)

Utah State University, Department of Health, Physical Ed. & Recreation

(January 2009 –Present)

Quality Manager

Juniper Systems

June 2012 – April 2015

Senior Product Development Engineer

Innovative Medical Device Solutions – Co-Innovation

February 2011 – June 2012

Product Development Engineer

Innovative Medical Device Solutions – Co-Innovation

December 2007 – February 2011

#### PUBLICATIONS

##### Conference Posters

Ultrasonically-Enhanced Chemotherapeutic Treatment of Mouse Lymphosarcoma by Micellar Encapsulated Paclitaxel, Bryan Howard, 1<sup>st</sup> Annual Rocky Mountain Bioengineering Conference, Sept. 2005

##### Conference Presentations

Response of Lumbar Physiology to Whole Body Vibration, Bryan Howard, Brouha Symposium, University of Utah, Salt Lake City, Sept. 2006

Response of Lumbar Spine Physiology to Chronic Occupational Vibration Exposure, 5<sup>th</sup> Annual NORA Young/New Investigators Symposium, Salt Lake City, April 2007

##### Peer Review Articles

Ultrasound-Enhanced Chemotherapy of Drug-Resistant Breast Cancer Tumors by Micellar-Encapsulated Paclitaxel; Bryan Howard, Zhonggao Gao, Sa-Won Lee, Min-Hyo Seo and Natalya Rapoport, Am J Drug Delivery 2006; 4 (2): 97-104

Typical whole body vibration exposure magnitudes encountered in the open pit mining industry. Howard B, Sesek R, Bloswick D. Work. 2009; 34(3):297-303.

##### Book Chapters

Chapter 15 – Current Designs in Assistive Technology, Ergonomics for Rehabilitation Professionals, CRC Press Taylor and Francis Group – 6000 Broken Sound Parkway NW, Suite 300 Boca Raton Florida © 2009

#### EXPERTISE

ISO Quality Systems / FDA Compliance: 21 CFR 820, ISO 13485, ISO 9001

ISO 14971 – Risk Management

Quality Audits / Continuous Improvement

Statistics / DOE

Design Verification / Design and Process Validation Testing

Risk Analysis (dFMEA, pFMEA, FTA)

DFA, DFM, Tolerance Analysis

Biomechanics, Biomaterials

SolidWorks / MS OFFICE Programs / Sigma Plot / SPSS / Minitab / NCSS /

PASS / Access Data Bases / MS Office Power Pivot & Data Models

#### SKILLS

Project Management – MS Project

FEA (SolidWorks Simulation)

GD&T

MatLab

Human/Machine Interface – Ergonomics & Human Factors

HPLC (High Pressure Liquid Chromatography)

Clinical Research: Animal & Human Models

#### CERTIFICATIONS

Certified Quality Engineer, American Society of Quality

Certification #:

58161 (12/03/11 – 12/31/2015)

Certified Quality Auditor, American Society of Quality

Certification #:

43707 (06/02/12 – 06/30/2015)

ISO9001:2008 36-Hour Lead Auditor with Medical Device Focus-Exemplar

Certification #:

Q19258 10/9/17

Global, ASQ Management Systems Inc.

#### PATENTS

8728162

8439947

8911474

8535377

8992558

10159478

9545252