

## *CURRICULUM VITAE*

**Joseph W. Brewer, PhD**

*Chair, Department of Biomedical Sciences  
Discipline Chair for Immunology  
Professor of Immunology  
Edward Via College of Osteopathic Medicine-Auburn*

### **CONTACT INFORMATION**

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### **EDUCATION**

College	Auburn University, Auburn, AL B.S., Molecular Biology, 1986-1990
Graduate School	Duke University, Durham, NC Ph.D., Immunology, 1990-1995
Postdoctoral Training	St. Jude Children's Research Hospital, Memphis, TN Cell Biology, 1995-1999

### **ACADEMIC APPOINTMENTS**

1999-2005	Assistant Professor of Immunology, Department of Microbiology and Immunology, Loyola University Chicago Stritch School of Medicine, Maywood, IL
2005-2007	Associate Professor of Immunology (tenured), Department of Microbiology and Immunology, Loyola University Chicago Stritch School of Medicine, Maywood, IL
2007-2013	Associate Professor of Immunology (tenured), Department of Microbiology and Immunology, University of South Alabama College of Medicine, Mobile, AL
2013-2020	Associate Professor of Immunology and Chair, Department of Molecular and Cellular Sciences, Liberty University College of Osteopathic Medicine, Lynchburg, VA
2014-2020	Associate Dean for Research, Liberty University College of Osteopathic Medicine, Lynchburg, VA
2020-present	Professor and Discipline Chair for Immunology, Edward Via College of Osteopathic Medicine-Auburn, Auburn, AL
2021-present	Chair, Department of Biomedical Sciences, Edward Via College of Osteopathic Medicine-Auburn, Auburn, AL

## **COMMITTEES AND LEADERSHIP**

### Loyola University Chicago Stritch School of Medicine

- 2000-2007 Member, Department of Microbiology and Immunology, Graduate Program Oversight Committee, Retreat Committee, Seminar Committee
- 2003-2007 Member, Institutional Animal Care and Use Committee
- 2003-2007 Member, Awards Committee

### University of South Alabama College of Medicine

- 2007-2010 Member, Biomedical Library Advisory Committee
- 2007-2010 Member, Medical Student Research Committee
- 2007-2013 Member, Research Forum Committee
- 2008-2009 Chair, Medical Student Research Committee
- 2009 Vice-Chair, Institutional Animal Care and Use Committee
- 2010-2011 Chair, Institutional Animal Care and Use Committee
- 2010 Member, LCME Self Study Task Force – Training Sub-Committee
- 2010-2013 Member, Flow Cytometry Core Lab Advisory Committee
- 2011 Member, School of Medicine Action Response Team for Curriculum
- 2011-2013 Member, Curriculum Committee
- 2011-2013 Member, Assessment and Evaluation Sub-Committee of Curriculum Committee
- 2012-2013 Member, University Library Committee

### Liberty University College of Osteopathic Medicine

- 2014-2015 Member, Curriculum Committee
- 2014-2016 Member, Student Progress Committee
- 2014-2017 Member, Scholarship Committee
- 2014-2017 Member, Dean's Council
- 2014-2020 Chair, Research Committee
- 2014-2020 Chair, Institutional Animal Care and Use Committee
- 2016-2018 Chair, Curriculum Committee
- 2017-2020 Member, Policy Review Committee
- 2017-2020 Member, Facilities and Needs Assessment Committee
- 2018-2020 Member, Executive Curriculum Committee
- 2018-2020 Member, Grants Policy Committee

### Edward Via College of Osteopathic Medicine-Auburn

- 2021-present Member, Pre-Clinical Curriculum Committee
- 2021-present Member, Via Research Recognition Day Committee
- 2022-present Member, Peer Exam Review Committee
- 2022-present Member, Admissions Committee

## **TEACHING EXPERIENCE**

### **Medical Education**

#### Loyola University Chicago Stritch School of Medicine

2002-2007 Host Defense course, Facilitator for case study small groups  
2007 Host Defense course, Lecturer

