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Title: Acute and repeated exposure to social stress reduces gut microbiota diversity in Syrian hamsters

Authors: Katherine A. Partrick, Benoit Chassaing, Linda Q. Beach, Katharine E. McCann, Andrew T. Gewirtz, Kim L. Huhman

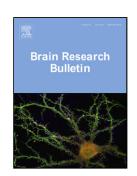
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## ACCEPTED MANUSCRIPT

Acute and repeated exposure to social stress reduces gut microbiota diversity in Syrian hamsters.

Katherine A. Partrick<sup>1</sup>, Benoit Chassaing<sup>1,2</sup>, Linda Q. Beach<sup>1</sup>, Katharine E. McCann<sup>1</sup>, Andrew T. Gewirtz<sup>2</sup>, Kim L. Huhman<sup>1</sup>

<sup>1</sup>Neuroscience Institute and

<sup>2</sup>Center for Inflammation, Immunity & Infection, Institute for Biomedical Sciences, Georgia State University, GA, USA, 30303

Katherine A. Partrick: kpartrick1@student.gsu.edu

Benoit Chassaing: bchassaing@gsu.edu

Linda Q. Beach: lbeach@gsu.edu

Katharine E. McCann: kmccann3@gsu.edu Andrew T. Gewirtz: agewirtz@gsu.edu Kim L. Huhman: khuhman@gsu.edu

Corresponding author:
Katherine A. Partrick
Georgia State University, Neuroscience Institute
832 Petit Science Center
161 Jesse Hill Jr. Drive, SE
Atlanta, GA, 30303

Phone: 770-713-2067

Email: kpartrick1@student.gsu.edu

#### 1. Introduction

Mood and anxiety disorders are strongly associated with somatic symptoms such as gastrointestinal distress (Bekhuis et al., 2014, Felice et al., 2015), and a high co-morbidity exists between stress-related neuropsychiatric symptoms and gastrointestinal disorders such as irritable bowel syndrome (Kanuri et al., 2016, Kennedy et al., 2012, Qin et al., 2014). One possibility is that stress impacts brain function and mental health via its effect on the gastrointestinal tract (for review see Dinan & Cryan, 2012, Dinan et al., 2015, Parashar & Udayabanu, 2016). Given that the available treatment strategies for a variety of stress-related neuropsychiatric disorders are inadequate for many, expanding our knowledge of a broader range of potential etiologic factors

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