

PEOPLE FOR
THE ETHICAL
TREATMENT
OF ANIMALS

March 6, 2025

Lucile Capuron, PhD.
President
PsychoNeuroImmunology Research Society (PNIRS)

Via e-mail: lucile.capuron@inrae.fr; pnirs@pnirs.org

Dear Dr. Capuron,

I'm writing on behalf of People for the Ethical Treatment of Animals (PETA) U.S. and PETA Australia—PETA entities have more than 9 million members and supporters around the world—to express our concern and disappointment regarding the decision to publish a scientifically flawed and irresponsible strangulation and traumatic brain injury (TBI) experiment on animals led by a group at Monash University in *Brain, Behavior, and Immunity*, titled, "Pathophysiology, blood biomarkers, and functional deficits after intimate partner violence-related brain injury: Insights from emergency department patients and a new rat model."¹ **Based on the significant ethical and methodological concerns described below, we ask that PNIRS do the following: 1) fully retract this paper, and 2) prohibit publication of all strangulation and TBI experiments on animals going forward.**

Strangulation Experiment on Rats Involved 'Severe and Needless' Suffering

The experiment, first exposed and brought to our attention by Animal-Free Science Advocacy in Australia, involved non-fatal strangulation of female rats and/or infliction of brain injuries by propelling a weight with pneumatic force onto their heads to simulate TBI in a purported effort to examine the neurological injuries that human victims of domestic violence often endure.² A spokesperson for the National Health and Medical Research Council (NHMRC), which funded this experiment, publicly stated that the agency "requires that any method used in animal research must be scientifically valid and ethically justified *but does not assess the validity of each animal model proposed itself*"³ (*emphasis ours*). However, according to Dr. Kathrin Herrmann—a veterinarian and an expert in animal welfare and ethics⁴—this study exposed dozens of rats to "severe and

¹ Sun M, Symons GF, Spitz G, O'Brien WT, Baker TL, Fan J, Martins BD, Allen J, Giesler LP, Mychasiuk R, van Donkelaar P, Brand J, Christie B, O'Brien TJ, O'Sullivan MJ, Mitra B, Wellington C, McDonald SJ, Shultz SR. Pathophysiology, blood biomarkers, and functional deficits after intimate partner violence-related brain injury: Insights from emergency department patients and a new rat model. *Brain Behav Immun*. 2025 Jan;123:383-396. doi: [10.1016/j.bbi.2024.09.030](https://doi.org/10.1016/j.bbi.2024.09.030).

² Stock, P. 2025, February 14. Rats strangled in part government-funded Australian domestic violence study. *The Guardian*. Accessed February 13, 2025. <https://www.theguardian.com/world/2025/feb/14/rats-strangled-in-part-government-funded-australian-domestic-violence-study-ntwnfb>.

³ Stock. 2025.

⁴ Johns Hopkins Bloomberg School of Public Health. Herrmann K – Faculty profile. Accessed February 19, 2025. <https://publichealth.jhu.edu/faculty/3518/kathrin-herrmann>.

Washington

1536 16th St. N.W.
Washington, DC 20036
202-483-PETA

Los Angeles

2154 W. Sunset Blvd.
Los Angeles, CA 90026
323-644-PETA

Norfolk

501 Front St.
Norfolk, VA 23510
757-622-PETA

Info@peta.org
PETA.org

Entities

- PETA Asia
- PETA India
- PETA France
- PETA Australia
- PETA Germany
- PETA Switzerland
- PETA Netherlands
- PETA Foundation (U.K.)

needless"⁵ suffering. Dr. Herrmann unequivocally stated, "As a former regulator responsible for assessing animal research proposals and granting licenses in Germany, I can say that I would not have approved this study."⁶

Use of Rats in Strangulation Test Appears to Violate POCTA Regulations 2019 and the Code Part 5, section 108 of the Victoria Prevention of Cruelty to Animals (POCTA) Regulations 2019,⁷ requires animal experimenters to abide by the NHMRC's Australian Code for the Care and Use of Animals for Scientific Purposes 8th Edition 2013 (updated 2021) (Code),⁸ stating: "All scientific procedures carried out under the scientific procedures premises licence must be carried out in accordance with the Australian Code and the Laboratory Animals Code of Practice."⁹

According to the NHMRC's Code, animals can only be used when there is no scientifically valid, non-animal alternative available.¹⁰ Specifically, section 1.5(2) of the Code states: "Evidence to support a case to use animals must demonstrate that ... the use of animals is essential to achieve the stated aims, and *suitable alternatives to replace the use of animals to achieve the stated aims are not available*"¹¹ (*our emphasis*). Monash University publicly stated that it used rats in this strangulation experiment due to its perceived "inability to analyse brain tissue in living human patients."¹² However, recent research has already identified and validated key biomarkers of TBI *in humans*, and advanced TBI imaging technologies and computational models^{13,14} offer robust non-invasive alternatives to animal testing, providing human-relevant insights for patients and making replication of such traumatic brain injuries in rats cruel, unnecessary, wasteful, and in apparent violation of the Code and POCTA Regulations 2019.^{15,16}

Additionally, for experiments that use animals, section 1.15 of the Code states: "Regardless of the potential benefits of a project, the methods used must be scientifically valid, feasible, well designed and carefully conducted so that there is a reasonable expectation that the aims of the project will be achieved. *Projects that are not scientifically valid must not be performed, no matter how mild the*

⁵ Stock. 2025.