#### University of South Alabama College of Medicine

2008-2013 Medical Microbiology and Immunology course, Lecturer and Facilitator for labs  
2011-2013 Medical Microbiology and Immunology course, Lecturer and Facilitator for Team-Based Learning  
2012-2013 Hematology and Host Defense course, Co-Director, Lecturer, and Facilitator for Team-Based Learning

#### Liberty University College of Osteopathic Medicine

2014-2016 Biomedical Foundations of Osteopathic Medicine course, Director  
2014-2020 Courses: Biomedical Foundations of Osteopathic Medicine; Integument and Musculoskeletal System; Cardiovascular, Respiratory, and Hematologic Systems; Gastrointestinal System and Nutrition; Endocrine and Reproductive Systems; Urinary System; Population-Based Medicine; Hematology and Oncology; Orthopedics, Rheumatology, and Dermatology, Lecturer and Facilitator for Team-Based Learning for immunology content

#### Edward Via College of Osteopathic Medicine-Auburn

2020-present Block 1 Immunology course (MED 7016), Director and Lecturer  
2020-present Block 2 Clinical Medicine: Musculoskeletal Disorders, Rheumatology and Orthopedics course (MED 7301), Lecturer  
2020 Block 2 Cell Biology and Physiology: Musculoskeletal System course (MED 7130), Lecturer  
2021-present Block 3 Clinical Medicine: Neurology/Neurosurgery course (MED 7271), Lecturer  
2021-present Block 7 Clinical Medicine: Dermatology course (MED7308), Lecturer  
2021 Block 4 Cell Biology and Physiology: Cardiovascular and Pulmonary Systems course (MED 7140), Lecturer  
2022-present Block 3 Clinical Medicine: Otolaryngology/Ophthalmology course (MED 7272), Lecturer  
2022-present Block 8 Comprehensive Review course, Contributor  
2022-present Block 5 Clinical Medicine: Nephrology course (MED7283), Lecturer  
2023-present Block 4 Clinical Medicine: Cardiology and Pulmonology course (MED 7277), Lecturer

### **Graduate PhD Education**

#### Loyola University Chicago Stritch School of Medicine

2000-2007 Courses: Basic Concepts of Immunology; Basic Virology; Molecular Biology of B Lymphocyte Differentiation; Methods in Microbiology; Special Topics; Lecturer and Group Facilitator  
2006-2007 Basic Concepts of Immunology course, Director

## University of South Alabama College of Medicine

2008-2013 Courses: Fundamentals of Biomedical Sciences I and II; Introduction to Research Methods, Lecturer

### **PROFESSIONAL AFFILIATIONS**

2000-present Member, American Association of Immunologists

2021-present Member, Boshell Diabetes and Metabolic Diseases Research Program, Auburn University, Auburn, AL

### **HONORS AND AWARDS**

#### **Academic Awards**

1990 David T. Smith Graduate Award, Duke University

#### **Teaching Awards**

2016 Biomedical Educator of the Year, Liberty University College of Osteopathic Medicine

2019 Excellence in Teaching Award, Liberty University College of Osteopathic Medicine

2020, 2022 Faculty of the Block (Block 1), Edward Via College of Osteopathic Medicine-Auburn

### **PROFESSIONAL SERVICE**

#### **Study Sections**

National Science Foundation Graduate Research Fellowship Program

2003-2004 Member, Genetics and Cell Biology Review Panel

2005-2006 Chair, Genetics and Cell Biology Review Panel

2007-2008 Chair, Microbiology and Cell Biology Review Panel

2009-2011 Member, Microbiology and Cell Biology Review Panel

#### **Ad hoc Reviewer – Scientific Journals**

2000-present *Science, Science Signaling, Nat. Rev. Immunol., Proc. Natl. Acad. Sci. USA, J. Cell Biol., J. Biol. Chem., Mol. Cell. Biol., EMBO J., EMBO Reports, Chem. Biol., J. Expt. Med., J. Immunol., Eur. J. Immunol., Blood, FEBS Letters, Int. Immunol., Biochim. Biophys. Acta, J. Cell. Biochem., Clin. Expt. Immunol., Cancer Res., Cell. Mol. Biol. Letters, PLoS One, Nat. Comm., Nat. Immunol., Oncogene, FASEB J., EMBO Mol. Med.*

