1. **Name:** Brent D. Cameron
2. **Education – degrees, discipline, institution, year:**
   Ph.D., Biomedical Engineering, Texas A&M University, College Station, TX, 2000
   M.S., Bioengineering, Texas A&M University, College Station, TX, 1996.
   B.S., Bioengineering, Texas A&M University, College Station, TX, 1994.
3. **Academic Experience –** 20 years
   Professor, Department of Bioengineering, University of Toledo, Toledo OH (2011-Present)
   Associate Professor, Department of Bioengineering, University of Toledo, Toledo OH (2006-2011)
   Assistant Professor, Department of Bioengineering, University of Toledo, Toledo OH (2000-2006)
   Assistant Lecturer, Biomedical Engineering Program, Texas A&M Univ. College Station, TX (1998-1999).
4. **Non-academic experience: N/A**
5. **Certifications or professional registrations: N/A**
6. **Current membership in professional organizations:**
   SPIE - the international society for optics and photonics
7. **Honors and Awards**
   Recipient of the 2017 University of Toledo College of Engineering Outstanding Faculty Researcher Award
   Recipient of the 2009-2010 University of Toledo College of Engineering Faculty Excellence Award
   Recipient of the 2004 UT Chapter Biomedical Engineering Society (BMES) Professor of the Year Award
8. **Service Activities (most important within and outside the institution)**
   National and International:
   Session Chair, Optical Diagnostics and Sensing: Toward Point-of-Care Diagnostics, SPIE Photonics West, BiOS, San Francisco, CA, January 2017, February 2016, February 2015, February 2013, February 2012, January 2012, & January 2011.
   Program Committee, Optical Diagnostics and Sensing: Toward Point-of-Care Diagnostics, SPIE Photonics West, BiOS, San Francisco, CA, 2014-Present.
   NSF/CBET Nanobiosensing Panel, Electrochemical and Bioelectronic Sensors, Washington D.C. Jan.24-25, 2017.
   NIH/NHLBI Peer Review Panel: Onsite Tools and Technologies for Heart, Lung, and Blood Clinical Research Point-of-Care SBIR (R43/R44), ZHL1 CSR-O M1/M2, Bethesda, MD, March 9-10, 2016.
   NSF/CBET Nanobiosensing Panel B, Photonics, Plasmonics, SERS Sensing, Washington D.C. Jan. 28-29, 2016
   NSF/CBET Nanobiosensing Panel C, Bioelectronics, Nanopore, and Nanowire, Washington D.C. Jan. 14-15, 2016
   NIH/IMST Small Business: Instrumentation, Environmental, and Occupational Safety; IMST(12), Bethesda, MD, Nov. 16-17, 2015
   NIH/NHLBI Peer Review Panel: Onsite Tools and Technologies for Heart, Lung, and Blood Clinical Research Point-of-Care SBIR (R43/R44), Bethesda, MD, July 13, 2015.
   NSF/CBET Nanobiosensing Panel A, Washington D.C. January 5-6, 2015
   University, College, and Department
   2004-Present University Patent and Commercialization Committee
   2008-Present Engineering College Academic Personnel (ENCAP) Committee
   2009-2010 Engineering College Academic Personnel (ENCAP) Committee Chairman

9. ***Most Important Publications: Refereed Journal Articles/Patents:***
   Refereed Journal Articles/Patents/Conference Papers – last 5 years (partial list)
   Feyzizarnagh H, Haushalter EF Grams EK, Cameron BD, Yoon DY, Kim DS, "Protein Sensing with Aptamer Immobilized on an Antifouling Binary Self-Assembled Monolayer," *Ind. Eng. Chem. Res.,* 2015, 54, 4072−4077, doi: 10.1021/ie503897h
   Garapati C, Clarke B, Zadora S, Burney C, Cameron BD, Fournier R, Baugh RF, Boddu SH, "Development and characterization of erythrosine nanoparticles with potential for treating sinusitis using photodynamic

