



Science Advancement & Outreach  
A DIVISION OF PETA

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Dear National Advisory Mental Health Council members:

On behalf of Science Advancement and Outreach, the biomedical science policy division of People for the Ethical Treatment of Animals, we request that the National Advisory Mental Health Council advise the National Institute of Mental Health (NIMH) Director to prioritize and support mental health research, training, and related programs that focus exclusively on non-animal methods, and to stop conducting and funding human mental health research that uses other animals.

### **1. Divest from animal use in mental health research**

Animal models cannot replicate all aspects of any human neuropsychiatric conditions, and many human behaviors that characterize these disorders cannot be produced or assessed in animals. For example, to model human depressive disorders, animals are subjected to behavioral tests such as the forced swim test. The validity of this test for assessing an animal's mood, screening antidepressants, or modeling stress is highly contested,<sup>1</sup> with one study noting that its use by leading pharmaceutical companies has not produced a single currently approved drug for treating depression in humans.<sup>2</sup>

Other commonly used behavioral tests—such as the sucrose preference test (for anhedonia)<sup>3,4,5</sup> and chronic unpredictable stress paradigms (to induce psychopathologies)<sup>6</sup>—suffer from the same lack of validity.

Beyond these ineffective assays, significant physiological differences between humans and other animals help explain the low rate of bench-to-bedside translation. For example, the tyrosine hydroxylase gene, which has been implicated in bipolar disorder and schizophrenia, is regulated differently in humans and mice.<sup>7</sup> There are also substantial species differences in brain cell types and in how proteins essential for neurophysiological function are produced,<sup>8</sup> as well as in neuronal diversity and organization, neural circuitry, neurotransmitter availability, and receptor distribution and kinetics.<sup>9</sup>

Several NIMH-funded studies use these poor behavioral models in attempts to study human neuropsychiatric disorders: the institute is currently funding four projects that describe the [forced swim test](#) and [sucrose preference test](#), and at least nine projects that describe [chronic unpredictable stress paradigms](#).

In addition, for more than four decades, a NIMH intramural laboratory has subjected macaques to invasive surgeries, prolonged restraint, food and water deprivation, and social isolation, at a

cost of over \$50 million to taxpayers, yet these experiments have failed to produce meaningful insights for human mental health. We urge NIMH to discontinue funding studies that use the forced swim test and similar black-box behavioral paradigms, end experiments on monkeys in NIMH intramural laboratories, and redirect resources toward human-relevant methodologies.

## **2. Expand training and support for mental health researchers using human-based methods**

Non-animal, human-based technologies are already transforming mental health research. Brain organoids are being used to study mood disorders,<sup>10</sup> psychoses,<sup>11</sup> and neurodivergence.<sup>12</sup> These models can be combined into assembloids to investigate neurodevelopmental conditions such as autism,<sup>13</sup> Tourette's syndrome,<sup>14</sup> and schizophrenia.<sup>15</sup> *In silico* “virtual patient” models are being used to evaluate potential therapeutics for conditions such as attention-deficit/hyperactivity disorder.<sup>16</sup> In addition, advanced brain imaging<sup>17</sup> and longitudinal studies<sup>18</sup> are being conducted with individuals who have lived experience of psychiatric conditions, generating clinically meaningful insights.

NIMH must act on NIH's initiative to prioritize human-based research methods to fully “accelerate innovation, improve healthcare outcomes, and deliver life-changing treatments.”<sup>19</sup>

To enable researchers to make human-relevant discoveries, NIMH should:

- Create training grants and fellowships for researchers who use non-animal methods in mental health research.
- Assist universities and research institutes in developing continuing education and certification programs focused on non-animal methodologies.
- Provide transition and early-career awards that incentivize investigators to replace animal experiments with human-based systems and establish research programs centered on non-animal approaches.

These recommendations and others are expanded on in our policy roadmap, [Research Modernization NOW](#), including an appendix relevant to neuropsychiatric disorders and neurodivergence on page 42.

Implementing these recommendations would position NIMH as a leader in advancing a more predictive, efficient, and human-specific research paradigm—ultimately improving patient outcomes and expanding effective treatment options for those living with mental health disorders.

Thank you for considering these recommendations.