#### **Ad hoc Reviewer – Funding Agencies**

2004-2005 Israel Science Foundation

2005 National Cancer Institute, P01, Angiogenesis and Hypoxia Cluster

2006, 2008 National Institutes of Health, Pharmacogenetics of Fluoride RFA

2006, 2010 National Science Foundation

2009 Austrian Science Fund, START Award Program

2009-2010 American Heart Association, Immunology and Virology Committee

2011 Comitato Telethon Fondazione, Italy

2012, 2016 United States – Israel Binational Science Foundation

2013 Austrian Science Fund

2015, 2019 French National Cancer Institute

**Other**

2002-2006 Council Member, Autumn Immunology Conference, Chicago, IL  
2009 Guest editor, *Proc. Natl. Acad. Sci. USA*

**MENTORING ACTIVITIES**

**Research Mentorship**

Loyola University Stritch School of Medicine

Mentor for PhD Dissertation

2000-2007 Jennifer N. Gass

2002-2006 Kathryn Gunn and Rungtawan Sriburi

2005-2008 Hemamalini Bommasamy

Mentor for Master's Thesis

2000-2002 Nicole Gifford

2004-2007 Cheryl Ward-Chapman

Mentor for Post-Doctoral Fellow

2005-2007 Gerald. L. Buldak, PhD

Member of PhD Dissertation Committee

2000-2007 16 graduate students

University of South Alabama College of Medicine

Mentor for PhD Dissertation

2008-2012 Andrew Byrd

Mentor for Medical Student Research

2008-2011 3 medical students, summer research program

Member of PhD Dissertation Committee

2008-2013 3 graduate students

Liberty University College of Osteopathic Medicine

Mentor for Medical Student Research

2015-2019 7 medical students, summer research elective

Edward Via College of Osteopathic Medicine-Auburn

Mentor for Medical Student Research

2021-present 11 medical students, research involvement

2021 1 medical student, OMS-3 research rotation

2022 3 medical students, OMS-3 research rotation

**INSTITUTIONAL SERVICE**

Edward Via College of Osteopathic Medicine-Auburn

2020-present Advisor, 12 to 19 OMS-1 students/year

2020-present Interviewer, medical student applicants

2021-present Poster judge, Via Research Recognition Day

## **GRANTS and CONTRACTS**

### **Completed Grants**

Grant: F32 GM018443  
Source: NIH  
Role: PI  
Dates: 08/01/1996 – 07/31/1998  
Title: Mechanism for Cellular Responses to Physiological Stress  
Total award: \$52,300

Grant: R01 GM061970  
Source: NIH  
Role: PI  
Dates: 06/01/2000 – 05/31/2005  
Title: Homeostasis of the ER in Differentiating B cells  
Total award: \$1,058,176

Grant: R01 GM061970  
Source: NIH  
Role: PI  
Dates: 06/01/2005 – 05/31/2009  
Title: Homeostasis of the ER in Differentiating B cells  
Total award: \$1,137,339

Grant: R01 GM061970-10S1  
Source: NIH  
Role: PI  
Dates: 09/30/2009 – 01/31/2010  
Title: Homeostasis of the ER in Differentiating B cells  
Total award: \$58,723

Grant: R01 GM061970  
Source: NIH  
Role: PI years 1-2, Co-I years 3-4 after grant transfer to Barrington (PI)  
Dates: 09/01/2010 – 06/30/2014  
Title: Homeostasis of the ER in Differentiating B cells  
Total award: \$1,256,368

Grant: Seed Funding for Research  
Source: University of South Alabama Cancer Research Fund  
Role: PI  
Dates: 10/01/2011 – 09/30/2012  
Title: MicroRNA-mediated Regulation of XBP1 and Breast Cancer Cell Fate  
Total award: \$56,390