⁶ Stock. 2025.

⁷ Prevention of Cruelty to Animals Regulations 2019 (Vic). S.R. No. 133/2019. Available at: https://content.legislation.vic.gov.au/sites/default/files/9cc60c2d-63c4-35b6-95ad-c39254a5d170_19-133sra%20authorised.pdf.

⁸ National Health and Medical Research Council. 2013. Australian code for the care and use of animals for scientific purposes. Accessed February 18, 2025. <https://www.nhmrc.gov.au/about-us/publications/australian-code-care-and-use-animals-scientific-purposes>.

⁹ Prevention of Cruelty to Animals Regulations 2019. Accessed March 3, 2025.

¹⁰ Stock. 2025.

¹¹ National Health and Medical Research Council. 2013.

¹² Stock. 2025.

¹³ Irimia A. Neuroinformatics and Analysis of Traumatic Brain Injury and Related Conditions. *Neuroinform*. 2024; 22, 569–572. <https://doi.org/10.1007/s12021-024-09691-5>.

¹⁴ Zhou Y, Wang Y, Wang J, Zhang Y. Computational approaches for acute traumatic brain injury image recognition. *Front Neurol*. 2022; 13, 791816. <https://doi.org/10.3389/fneur.2022.791816>.

¹⁵ Ghaith HS, Nawar AA, Gabra MD, Abdelrahman ME, Nafady MH, Bahbah EI, Ebada MA, Ashraf GM, Negida A, Barreto GE. A Literature Review of Traumatic Brain Injury Biomarkers. *Mol Neurobiol*. 2022 Jul;59(7):4141-4158. [doi: 10.1007/s12035-022-02822-6](https://doi.org/10.1007/s12035-022-02822-6).

¹⁶ Lipsky RH, Witkin JM, Shafique H, Smith JL, Cerne R, Marini AM. Traumatic brain injury: molecular biomarkers, genetics, secondary consequences, and medical management. *Front Neurosci*. 2024 Oct 4;18:1446076. [doi: 10.3389/fnins.2024.1446076](https://doi.org/10.3389/fnins.2024.1446076).

*impact on the wellbeing of the animals*¹⁷ (our emphasis). However, the design of this rat strangulation experiment is inherently flawed. Despite some biological similarities, rats and humans differ significantly in brain morphology, function, and structure.¹⁸ Additionally, the psychological and social dimensions of trauma resulting from domestic violence are individualized, nuanced, and deeply intertwined with human experiences, which cannot be replicated in rats—especially given our limited understanding of their cognition.^{19,20} Scientific evidence underscores that while animals can exhibit stress responses, they do not possess the same cognitive and emotional frameworks as humans to process and manifest trauma in comparable ways.²¹ Consequently, conclusions about human physiological and psychological trauma based on such experiments on animals, including Monash’s rat strangulation experiment, run a high risk of invalid clinical conclusions.^{22,23} Given the aforementioned points—namely, the scientific critique from Dr. Herrmann regarding this rat strangulation experiment being severe and needless, NHMRC’s public admission that it did not evaluate the validity of this animal model, and Monash University’s public admission that it justified the use of rats in this experiment by arguing it could not analyze brain tissue in live human patients (despite the evidence we presented clearly showing otherwise)—it is reasonable to conclude that this experiment does not adequately meet the minimum threshold required for establishing scientific validity, as required by the Code and POCTA Regulations 2019.

Furthermore, section 1.5(4) of the Code states: “Evidence to support a case to use animals must demonstrate that ... the project involves the *minimum adverse impact* on the wellbeing of the animals involved”²⁴ (our emphasis). Given an average rat’s size and the delicate anatomy of their respiratory system, the amount of force used in this experiment to suffocate the rats likely caused significant distress and tissue trauma, as some animals had to be resuscitated after the procedure.^{25,26} Dr. Andrew Knight, a veterinary professor of animal welfare,²⁷ also pointed out that the Monash experimenters did not administer adequate analgesia to the rats before the painful procedures,²⁸ compounding the apparent violations of the Code and POCTA Regulations 2019.

¹⁷ National Health and Medical Research Council. 2013.

¹⁸ *Neuron Development*. (n.d.). Human and rat brain comparisons. Accessed February 18, 2025.

<https://neurondevelopment.org/human-rat-comparisons/>.

¹⁹ Stock. 2025.

²⁰ Pisula W, