Berenice Adriana Gutierrez Grebenkova
Internal Medicine
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Research interests

Brain-Gut Microbiome axis

Research interests

- My main research interest is to understand how the gut microbiome influences our cognition.
- My topics of interest include molecular biology, AI, data science, medical writing, and science communication.
- Neurology / Gut-brain axis / Neurodegenerative disorders

Qualifications

MD PhD, Instituto Tecnologico de Estudios Superiores de Monterrey
2012 → 2022

Employment

Postdoctoral Fellow IV
Internal Medicine
University of Texas Medical Branch
Jan 5 2022 → present

The University of Texas M. D. Anderson Cancer Center
Houston, TX 77030, United States
Jan 1 2013 → Jan 1 2017

Publications

Evidence for cPLA2 activation in Alzheimer's disease synaptic pathology
Ma, Q. L., Ebright, B., Li, B., Li, J., Galvan, J., Sanchez, A., Renteln, M., Dikeman, D., Wang, S., Kerman, B. E., Wang, X., Manvelian, M., Yu, X., Seidler, P., Gutierrez-Grebenkova, B., Hjelm, B. E., Hawes, D., Hiniker, A. E., Hurth, K. M. & Bennett, D. A. & 5 others, Louie, S. G., Chui, H. C., Limon, A., Arvanitakis, Z. & Yassine, H. N., Dec 2026, In: Acta Neuropathologica Communications. 14, 1, 64.

Inhibition of the GSK3β/Nav1.6 complex suppresses early-stage Alzheimer's hyperexcitability
Baumgartner, T. J., Silva-Pérez, M., Haghighijoo, Z., Dvorak, N. M., Singh, A. K., Goode, N. A., Singh, J., Grebenkova, B. G., Marosi, M., Di Re, J., Koff, L., Wijitrmektong, W., Bala, M., Liao, H., Lijffijt, M., Szafran, A. T., Bolt, M. J., Mancini, M. A., Cuny, G. D. & Chow, D.S.-L. & 3 others, Limon, A., Chin, J. & Laezza, F., Jul 2025, In: Alzheimer's and Dementia. 21, 7, p. e70507

Evidence for cPLA2 activation in Alzheimer's Disease Synaptic Pathology
Ma, Q.-L., Ebright, B., Li, B., Li, J., Galvan, J., Sanchez, A., Renteln, M., Dikeman, D., Wang, S., Kerman, B. E., Seidler, P., Gutierrez-Grebenkova, B., Hjelm, B. E., Hawes, D., Hiniker, A. E., Hurth, K. M., Bennett, D. A., Louie, S. G., Chui, H. C. & Limon, A. & 2 others, Arvanitakis, Z. & Yassine, H. N., Apr 1 2025, In: bioRxiv : the preprint server for biology.

Bridging Neuroscience Knowledge Gaps Across Across Communities: The Mitchell Center's Brain Awareness Initiative
Gutierrez Grebenkova, B. A., Sanchez Sanchez, L., Marino, C. & Cuevas-Martinez, E.-Y., 2025, (Unpublished).

Transcriptional and bioinformatic analysis of $GABA_A$ receptors expressed in oligodendrocyte progenitor cells from the human brain
Gutierrez, B. A., González-Coronel, J. M., Arellano, R. O. & Limon, A., Oct 26 2023, In: Frontiers in Molecular Neuroscience. 16, p. 1279232 1279232.

Rearrangement of AMPA receptors in non-demented individuals with high pathology of Alzheimer's disease
Gutierrez, B. A., Neuhart, J. & Limon, A., Oct 2023.

Functional excitatory to inhibitory synaptic imbalance and loss of cognitive performance in people with Alzheimer's disease neuropathologic change
Scaduto, P., Lauterborn, J. C., Cox, C. D., Fracassi, A., Zeppillo, T., Gutierrez, B. A., Keene, C. D., Crane, P. K., Mukherjee, S., Russell, W. K., Taglialatela, G. & Limon, A., Mar 2023, In: Acta Neuropathologica. 145, 3, p. 303-324 22 p.

Differential synaptic responses of calcium permeable AMPA receptors in resilient individuals to Alzheimer's disease neuropathology
Gutierrez , B. A. & Limon, A., 2023.

Electrophysiology of AMPA receptors in individuals resilient to Alzheimer's disease Neuropathology
Gutierrez, B. A., Widen, S., Russell, W., Keene, C. D. & Limon, A., 2023.

Microtransplantation of native synaptic mGluR5 receptors into Xenopus oocytes
Miller, B., Moreno, N., Gutierrez, B. A. & Limon, A., Dec 22 2022.

Microtransplantation of Postmortem Native Synaptic mGluRs Receptors into Xenopus Oocytes for Their Functional Analysis
Miller, B., Moreno, N., Gutierrez, B. A. & Limon, A., Oct 2022, In: Membranes. 12, 10, 931.

Microtransplantation of Synaptic Membranes to Reactivate Human Synaptic Receptors for Functional Studies
Miller, B., Powell, A., Gutierrez, B. A. & Limon, A., Jul 2022, In: Journal of Visualized Experiments. 2022, 185, e64024.

Synaptic Disruption by Soluble Oligomers in Patients with Alzheimer's and Parkinson's Disease
Gutierrez, B. A. & Limon, A., Jul 2022, In: Biomedicines. 10, 7, 1743.