Grant: Seed Funding for Research  
Source: Liberty University College of Osteopathic Medicine  
Role: PI  
Dates: 06/21/2016 – 06/30/2020  
Title: MicroRNA-mediated Regulation of XBP1 and Breast Cancer Cell Fate  
Total award: \$12,000

Grant: Seed Funding for Research  
Source: Center for One Health Research Seed Grant Program  
Role: Co-PI with R.L. Judd, PhD, AUCVM  
Dates: 07/01/2021 – 06/30/2022  
Title: Regulatory Interactions of Adipocytes and B Lymphocytes  
Total award: \$39,535

Grant: Kern National Network for Flourishing in Medicine Pilot Grant  
Source: Kern National Network for Flourishing in Medicine  
Role: Co-I (PI, William Pearson, PhD, VCOM-Auburn)  
Dates: 07/2022 – 01/2023  
Title: Flourishing Approach to Physician Formation (Sub-project title: Faculty development as a means of faculty flourishing)  
Total award: \$50,000

### **Active Grants**

Grant: Seed Funding for Research  
Source: Center for One Health Research Seed Grant Program  
Role: Co-PI with R.L. Judd, PhD, AUCVM  
Dates: 07/01/2022 – 06/30/2023  
Title: Adipocyte-Mediated Regulation of B cell Function  
Total award: \$39,450

Grant: Kern National Network for Flourishing in Medicine Extension Grant  
Source: Kern National Network for Flourishing in Medicine  
Role: Co-I (PI, William Pearson, PhD, VCOM-Auburn)  
Dates: 02/2023 – 06/2024  
Title: Flourishing Approach to Physician Formation (Sub-project title: Repurposing student advisee system for character, caring, and flourishing)  
Total award: \$100,000

### **PUBLICATIONS**

#### **Peer-Reviewed Journal Articles**

1. Randall TD, **Brewer JW**, Corley RB. Direct evidence that J chain regulates the polymeric structure of IgM in antibody-secreting B cells. *J Biol Chem.* 1992;267(25):18002-7. PubMed PMID: 1517233.

2. Randall TD, Lund FE, **Brewer JW**, Aldridge C, Wall R, Corley RB. Interleukin-5 (IL-5) and IL-6 define two molecularly distinct pathways of B-cell differentiation. *Mol Cell Biol.*

1993;13(7):3929-36. doi: 10.1128/mcb.13.7.3929-3936.1993. PubMed PMID: 8321200; PubMed Central PMCID: PMCPMC359931.

3. **Brewer JW**, Randall TD, Parkhouse RM, Corley RB. Mechanism and subcellular localization of secretory IgM polymer assembly. *J Biol Chem.* 1994;269(25):17338-48. PubMed PMID: 8006043.

4. Bornemann KD, **Brewer JW**, Beck-Engeser GB, Corley RB, Haas IG, Jäck HM. Roles of heavy and light chains in IgM polymerization. *Proc Natl Acad Sci USA.* 1995;92(11):4912-6. doi: 10.1073/pnas.92.11.4912. PubMed PMID: 7761423; PubMed Central PMCID: PMCPMC41817.

5. **Brewer JW**, Corley RB. Quality control in protein biogenesis: thiol-mediated retention monitors the redox state of proteins in the endoplasmic reticulum. *J Cell Sci.* 1996;109(Pt 9):2383-92. doi: 10.1242/jcs.109.9.2383. PubMed PMID: 8886987.

6. Wang XZ, Lawson B, **Brewer JW**, Zinszner H, Sanjay A, Mi LJ, Boorstein R, Kreibich G, Hendershot LM, Ron D. Signals from the stressed endoplasmic reticulum induce C/EBP-homologous protein (CHOP/GADD153). *Mol Cell Biol.* 1996;16(8):4273-80. doi: 10.1128/mcb.16.8.4273. PubMed PMID: 8754828; PubMed Central PMCID: PMCPMC231426.

7. Bornemann KD, **Brewer JW**, Perez E, Doerre S, Sita R, Corley RB. Secretion of soluble pre-B cell receptors by pre-B cells. *J Immunol.* 1997;158(6):2551-7. PubMed PMID: 9058786.

