Stanford

Peter Malcolm Klein

Instructor, Neurosurgery

Bio

ACADEMIC APPOINTMENTS

- Instructor, Neurosurgery

Publications

PUBLICATIONS

- **Acetylcholine receptor based chemogenetics engineered for neuronal inhibition and seizure control assessed in mice.** *Nature communications*

  Nguyen, Q. A., Klein, P. M., Xie, C., Benthall, K. N., Iafrati, J., Homidan, J., Bendor, J. T., Dudok, B., Farrell, J. S., Gschwind, T., Porter, C. L., Keravala, A., Dodson, et al

  2024; 15 (1): 601

- **Galactic cosmic radiation exposure causes multifaceted neurocognitive impairments.** *Cellular and molecular life sciences : CMLS*

  Alaghband, Y., Klein, P. M., Kramar, E. A., Cranston, M. N., Perry, B. C., Shelerud, L. M., Kane, A. E., Doan, N., Ru, N., Acharya, M. M., Wood, M. A., Sinclair, D. A., Dickstein, et al

  2023; 80 (1): 29

- **Toward Understanding the Diverse Roles of Perisomatic Interneurons in Epilepsy.** *Epilepsy currents*

  Dudok, B., Klein, P. M., Soltesz, I.

  2021; 22 (1): 54-60

- **Recruitment and inhibitory action of hippocampal axo-axonic cells during behavior.** *Neuron*

  Dudok, B., Szoboszlay, M., Paul, A., Klein, P. M., Liao, Z., Hwaun, E., Szabo, G. G., Geiller, T., Vancura, B., Wang, B., McKenzie, S., Homidan, J., Klaver, et al

  2021

- **Acute, Low-Dose Neutron Exposures Adversely Impact Central Nervous System Function.** *International journal of molecular sciences*

  Klein, P. M., Alaghband, Y., Doan, N., Ru, N., Drayson, O. G., Baulch, J. E., Kramar, E. A., Wood, M. A., Soltesz, I., Limoli, C. L.

  2021; 22 (16)

- **Alternating sources of perisomatic inhibition during behavior.** *Neuron*

  Dudok, B., Klein, P. M., Hwaun, E., Lee, B. R., Yao, Z., Fong, O., Bowler, J. C., Terada, S., Sparks, F. T., Szabo, G. G., Farrell, J. S., Berg, J., Daigle, et al

  2021

- **Detrimental impacts of mixed-ion radiation on nervous system function.** *Neurobiology of disease*

  Klein, P. M., Parihar, V. K., Szabo, G. G., Zöldi, M. n., Angulo, M. C., Allen, B. D., Amin, A. N., Nguyen, Q. A., Katona, I. n., Baulch, J. E., Limoli, C. L., Soltesz, I. n.

  2021: 105252

- **Supramammillary regulation of locomotion and hippocampal activity.** *Science (New York, N.Y.)*

  Farrell, J. S., Lovett-Barron, M., Klein, P. M., Sparks, F. T., Gschwind, T., Ortiz, A. L., Ahanonu, B., Bradbury, S., Terada, S., Oijala, M., Hwaun, E., Dudok, B., Szabo, et al

  2021; 374 (6574): 1492-1496

- **Angiotensin II induces coordinated calcium bursts in aldosterone-producing adrenal rosettes** *NATURE COMMUNICATIONS*

Guagliardo, N. A., Klein, P. M., Gancayco, C. A., Lu, A., Leng, S., Makarem, R. R., Cho, C., Rusin, C. G., Breault, D. T., Barrett, P. Q., Beenhakker, M. P.
2020; 11 (1): 1679

- **Neurological Impairments in Mice Subjected to Irradiation and Chemotherapy.** *Radiation research*
  Dey, D., Parihar, V. K., Szabo, G. G., Klein, P. M., Tran, J., Moayyad, J., Ahmed, F., Nguyen, Q., Murry, A., Merriott, D., Nguyen, B., Goldman, J., Angulo, et al
  2020

- **VIPergic neurons of the infralimbic and prelimbic cortices control palatable food intake through separate cognitive pathways** *JCI INSIGHT*
  Newmyer, B. A., Whindleton, C. M., Klein, P. M., Beenhakker, M. P., Jones, M. K., Scott, M. M.
  2019; 4 (9)

- **New Concerns for Neurocognitive Function during Deep Space Exposures to Chronic, Low Dose-Rate, Neutron Radiation.** *eNeuro*
  Acharya, M. M., Baulch, J. E., Klein, P. M., Baddour, A. A., Apodaca, L. A., Kramár, E. A., Alikhani, L. n., Garcia, C. n., Angulo, M. C., Batra, R. S., Fallgren, C. M., Borak, T. B., Stark, et al
  2019; 6 (4)

