

**BIOGRAPHICAL SKETCH**

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NAME: Zimmerman, M. Bridget

eRA COMMONS USER NAME (credential, e.g., agency login): ZIMMERMANMB

POSITION TITLE: Professor (Clinical)

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

| INSTITUTION AND LOCATION                   | DEGREE<br>(if applicable) | Completion<br>Date<br>MM/YYYY | FIELD OF STUDY               |
|--|---------------------------|-------------------------------|------------------------------|
| University of the Philippines at Los Baños | B.S.                      | 1978                          | Statistics                   |
| University of the Philippines at Los Baños | M.S.                      | 1982                          | Statistics                   |
| Iowa State University, Ames, IA            | M.S.                      | 1984                          | Statistics                   |
| Iowa State University, Ames, IA            | Ph.D.                     | 1987                          | Statistics & Industrial Eng. |

**A. Personal Statement**

As the Biostatistician for this study, I will be actively involved in the study design, statistical analysis, and interpretation of results from this study. I have 30+ years of experience in statistical consulting and collaborative research, including serving as Director of the Biostatistics Consulting Center and as co-investigator/biostatistician for many research grants. Drawing from this experience, I will provide expertise and guidance in implementing study design practices and application of appropriate statistical methods to ensure rigor and reproducibility in addressing the aims and hypotheses of this study.

**B. Positions, Scientific Appointments, and Honors****Positions and Employment**

|           |   |
|-----------|---|
| 2008-     | Professor (Clinical), Department of Biostatistics, College of Public Health, University of Iowa, Iowa City, Iowa                                      |
| 2009-2018 | Associate Director of the ICTS Biostatistics Core, Institute for Clinical and Translational Science at The University of Iowa                         |
| 2003-2008 | Associate Professor (Clinical), Department of Biostatistics, College of Public Health, University of Iowa, Iowa City, Iowa                            |
| 1995-2003 | Associate Research Scientist, Department of Biostatistics, College of Public Health, University of Iowa, Iowa City, Iowa                              |
| 1990-     | Director, Biostatistics Consulting Center, Department of Biostatistics, College of Public Health, University of Iowa, Iowa City, Iowa                 |
| 1988-95   | Assistant Research Scientist, Biostatistics Division, Department of Preventive Medicine and Environmental Health, University of Iowa, Iowa City, Iowa |
| 1987-88   | Visiting Assistant Professor, Department of Statistics and Actuarial Science, University of Iowa, Iowa City, Iowa                                     |
| 1983-87   | Research Assistant, Numerical Analysis Section, Department of Statistics, Iowa State University, Ames, Iowa   |
| 1980-81   | Programmer, Multiple Cropping Systems Project, Department of Agronomy, University of the Philippines at Los Baños, Los Baños, Laguna, Philippines     |

- 1979-81 Instructor, Department of Statistics, University of the Philippines at Los Baños, Los Baños, Laguna, Philippines
- 1978-79 Programmer, Policy and Technical Advisory Group, University of the Philippines at Los Baños, Los Baños, Laguna, Philippines

## **Professional Memberships**

American Statistical Association

## **C. Contributions to Science**

My career as consulting statistician, spanning 30+ years, have primarily involved collaborative research in health science research. My role in these studies included development of study design, statistical analysis, and interpretation of study results. This has resulted in 300+ publications with 26,000+ citations.

My early collaborative work was in ophthalmology research, primarily in the area of vascular eye diseases. The scope of these studies included natural history and progression of these eye diseases, and association of systemic conditions and treatment on visual outcomes. The findings from these studies, which are among my most highly cited publications, have influenced the management of these conditions. Other noteworthy early research was the design and statistical analyses of a large clinical trial on intranasal mupirocin to prevent post-operative *S. aureus* infection. The results from this study have been applied to pre-operative practice for prevention post-operative surgical site infection. Other clinical trials of note included a study on comparative antihypertensive effects of Hydrochlorothiazide and Chlorthalidone, a randomized trial of liberal versus restrictive red blood cell transfusion in preterm infants.

- a. Hayreh SS, **Zimmerman MB**, Podhajsky P. Nocturnal arterial hypotension and its role in optic nerve head and ocular ischemic disorders. American Journal of Ophthalmology 117(5):603-624, 1994. PMID: 8172267
- b. Perl TM, Cullen JJ, Wenzel RP, **Zimmerman MB**, Pfaller MA, Sheppard D, Twombly J, French PP, Herwaldt LA. Intranasal mupirocin to prevent postoperative staphylococcus aureus infections. New England Journal of Medicine 346(24):1871-1877, 2002. PMID: 12063371
- c. Ernst ME, Carter BL, Goerdts CJ, Steffensmeier JJG, Phillips BB, **Zimmerman MB**, Bergus GR. Comparative antihypertensive effects of Hydrochlorothiazide and Chlorthalidone on ambulatory and office blood pressure. Hypertension 47:352-358, 2006. PMID: 16432050
- d. Bell EF, Strauss RG, Widness JA, Mahoney LT, Mock DM, Seward VJ, Cress GA, Johnson KJ, Kromer IJ, **Zimmerman MB**. Randomized trial of liberal versus restrictive guidelines for red blood cell transfusion in preterm infants. Pediatrics 115(6):1685-1691, 2005. PMID: 15930233  
PMCID:PMC2866196

The scope of my research collaborations encompasses the entire lifespan, from studies based on animal models, neonatal and pediatric research, progression of neuromuscular disorders, corneal transplant research, and surgical outcomes. The following are selected recent publications from these collaborations.