8. **Brewer JW**, Cleveland JL, Hendershot LM. A pathway distinct from the mammalian unfolded protein response regulates expression of endoplasmic reticulum chaperones in non-stressed cells. *EMBO J.* 1997;16(23):7207-16. doi: 10.1093/emboj/16.23.7207. PubMed PMID: 9384597; PubMed Central PMCID: PMCPMC1170321.

9. **Brewer JW**, Corley RB. Late events in assembly determine the polymeric structure and biological activity of secretory IgM. *Mol Immunol.* 1997;34(4):323-31. doi: 10.1016/s0161-5890(97)00029-1. PubMed PMID: 9244345.

10. Hughey CT, **Brewer JW**, Colosia AD, Rosse WF, Corley RB. Production of IgM hexamers by normal and autoimmune B cells: implications for the physiologic role of hexameric IgM. *J Immunol.* 1998;161(8):4091-7. PubMed PMID: 9780180.

11. Lawson B, **Brewer JW**, Hendershot LM. Geldanamycin, an hsp90/GRP94-binding drug, induces increased transcription of endoplasmic reticulum (ER) chaperones via the ER stress pathway. *J Cell Physiol.* 1998;174(2):170-8. doi: 10.1002/(sici)1097-4652(199802)174:2<170::Aid-jcp4>3.0.Co;2-l. PubMed PMID: 9428803.

12. **Brewer JW**, Hendershot LM, Sherr CJ, Diehl JA. Mammalian unfolded protein response inhibits cyclin D1 translation and cell-cycle progression. *Proc Natl Acad Sci USA.* 1999;96(15):8505-10. doi: 10.1073/pnas.96.15.8505. PubMed PMID: 10411905; PubMed Central PMCID: PMCPMC17546.



13. Lee YK, **Brewer JW**, Hellman R, Hendershot LM. BiP and immunoglobulin light chain cooperate to control the folding of heavy chain and ensure the fidelity of immunoglobulin assembly. *Mol Biol Cell*. 1999;10(7):2209-19. doi: 10.1091/mbc.10.7.2209. PubMed PMID: 10397760; PubMed Central PMCID: PMCPMC25436.
14. **Brewer JW**, Diehl JA. PERK mediates cell-cycle exit during the mammalian unfolded protein response. *Proc Natl Acad Sci USA*. 2000;97(23):12625-30. doi: 10.1073/pnas.220247197. PubMed PMID: 11035797; PubMed Central PMCID: PMCPMC18814.
15. Gass JN, Gifford NM, **Brewer JW**. Activation of an unfolded protein response during differentiation of antibody-secreting B cells. *J Biol Chem*. 2002;277(50):49047-54. doi: 10.1074/jbc.M205011200. PubMed PMID: 12374812.
16. Ma Y, **Brewer JW**, Diehl JA, Hendershot LM. Two distinct stress signaling pathways converge upon the CHOP promoter during the mammalian unfolded protein response. *J Mol Biol*. 2002;318(5):1351-65. doi: 10.1016/s0022-2836(02)00234-6. PubMed PMID: 12083523.
17. Gunn KE, Gifford NM, Mori K, **Brewer JW**. A role for the unfolded protein response in optimizing antibody secretion. *Mol Immunol*. 2004;41(9):919-27. doi: 10.1016/j.molimm.2004.04.023. PubMed PMID: 15261464.
18. Sriburi R, Jackowski S, Mori K, **Brewer JW**. XBP1: a link between the unfolded protein response, lipid biosynthesis, and biogenesis of the endoplasmic reticulum. *J Cell Biol*. 2004;167(1):35-41. doi: 10.1083/jcb.200406136. PubMed PMID: 15466483; PubMed Central PMCID: PMCPMC2172532.
19. Stephens SB, Dodd RD, **Brewer JW**, Lager PJ, Keene JD, Nicchitta CV. Stable ribosome binding to the endoplasmic reticulum enables compartment-specific regulation of mRNA translation. *Mol Biol Cell*. 2005;16(12):5819-31. doi: 10.1091/mbc.e05-07-0685. PubMed PMID: 16221886; PubMed Central PMCID: PMCPMC1289424.
20. Bechill J, Chen Z, **Brewer JW**, Baker SC. Mouse hepatitis virus infection activates the Ire1/XBP1 pathway of the unfolded protein response. *Adv Exp Med Biol*. 2006;581:139-44. doi: 10.1007/978-0-387-33012-9\_24. PubMed PMID: 17037520; PubMed Central PMCID: PMCPMC7123145.
21. Gunn KE, **Brewer JW**. Evidence that marginal zone B cells possess an enhanced secretory apparatus and exhibit superior secretory activity. *J Immunol*. 2006;177(6):3791-8. doi: 10.4049/jimmunol.177.6.3791. PubMed PMID: 16951340.
22. Fagone P, Sriburi R, Ward-Chapman C, Frank M, Wang J, Gunter C, **Brewer JW**, Jackowski S. Phospholipid biosynthesis program underlying membrane expansion during B-lymphocyte differentiation. *J Biol Chem*. 2007;282(10):7591-605. doi: 10.1074/jbc.M608175200. PubMed PMID: 17213195.