therapy," *Photodiagnosis Photodyn Ther.* Mar;12(1):9-18. doi: 10.1016/j.pdpdt.2015.01.005, 2015
Pappada SM, Cameron BD, Tulman DB, Bourey RE, Borst MJ, Olorunto W, Bergese SD, Evans DC, Stawicki SP, Papadimos TJ, "Evaluation of a model for glycemic prediction in critically ill surgical patients," *PLoS One*, 8(7), e69475, doi: 10.1371/journal.pone.0069475, 2013.
Park B, Zheng R., Ko, K. Cameron B.D., Yoon, D., Kim D, "A novel glucose biosensor using a bi-enzyme incorporated with peptide nanotubes," *Biosensors and Bioelectronics,* 38, 295-301, 2012.
Zheng R., Cameron B.D., " Surface plasmon resonance: recent progress toward the development of portable real-time blood diagnostics," *Exp. Rev. of Mol. Diag.* 12(1), 5-7. 2012.
Cameron, BD and Clarke, BW, "Integrated Magneto-Optic Modulator/Compensator System, Methods of Making, and Methods of Using," U.S. Patent No. 9,668,678 B2, Issued: Jun. 6, 2017.
Cameron, BD, Kim, DS, Zheng, R, and Park, BW, "Amine-Terminated Aptamer Functionalized Surface Plasmon Resonance Sensors, Methods of Making and Methods of Using," U.S. Patent No. 9,562,266 B1, Issued: Feb. 7, 2017.
Cameron, BD and Kim, DS, "Aptamers For Detection and Measurement of Analytes," U.S. Patent No. 9,494,582 B2, Issued: Nov. 15, 2016.
Cameron, BD and Webb, AJ, "Non-invasive Ocular Analyte Sensing System," U.S. Patent No. 9,456,772 B2, Issued: Oct. 4, 2016.
Cameron, BD and Clarke, BW, "Integrated Magneto-Optic Modulator/Compensator System, Methods of Making, and Methods of Using," U.S. Patent No. 9,423,635 B1, Issued: Aug. 23, 2016.
Cameron, BD and Kim, DS, "Methods and Devices for Detection and Measurement of Analytes," U.S. Patent No. 9,417,234 B2, Issued: Aug. 16, 2016.
Cameron, B.D. and Pappada, S.M. "Neural Network System and Uses Thereof," U.S. Patent No. 9,076,107 B2, Issued: Jul. 7, 2015
Cameron, B.D. and Pappada, S.M. "Neural Network for Glucose Therapy Recommendation," U.S. PCT Patent No. 8,762,306 B2, Issued: June 24, 2014
Cameron, B.D., "Non-Invasive Polarimetric Apparatus and Method for Analyte Sensing in Birefringent Media," U.S. Patent No. 8,718,734 B2, Issued: May 6, 2014
Cameron, B.D. and Webb, A.J. "Non-Invasive ocular analyte sensing system," U.S. PCT Patent No. 8,845,100 B2, Issued: Sep. 30, 2014.

Conference presentations and posters – last 5 years (partial list)

NK Gupta, Y Hwang, and BD Cameron. "Development of a Reverse Iontophoresis Based Noninvasive Real Time Transdermal Biomarker Sensing Platform." Biomedical Engineering Society Annual Meeting, 7th October, 2016, Minneapolis Convention Center, Minneapolis, MN, Oral Presentation.
NK Gupta and BD Cameron. "Development of an Iris-Based Noninvasive Physiological Glucose Sensor: A Preliminary Clinical Trial," Biomedical Engineering Society Annual Meeting, 7th October, 2016, Minneapolis Convention Center, Minneapolis, MN, Oral Presentation.
Gupta, NK, Hwang, Y, Cameron, BD, "The use of reverse iontophoresis based surface plasmon resonance for the development of a noninvasive real time transdermal biomarker sensor," Proc. SPIE. 9715, Optical Diagnostics and Sensing XVI: Toward Point-of-Care Diagnostics, 2016.
Hwang, Y, Gupta, NK, Ojha, YR, Cameron, BD, "An optical sensing approach for the noninvasive transdermal monitoring of cortisol," Proc. SPIE. 9721, Nanoscale Imaging, Sensing, and Actuation for Biomedical Applications XIII, 2016.
Ojha, YR, Marvin, RK, Saepoo, B, Isailovic, D, Giovannucci, D, Hensley, K, Cameron, BD, "In-vitro Selection of DNA Aptamers for the Detection of Histatin-3 in Salvia," Midwest BMES Regional Conference, Akron OH, Nov. 2015

10. **Professional development activities in the last five years:**

Have attended professional conferences on a regular basis