Sincerely,

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- <sup>1</sup> PETA. *The invalidity of the forced swim test*. Published 2025. Accessed February 27, 2026. <https://www.peta.org/wp-content/uploads/2025/07/The-Invalidity-of-the-Forced-Swim-Test-2025.pdf>
- <sup>2</sup> Trunnell ER, Carvalho C. The forced swim test has poor accuracy for identifying novel antidepressants. *Drug Discov Today*. 2021;26(12):2898-2904. doi:10.1016/j.drudis.2021.08.003
- <sup>3</sup> Berrio JP, Hestehave S, Kalliokoski O. Reliability of sucrose preference testing following short or no food and water deprivation—a systematic review and meta-analysis of rat models of chronic unpredictable stress. *Transl Psychiatry*. 2024;14(1):1-10. doi:10.1038/s41398-024-02742-0
- <sup>4</sup> Scheggi S. Still controversial issues on assessing anhedonia in experimental modeling of depression. *Transl Psychiatry*. 2024;14(1):1-2. doi:10.1038/s41398-024-03057-w
- <sup>5</sup> Verharen JPH, de Jong JW, Zhu Y, Lammel S. A computational analysis of mouse behavior in the sucrose preference test. *Nat Commun*. 2023;14(1):2419. doi:10.1038/s41467-023-38028-0
- <sup>6</sup> Markov DD, Novosadova EV. Chronic unpredictable mild stress model of depression: possible sources of poor reproducibility and latent variables. *Biology (Basel)*. 2022;11(11):1621. doi:10.3390/biology11111621
- <sup>7</sup> Jin H, Romano G, Marshall C, Donaldson AE, Suon S, Iacovitti L. Tyrosine hydroxylase gene regulation in human neuronal progenitor cells does not depend on Nurr1 as in the murine and rat systems. *J Cell Physiol*. 2006;207(1):49-57. doi:10.1002/jcp.20534
- <sup>8</sup> Hodge RD, Bakken TE, Miller JA, et al. Conserved cell types with divergent features in human versus mouse cortex. *Nature*. 2019;573(7772):61-68. doi:10.1038/s41586-019-1506-7
- <sup>9</sup> Dixon TA, Muotri AR. Advancing preclinical models of psychiatric disorders with human brain organoid cultures. *Mol Psychiatry*. 2023;28(1):83-95. doi:10.1038/s41380-022-01708-2
- <sup>10</sup> Li M, Duan W, Hao X, et al. Effects of esketamine on electrophysiology and metabolic reprogramming in brain organoids: insights into antidepressant mechanisms. *Mol Psychiatry*. 2025;30(12):6107-6118. doi:10.1038/s41380-025-03198-4
- <sup>11</sup> Ahn I, Chang S, Lee J, Choi SH, Han J, Kim Y. Exploration of novel biomarkers through a precision medicine approach using multi-omics and brain organoids in patients with atypical depression and psychotic symptoms. *Adv Sci (Weinh)*. 2026;13(4):e08383. doi:10.1002/advs.202508383
- <sup>12</sup> Li C, Fleck JS, Martins-Costa C, et al. Single-cell brain organoid screening identifies developmental defects in autism. *Nature*. 2023;621(7978):373-380. doi:10.1038/s41586-023-06473-y
- <sup>13</sup> Wu J, Chen X, Zhang J, et al. Human microglia in brain assembloids display region-specific diversity and respond to hyperexcitable neurons carrying *SCN2A* mutation. *Sci Adv*. 2026;12(8):eady2977. doi:10.1126/sciadv.ady2977
- <sup>14</sup> Miura Y, Kim JI, Jurjuț O, et al. Assembloid model to study loop circuits of the human nervous system. 2024:2024.10.13.617729. doi:10.1101/2024.10.13.617729
- <sup>15</sup> Walsh RM, Crabtree GW, Kalpana K, et al. Forebrain assembloids support the development of fast-spiking human PVALB+ cortical interneurons and uncover schizophrenia-associated defects. *Neuron*. 2025;113(19):3185-3203.e7. doi:10.1016/j.neuron.2025.06.017
- <sup>16</sup> Gutiérrez-Casares JR, Quintero J, Segú-Vergés C, et al. In silico clinical trial evaluating lisdexamfetamine's and methylphenidate's mechanism of action computational models in an attention-deficit/hyperactivity disorder virtual patients' population. *Front Psychiatry*. 2023;14:939650. doi:10.3389/fpsy.2023.939650
- <sup>17</sup> Tozzi L, Zhang X, Pines A, et al. Personalized brain circuit scores identify clinically distinct biotypes in depression and anxiety. *Nat Med*. 2024;30(7):2076-2087. doi:10.1038/s41591-024-03057-9
- <sup>18</sup> See CRZ, Tan AX, Valmaggia LR, Kempton MJ. The association between recent stressful life events and brain structure: a UK Biobank longitudinal MRI study. *Eur Psychiatry*. 2025;68(1):e18. doi:10.1192/j.eurpsy.2025.2
- <sup>19</sup> National Institutes of Health. NIH to prioritize human-based research technologies. April 29, 2025. Accessed February 27, 2026. <https://www.nih.gov/news-events/news-releases/nih-prioritize-human-based-research-technologies>