23. Sriburi R, Bommasamy H, Buldak GL, Robbins GR, Frank M, Jackowski S, **Brewer JW**. Coordinate regulation of phospholipid biosynthesis and secretory pathway gene expression in XBP-1(S)-induced endoplasmic reticulum biogenesis. *J Biol Chem*. 2007;282(10):7024-34. doi: 10.1074/jbc.M609490200. PubMed PMID: 17213183.
24. Bechill J, Chen Z, **Brewer JW**, Baker SC. Coronavirus infection modulates the unfolded protein response and mediates sustained translational repression. *J Virol*. 2008;82(9):4492-501. doi: 10.1128/jvi.00017-08. PubMed PMID: 18305036; PubMed Central PMCID: PMC2293058.
25. Gass JN, Jiang HY, Wek RC, **Brewer JW**. The unfolded protein response of B-lymphocytes: PERK-independent development of antibody-secreting cells. *Mol Immunol*. 2008;45(4):1035-43. doi: 10.1016/j.molimm.2007.07.029. PubMed PMID: 17822768; PubMed Central PMCID: PMC2677759.
26. Bommasamy H, Back SH, Fagone P, Lee K, Meshinchi S, Vink E, Sriburi R, Frank M, Jackowski S, Kaufman RJ, **Brewer JW**. ATF6 $\alpha$  induces XBP1-independent expansion of the endoplasmic reticulum. *J Cell Sci*. 2009;122(Pt 10):1626-36. doi: 10.1242/jcs.045625. PubMed PMID: 19420237; PubMed Central PMCID: PMC2680102.
27. Fagone P, Gunter C, Sage CR, Gunn KE, **Brewer JW**, Jackowski S. CTP:phosphocholine cytidyltransferase alpha is required for B-cell proliferation and class switch recombination. *J Biol Chem*. 2009;284(11):6847-54. doi: 10.1074/jbc.M807338200. PubMed PMID: 19139091; PubMed Central PMCID: PMC2652266.
28. Bartoszewski R, **Brewer JW**, Rab A, Crossman DK, Bartoszewska S, Kapoor N, Fuller C, Collawn JF, Bebek, Z. The unfolded protein response (UPR)-activated transcription factor X-box-binding protein 1 (XBP1) induces microRNA-346 expression that targets the human antigen peptide transporter 1 (TAP1) mRNA and governs immune regulatory genes. *J Biol Chem*. 2011;286(48):41862-70. doi: 10.1074/jbc.M111.304956. PubMed PMID: 22002058; PubMed Central PMCID: PMC3308892.
29. Aragon IV, Barrington RA, Jackowski S, Mori K, **Brewer JW**. The specialized unfolded protein response of B lymphocytes: ATF6 $\alpha$ -independent development of antibody-secreting B cells. *Mol Immunol*. 2012;51(3-4):347-55. Epub 2012/05/05. doi: 10.1016/j.molimm.2012.04.001. PubMed PMID: 22555069; PubMed Central PMCID: PMC3358488.
30. Byrd AE, Aragon IV, **Brewer JW**. MicroRNA-30c-2\* limits expression of proadaptive factor XBP1 in the unfolded protein response. *J Cell Biol*. 2012;196(6):689-98. doi: 10.1083/jcb.201201077. PubMed PMID: 22431749; PubMed Central PMCID: PMC3308703.
31. **Brewer JW**, Solodushko V, Aragon I, Barrington RA. Phosphatidylcholine as a metabolic cue for determining B cell fate and function. *Cell Immunol*. 2016;310:78-88. doi:

