Chao-Yin Chen, Ph.D.

Clinical Interests

Dr. Chen's research focuses on central regulation of the cardiovascular system and autonomic function with an emphasis on the impacts of environmental factors such as exercise, stress, exposure to air pollution, hypertension, and obesity. She is particularly interested in how these environmental factors induce neuroplasticity in the central autonomic pathways, including the first central site that receives and integrates sensory information (Nucleus Tractus Solitarii) and the final output for cardiac parasympathetic motor nerves (Nucleus Ambiguous).

Research/Academic Interests

Dr. Chen's research focuses on central regulation of the cardiovascular system and autonomic function. She is particularly interested in how environmental factors induces neuroplasticity in the central autonomic pathways.

Title

Professor

Specialty

Pharmacology, Physiology

Department

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Division

Pharmacology

Address/Phone

Tupper Hall, Tupper Hall- UC Davis, Davis, CA 95616

Languages

Mandarin, Taiwanese

Education

Ph.D., Physiology, Kent State University, Kent OH 1996
M.S., Physiology, Tunghai University, Taichung, Taiwan 1988
B.S., Tunghai University, Taichung, Taiwan 1986

Professional Memberships

American Physiological Society
Society for Neurosciences

Honors and Awards

Recognition from UCD Health employee recognition program for dedication and leadership in in the efforts to strengthen partnerships and improve the care for and support of local communities, 2020
UC Davis Graduate Program Advising and Mentoring Award, UC Davis, 2020
Faculty 1000 Biology: Article title: Post-exercise hypotension is associated with neurokinin 1 receptor internalization, 2009
American Physiological Society Neural Control and Autonomic Regulation Young Investigator Award, 2003

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Chao-Yin Chen, Ph.D.

Excellence for Doctoral dissertation, the Graduate Student Senate, Kent State University, 1996

Select Recent Publications

To view Dr. Chen's publications, please click here.

Sun J, Pan S, Karey E, Chen YJ, Pinkerton KE, Wilson CG, Chen CY. Secondhand Smoke Decreased Excitability and Altered Action Potential Characteristics of Cardiac Vagal Neurons in Mice. Front Physiol. 2021 Sep 24;12:727000. doi:10.3389/fphys.2021.727000. PMID:34630146.

Le T, Martín-Aragón Baudel M, Syed A, Singhrao N, Pan S, Flores-Tamez VA, Burns AE, Man KNM, Karey E, Hong J, Hell JW, Pinkerton KE, Chen CY, Nieves-Cintrón M. Secondhand Smoke Exposure Impairs Ion Channel Function and Contractility of Mesenteric Arteries. Function (Oxf). 2021 Aug 19;2(5):zqab041. doi:10.1093/function/zqab041. PMID:34553140.

Han JS, Hino K, Li W, Reyes RV, Canales CP, Miltner AM, Haddadi Y, Sun J, Chen C, La Torre A, Olivar SS. CRL5-dependent regulation of the small GTPAses Arl4c and Arf6 controls hippocampal morphogenesis. PNAS. 2020 August. doi:10.1101/2020.01.10.902221.

Bates MC, Stone GW, Chen CY, Spiering W. Device profile of the MobiusHD EVBA system for the treatment of resistant hypertension: overview of its mechanism of action, safety and efficacy. Expert Rev Med Devices. 2020 Jul;17(7):649-658. doi:10.1080/17434440.2020.1779054. Epub 2020 Jun 16. PMID:32510250.

Pinkerton KE, Chen CY, Mack SM, Upadhyay P, Wu CW, Yuan W. Cardiopulmonary Health Effects of Airborne Particulate Matter: Correlating Animal Toxicology to Human Epidemiology. Toxicol Pathol. 2019 Dec;47(8):954-961. doi:10.1177/0192623319879091. Epub 2019 Oct 23. PMID:31645209.

Karey E, Pan S, Morris AN, Bruun DA, Lein PJ, Chen CY. The Use of Percent Change in RR Interval for Data Exclusion in Analyzing 24-h Time Domain Heart Rate Variability in Rodents. Front

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Physiol. 2019;10:693. doi:10.3389/fphys.2019.00693. eCollection 2019. PMID:31244671.

Wang Z, Wang L, Tapa S, Pinkerton KE, Chen CY, Ripplinger CM. Exposure to Secondhand Smoke and Arrhythmogenic Cardiac Alternans in a Mouse Model. Environ Health Perspect. 2018 Dec;126(12):127001. doi:10.1289/EHP3664. PMID:30675795.

Bassein JA, Bustamante JM, Haigh N, Jackson KB, Khuu C, Liu X, Mack SM, Mundy PC, Patten KT, Sethi S, Chen C, Miller LA, Van Winkle LS, Lein PJ. E-cigarettes: different but not safe. Open Access Government, E-books. 2018 September.

Mizuno GO, Wang Y, Shi G, Wang Y, Sun J, Papadopoulos S, Broussard GJ, Unger EK, Deng W, Weick J, Bhattacharyya A, Chen CY, Yu G, Looger LL, Tian L. Aberrant Calcium Signaling in Astrocytes Inhibits Neuronal Excitability in a Human Down Syndrome Stem Cell Model. Cell Rep. 2018 Jul 10;24(2):355-365. doi:10.1016/j.celrep.2018.06.033. PMID:29996097.

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