Melissa Dawn Bauman, Ph.D.

Research/Academic Interests

Dr. Bauman is a behavioral neuroscientist whose research focuses on prenatal risk factors for neurodevelopmental disorders. She is particularly interested in the influence of the maternal-fetal immune environment on neural development.

She also has a strong commitment to advancing women's careers in science and medicine and serves as the director of the UC Davis Health Women in Medicine and Health Sciences (WIMHS) program.

Title

Professor, Department of Psychiatry and Behavioral Sciences

Associate Dean for Research Infrastructure

Specialty

Psychiatry, Neuroscience

Department

Physiology and Membrane Biology

Center/Program Affiliation

UC Davis MIND Institute

Email

mdbauman@ucdavis.edu

Education

Ph.D., Neuroscience, UC Davis, Davis CA 2003

B.A., Colorado College, Colorado Springs CO 1998

Honors and Awards

UC Women's Initiative for Professional Development Fellow, 2018

AAMC Mid-Career Women Faculty Professional Development Seminar Trainee, 2016

NARSAD Young Investigator Award, 2012

AAMC Early Career Women Faculty Professional Development Seminar Trainee, 2012

UCDMC Women in Medical and Health Sciences (WIMHS) Mentored Leadership Trainee, 2011

Select Recent Publications

To view a detailed list of Dr. Bauman's publications, please click here.

Vlasova RM, Iosif AM, Ryan AM, Funk LH, Murai T, Chen S, Lesh TA, Rowland DJ, Bennett J, Hogrefe CE, Maddock RJ, Gandal MJ, Geschwind DH, Schumann CM, Van de Water J, McAllister AK, Carter CS, Styner MA, Amaral DG, Bauman MD. Maternal Immune Activation during Pregnancy Alters Postnatal Brain Growth and Cognitive Development in Nonhuman Primate Offspring. J Neurosci. 2021 Dec 1;41(48):9971-9987. doi:10.1523/JNEUROSCI.0378-21.2021. Epub 2021 Oct 4. PMID:34607967.

Warling A, Uchida R, Shin H, Dodelson C, Garcia ME, Shea-Shumsky NB, Svirsky S, Pothast M,

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Kelley H, Schumann CM, Brzezinski C, Bauman MD, Alexander A, McKee AC, Stein TD, Schall M, Jacobs B. Putative dendritic correlates of chronic traumatic encephalopathy: A preliminary quantitative Golgi exploration. J Comp Neurol. 2021 May 1;529(7):1308-1326. doi:10.1002/cne.25022. Epub 2020 Sep 23. PMID:32869318.

Page NF, Gandal MJ, Estes ML, Cameron S, Buth J, Parhami S, Ramaswami G, Murray K, Amaral DG, Van de Water JA, Schumann CM, Carter CS, Bauman MD, McAllister AK, Geschwind DH. Alterations in Retrotransposition, Synaptic Connectivity, and Myelination Implicated by Transcriptomic Changes Following Maternal Immune Activation in Nonhuman Primates. Biol Psychiatry. 2021 May 1;89(9):896-910. doi:10.1016/j.biopsych.2020.10.016. Epub 2020 Nov 2. PMID:33386132.

Ryan AM, Murai T, Lau AR, Hogrefe CE, McAllister AK, Carter CS, Bauman MD. New approaches to quantify social development in rhesus macaques (Macaca mulatta): Integrating eye tracking with traditional assessments of social behavior. Dev Psychobiol. 2020 Nov;62(7):950-962. doi:10.1002/dev.22003. Epub 2020 Jul 14. PMID:32666534.

Estes ML, Prendergast K, MacMahon JA, Cameron S, Aboubechara JP, Farrelly K, Sell GL, Haapanen L, Schauer JD, Horta A, Shaffer IC, Le CT, Kincheloe GN, Tan DJ, van der List D, Bauman MD, Carter CS, Van de Water J, McAllister AK. Baseline immunoreactivity before pregnancy and poly(I:C) dose combine to dictate susceptibility and resilience of offspring to maternal immune activation. Brain Behav Immun. 2020 Aug;88:619-630. doi:10.1016/j.bbi.2020.04.061. Epub 2020 Apr 23. PMID:32335198.

Bauman MD, Van de Water J. Translational opportunities in the prenatal immune environment: Promises and limitations of the maternal immune activation model. Neurobiol Dis. 2020 Jul;141:104864. doi:10.1016/j.nbd.2020.104864. Epub 2020 Apr 9. PMID:32278881.

Schumann CM, Scott JA, Lee A, Bauman MD, Amaral DG. Amygdala growth from youth to adulthood in the macaque monkey. J Comp Neurol. 2019 Dec 15;527(18):3034-3045. doi:

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10.1002/cne.24728. Epub 2019 Jun 19. PMID:31173365.

Ryan AM, Berman RF, Bauman MD. Bridging the species gap in translational research for neurodevelopmental disorders. Neurobiol Learn Mem. 2019 Nov;165:106950. doi:10.1016/j.nlm.2018.10.006. Epub 2018 Oct 19. PMID:30347236.

Bauman MD, Lesh TA, Rowland DJ, Schumann CM, Smucny J, Kukis DL, Cherry SR, McAllister AK, Carter CS. Preliminary evidence of increased striatal dopamine in a nonhuman primate model of maternal immune activation. Transl Psychiatry. 2019 Apr 12;9(1):135. doi:10.1038/s41398-019-0449-y. PMID:30979867.

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