10.1016/j.cellimm.2016.08.002. PubMed PMID: 27502364; PubMed Central PMCID: PMC5125835.

### Peer-Reviewed Book Chapters and Review Articles

1. **Brewer JW**, Randall TD, Parkhouse RM, Corley RB. IgM hexamers? Immunology today. 1994;15(4):165-8. doi: 10.1016/0167-5699(94)90313-1. PubMed PMID: 8198707.
2. **Brewer JW**, Hendershot LM. Molecular chaperones in the life cycle of proteins: structure, function and mode action. New York: Marcel Dekker; c1998. Chapter 17, Early events in the biosynthesis of secretory pathway proteins: role of molecular chaperones; p. 415-34.
3. Gass JN, Gunn KE, Sriburi R, **Brewer JW**. Stressed-out B cells? Plasma-cell differentiation and the unfolded protein response. Trends Immunol. 2004;25(1):17-24. doi: 10.1016/j.it.2003.11.004. PubMed PMID: 14698280.
4. **Brewer JW**, Hendershot LM. Building an antibody factory: a job for the unfolded protein response. Nat Immunol. 2005;6(1):23-9. doi: 10.1038/ni1149. PubMed PMID: 15611778.
5. **Brewer JW**, Jackowski S. UPR-mediated membrane biogenesis in B Cells. Biochem Res Intl. 2012;2012:738471. doi: 10.1155/2012/738471. PubMed PMID: 22110962; PubMed Central PMCID: PMC3206326.
6. Byrd AE, **Brewer JW**. Intricately regulated: a cellular toolbox for fine-tuning XBP1 expression and activity. Cells. 2012;1(4):738-53. doi: 10.3390/cells1040738. PubMed PMID: 24710528; PubMed Central PMCID: PMC3901129.
7. **Brewer JW**. Phospholipids: "greasing the wheels" of humoral immunity. Biochim Biophys Acta. 2013;1831(3):642-51. doi: 10.1016/j.bbali.2012.09.018. PubMed PMID: 23051607; PubMed Central PMCID: PMC3562403.
8. Byrd AE, **Brewer JW**. Micro(RNA)managing endoplasmic reticulum stress. IUBMB Life. 2013;65(5):373-81. doi: 10.1002/iub.1151. PubMed PMID: 23554021; PubMed Central PMCID: PMC3637854.
9. **Brewer JW**. Regulatory crosstalk within the mammalian unfolded protein response. Cell Mol Life Sci. 2014;71(6):1067-79. doi: 10.1007/s00018-013-1490-2. PubMed PMID: 24135849.

### PROFESSIONAL PRESENTATIONS

1. *Regulation of mammalian ER chaperone synthesis*. Presented in workshop "Misfolding and the ER Stress Response" at the Keystone Symposia: Protein Folding, Modification, and Transport in the Early Secretory Pathway. Copper, Mountain, CO. 05/14/1999.
2. *Homeostasis of the ER in differentiating B cells*. Presented in block symposium "Peripheral B cell Responses: Germinal Centers and Secondary Lymphoid Architecture" at the American Association of Immunologists Annual Meeting. Seattle, WA. 05/16/2000.
3. *Signal transduction and the endoplasmic reticulum: meeting the needs of the cell*. Presented in the Department of Microbiology and Immunology, The Chicago Medical School. North Chicago, IL. 03/27/2001.