- e. Dhanesha N, Schnell T, Rahmatalla S, DeShaw J, Thedens D, Parker BM, **Zimmerman MB**, Pieper AA, Chauhan AK, Leira EC. Low-Frequency Vibrations Enhance Thrombolytic Therapy and Improve Stroke Outcomes. Stroke 51(6):1855-1861, 2020. doi: 10.1161/STROKEAHA.120.029405. PMID: 32397935; PMCID: PMC7263385
- f. Uc A, **Zimmerman MB**, Wilschanski M, Werlin SL, Troendle D, Shah U, Schwarzenberg SJ, Rhee S, Pohl JF, Perito ER, Palermo JJ, Ooi CY, Liu Q, Lin TK, Morinville VD, McFerron BA, Husain SZ, Himes R, Heyman MB, Gonska T, Giefer MJ, Garipey CE, Freedman SD, Fishman DS, Bellin MD, Barth B, Abu-El-Hajja M, Lowe ME. Impact of Obesity on Pediatric Acute Recurrent and Chronic Pancreatitis. Pancreas 47(8):967-973, 2018. PMID: 30059474 PMCID:PMC6095802
- g. Gedlinske AM, Stephan CM, Mockler SR, Laubscher KM, Laubenthal KS, Crockett CD, **Zimmerman MB**, Mathews KD. Motor Outcome Measures in Patients with *FKRP* Mutations, Longitudinal Follow-up. Neurology 39(15):e2131-e2139, 2020. PMID: 32764098
- h. Skeie JM, Aldrich BT, Nishimura DY, Schmidt GA, **Zimmerman MB**, Ling JJ, Naguib YW, Salem AK, Greiner MA. Ubiquinol Supplementation of Donor Tissue Enhances Corneal Endothelial Cell Mitochondrial Respiration. Cornea 39(10):1285-1290, 2020. PMID: 32558735

Recent collaborations and current ongoing randomized clinical trials include studies on pain with faculty in the College of Nursing, and Department of Physical Therapy which examined effect of Transcutaneous Electrical Nerve Stimulation on pain in women with Fibromyalgia, and the effect of Acceptance and Commitment Therapy for prevention of chronic post-surgical pain and opioid use.

- i. Dailey DL, Vance CGT, Rakel BA, **Zimmerman MB**, Embree J, Merriwether EN, Geasland KM, Chimenti R, Williams JM, Golchha M, Crofford LJ, Sluka KA. Transcutaneous Electrical Nerve Stimulation Reduces Movement-Evoked Pain and Fatigue: A Randomized, Controlled Trial. Arthritis and Rheumatology 72(5):824-836, 2020. PMID: PMC7188591
- j. Vance CG, **Zimmerman MB**, Dailey DL, Rakel BA, Geasland KM, Chimenti RL, Williams JM, Golchha M, Crofford LJ, Sluka KA. Reduction in movement-evoked pain and fatigue during initial 30-minute TENS treatment predicts TENS responders in women with fibromyalgia. Pain. 2020 Nov 11;. doi: 10.1097/j.pain.0000000000002144. [Epub ahead of print] PMID: 33230010
- k. Dindo L, **Zimmerman MB**, Hadlandsmyth K, StMarie B, Embree J, Marchman J, Tripp-Reimer T, Rakel B. Acceptance and Commitment Therapy for Prevention of Chronic Post-surgical Pain and Opioid Use in At-Risk Veterans: A Pilot Randomized Controlled Study. Journal of Pain 19(10):1211-1221, 2018. PMID: 29777950 PMID: PMC6163061
- l. Hadlandsmyth K, Dindo LN, Wajid R, Sugg SL, **Zimmerman MB**, Rakel BA. A single-session acceptance and commitment therapy intervention among women undergoing surgery for breast cancer: A randomized pilot trial to reduce persistent postsurgical pain. Psychooncology 28(11):2210-2217, 2019. doi: 10.1002/pon.5209. PMID: 31430830.

Other currently NIH funded ongoing research that I am co-investigator/biostatistician include studies on 1) behavioral influences on ovarian cancer progression, 2) intervention trial to improve quality of life in ovarian cancer survivors, 3) cohort study on sedentary behavior, physical activity, sleep, and cardiovascular risk in pregnancy, and 4) metabolic biomarkers for fibromyalgia.

### **Complete List of Published Work in My Bibliography:**

My published work can be accessed through My NCBI:

<https://www.ncbi.nlm.nih.gov/myncbi/18qZwszZqst5z/bibliography/public/>