- **Tenuous Inhibitory GABAergic Signaling in the Reticular Thalamus.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
  Klein, P. M., Lu, A. C., Harper, M. E., McKown, H. M., Morgan, J. D., Beenhakker, M. P.
  2018; 38 (5): 1232-1248

- **Role of voltage-gated calcium channels in the regulation of aldosterone production from zona glomerulosa cells of the adrenal cortex** *JOURNAL OF PHYSIOLOGY-LONDON*
  Barrett, P. Q., Guagliardo, N. A., Klein, P. M., Hu, C., Breault, D. T., Beenhakker, M. P.
  2016; 594 (20): 5851–60

- **Neonatal seizures alter NMDA glutamate receptor GluN2A and 3A subunit expression and function in hippocampal CA1 neurons** *FRONTIERS IN CELLULAR NEUROSCIENCE*
  Zhou, C., Sun, H., Klein, P. M., Jensen, F. E.
  2015; 9: 362

- **Lestaurtinib (CEP-701) attenuates "second hit" kainic acid-induced seizures following early life hypoxic seizures** *EPILEPSY RESEARCH*
  Obeid, M., Rosenberg, E. C., Klein, P. M., Jensen, F. E.
  2014; 108 (4): 806–10

- **AMPA Receptor antagonist NBQX attenuates later-life epileptic seizures and autistic-like social deficits following neonatal seizures** *EPILEPSIA*
  Lippman-Bell, J. J., Rakhade, S. N., Klein, P. M., Obeid, M., Jackson, M. C., Joseph, A., Jensen, F. E.
  2013; 54 (11): 1922–32

- **Gene Expression Profiling of a Hypoxic Seizure Model of Epilepsy Suggests a Role for mTOR and Wnt Signaling in Epileptogenesis** *PLOS ONE*
  Theilhaber, J., Rakhade, S. N., Sudhalter, J., Kothari, N., Klein, P., Pollard, J., Jensen, F. E.
  2013; 8 (9): e74428

- **Mammalian target of rapamycin complex 1 activation negatively regulates Polo-like kinase 2-mediated homeostatic compensation following neonatal seizures** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Sun, H., Kosaras, B., Klein, P. M., Jensen, F. E.
  2013; 110 (13): 5199–5204

- **Glutamate Receptor 1 Phosphorylation at Serine 831 and 845 Modulates Seizure Susceptibility and Hippocampal Hyperexcitability after Early Life Seizures** *JOURNAL OF NEUROSCIENCE*
  Rakhade, S. N., Fitzgerald, E. F., Klein, P. M., Zhou, C., Sun, H., Hunganir, R. L., Jensen, F. E.
  2012; 32 (49): 17800-+

- **The Interaction between Early Life Epilepsy and Autistic-Like Behavioral Consequences: A Role for the Mammalian Target of Rapamycin (mTOR) Pathway** *PLOS ONE*
  Talos, D. M., Sun, H., Zhou, X., Fitzgerald, E. C., Jackson, M. C., Klein, P. M., Lan, V. J., Joseph, A., Jensen, F. E.
  2012; 7 (5): e35885

- **Regulable neural progenitor-specific Tsc1 loss yields giant cells with organellar dysfunction in a model of tuberous sclerosis complex** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Goto, J., Talos, D. M., Klein, P., Qin, W., Chekaluk, Y. I., Anderl, S., Malinowska, I. A., Di Nardo, A., Bronson, R. T., Chan, J. A., Vinters, H. V., Kernie, S. G., Jensen, et al
  2011; 108 (45): E1070–E1079

- **Development of later life spontaneous seizures in a rodent model of hypoxia-induced neonatal seizures** *EPILEPSIA*
  Rakhade, S. N., Klein, P. M., Huynh, T., Hilario-Gomez, C., Kosaras, B., Rotenberg, A., Jensen, F. E.
  2011; 52 (4): 753–65

- **Chronic hyperoxia alters the early and late phases of the hypoxic ventilatory response in neonatal rats** *JOURNAL OF APPLIED PHYSIOLOGY*
  Bavis, R. W., Young, K. M., Barry, K. J., Boller, M. R., Kim, E., Klein, P. M., Ovrutsky, A. R., Rampersad, D. A.
  2010; 109 (3): 796–803

- **Gyrodactylus pisculentus sp n. (Monogenoidea: Gyrodactylidae) associated with mortality of the northern pipefish, Syngnathus fuscus (Syngnathiformes: Syngnathidae) at the Woods Hole Science Aquarium** *FOLIA PARASITOLOGICA*
  Williams, S. R., Kritsky, D. C., Dunnigan, B., Lash, R., Klein, P.
  2008; 55 (4): 265-269