4. *The unfolded protein response in differentiating B cells: building and equipping the secretory pathway.* Presented in the Immunology Training Program seminar series, Boston University School of Medicine. Boston, MA. 12/01/2004.
5. *Building antibody factories: a job for the unfolded protein response.* Presented in the Department of Microbiology and Immunology, Indiana University School of Medicine. 05/26/2005.
6. *XBPI: a link between the unfolded protein response, phospholipid biosynthesis, and biogenesis of the endoplasmic reticulum.* Presented in mini-symposium “XBPI, a multifunctional transcription factor activated by ER stress” (co-organizer) at the Annual Meeting of the Japanese Biochemical Society. Kobe, Japan. 10/20/2005.
7. *XBPI enhances secretory capacity, but is there more to the story?* Presented in the Department of Biophysics, Kyoto University. Kyoto, Japan. 10/22/2005
8. *The unfolded protein response: meeting the needs of the secretory pathway.* Presented in the Cell Signaling Seminar Series, University of South Alabama College of Medicine. Mobile, AL. 05/17/2006.
9. *Homeostasis of the endoplasmic reticulum in antibody-secreting B cells.* Presented in the Department of Microbiology and Immunology, University of South Alabama College of Medicine. Mobile, AL. 11/07/2006.
10. *ER on demand: expansion of the secretory machinery in differentiating plasma cells.* Presented at the FASEB Summer Research Conference “From Unfolded Proteins in the Endoplasmic Reticulum to Disease.” Indian Wells, CA. 08/17/2007.
11. *Membrane biogenesis induced by the unfolded protein response.* Presented in symposium “Stress and Lipid Metabolism” at the Annual Meeting of American Society of Biochemistry and Molecular Biology. San Diego, CA. 04/08/2008.
12. *Unraveling the unfolded protein response of antibody-secreting B cells.* Presented in the Department of Cell Biology, University of Alabama at Birmingham School of Medicine. Birmingham, AL. 01/05/2011.
13. *Biogenesis and homeostasis of the mammalian endoplasmic reticulum.* Presented in the Grand Rounds Series, Department of Surgery, University of South Alabama College of Medicine. Mobile, AL. 02/18/2011.
14. *Unraveling the unfolded protein response of antibody-secreting B cells.* Presented in the Distinguished Scientist Seminar Program, University of South Alabama College of Medicine. Mobile, AL. 05/05/2011.
15. *Micro(RNA)managing the cellular response to endoplasmic reticulum stress.* Presented at the Mitchell Cancer Institute. Mobile, AL. 05/22/2012.

16. *The UPR in B cells: balancing supply and demand in the secretory pathway*. Presented in the Department of Biology, University of Alabama at Birmingham. Birmingham, AL. 04/11/2014.

17. *Building an antibody factory: the unfolded protein response at work in B cells*. Presented in the Suter Science Seminar Series, Eastern Mennonite University. Harrisonburg, VA. 03/20/2015.

18. *What are stem cells?* Presented in the medical ethical symposium “Made in God’s Image: Its Implications for Law and Medicine” at the Liberty University College of Osteopathic Medicine. Lynchburg, VA. 04/22/2017.

19. *Adipose tissue: much more than fat...an immune cell environment*. Presented in the Auburn University Microbiology Club, College of Sciences and Mathematics, Auburn University. Auburn, AL. 11/11/2022.

### **PUBLISHED ABSTRACTS**

1. **Brewer JW**, Lawson B, Wang X-Z, Ron D, Hendershot LM. Signals from the stressed ER induce C/EBP homologous protein (CHOP/GADD153). American Association for Cancer Research Special Conference: Inducible Genomic Responses. Stevenson, WA. 1996.

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#### **OTHER**

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|--------------|---|
| 2001-2007    | Adult small group leader and children’s ministries volunteer, Naperville Baptist Church, Naperville, IL |
| 2008-2013    | Children’s ministries volunteer, Wilmer Baptist Church, Wilmer, AL                                      |
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