GABAA receptor subunits in human oligodendrocyte progenitor cells
Gutierrez , B. A., Arellano, R. O. & Limon, A., Jan 2022.

Interplay between estrogen and Stat3/NF-κB-driven immunomodulation in lung cancer
Deng, S., Ramos-Castaneda, M., Velasco, W. V., Clowers, M. J., Gutierrez, B. A., Noble, O., Dong, Y., Zarghooni, M., Alvarado, L., Caetano, M. S., Yang, S., Ostrin, E. J., Behrens, C., Wistuba, I. I., Stabile, L. P., Kadara, H., Watowich, S. S. & Moghaddam, S. J., Nov 13 2020, In: Carcinogenesis. 41, 11, p. 1529-1542 14 p.

Munc18-2, but not Munc18-1 or Munc18-3, regulates platelet exocytosis, hemostasis, and thrombosis
Cardenas, E. I., Gonzalez, R., Breaux, K., Da, Q., Gutierrez, B. A., Ramos, M. A., Cardenas, R. A., Burns, A. R., Rumbaut, R. E. & Adachi, R., Mar 29 2019, In: The Journal of biological chemistry. 294, 13, p. 4784-4792 9 p.

Syntaxin 3, but not syntaxin 4, is required for mast cell–regulated exocytosis, where it plays a primary role mediating compound exocytosis
Sanchez, E., Gonzalez, E. A., Moreno, D. S., Cardenas, R. A., Ramos, M. A., Davalos, A. J., Manllo, J., Rodarte, A. I., Petrova, Y., Moreira, D. C., Chavez, M. A., Tortoriello, A., Lara, A., Gutierrez, B. A., Burns, A. R., Heidelberger, R. & Adachi, R., Mar 1 2019, In: Journal of Biological Chemistry. 294, 9, p. 3012-3023 12 p.

IL22 Promotes Kras-Mutant Lung Cancer by Induction of a Protumor Immune Response and Protection of Stemness Properties
Khosravi, N., Caetano, M. S., Cumpian, A. M., Unver, N., De la Garza Ramos, C., Noble, O., Daliri, S., Hernandez, B. J., Gutierrez, B. A., Evans, S. E., Hanash, S., Alekseev, A. M., Yang, Y., Chang, S. H., Nurieva, R., Kadara, H., Chen, J., Ostrin, E. J. & Moghaddam, S. J., Jul 2018, In: Cancer Immunology Research. 6, 7, p. 788-797 10 p.

Munc18-2, but not Munc18-1 or Munc18-3, controls compound and single-vesicle-regulated exocytosis in mast cells
Gutierrez, B. A., Chavez, M. A., Rodarte, A. I., Ramos, M. A., Dominguez, A., Petrova, Y., Davalos, A. J., Costa, R. M., Elizondo, R., Tuvim, M. J., Dickey, B. F., Burns, A. R., Heidelberger, R. & Adachi, R., May 11 2018, In: The Journal of biological chemistry. 293, 19, p. 7148-7159 12 p.

Synergistic effect of cigarette smoke and bacterial-induced chronic obstructive pulmonary disease type airway inflammation on promotion of K-ras mutant lung cancer
Ramos, M. A., Umer, M., Castro, S., Gutierrez, B. A., Khosravi, N. & Moghaddam, S. J., 2018.

Control of Mast Cell Exocytosis by Munc18 Proteins
Gutierrez, B. A., Chavez, M. A., Ramos, M. A., Rodarte, A. I., Petrova, Y. & Adachi, R., 2017.

Activities

American Association for the Advancement of Science (External organization)
Gutierrez Grebenkova, B. A. (Chair)
2026 → …

Internal Medicine (Organizational unit)
Gutierrez Grebenkova, B. A. (Member)
Nov 1 2025 → Dec 31 2026

GSBS Innovative Methods Fellowship
Gutierrez Grebenkova, B. A. (Recipient)
2024 → …

UTMB GSBS Research Expo 2024 (Event)
Gutierrez Grebenkova, B. A. (Member)
2024

Neurobiology: Mechanisms and Advanced Approaches. The University of Chicago - Marine Biological Laboratory. Wood Hole, MA
Gutierrez Grebenkova, B. A. (Recipient)
Jun 6 2023 → Jul 19 2023

Data Science for Diverse Scholars in Down Syndrome Research (DS3) – University of Colorado Boulder
Gutierrez Grebenkova, B. A. (Recipient)
Jul 11 2022 → Jul 22 2022

GABAA receptor subunits in human oligodendrocyte progenitor cells
Gutierrez, B. A. (Speaker)
2022

Prizes

GSBS Innovative Methods Fellowship
Gutierrez Grebenkova, B. A. (Recipient), 2024

Minority Trainee Development Scholarship
Gutierrez Grebenkova, B. A. (Recipient), 2017

Texas Medical Center/Rice University Chapter of Sigma Xi virtual poster session
Gutierrez Grebenkova, B. A. (Recipient), 2022

Trainee Professional Development Award
Gutierrez Grebenkova, B. A. (Recipient), 2023

UTMB Graduate School of Biomedical Sciences Eureka Evolution Award - 2023
Gutierrez Grebenkova, B. A. (Recipient), 2023

UTMB Graduate School of Biomedical Sciences Niesel Service Award
Gutierrez Grebenkova, B. A. (Recipient), 2024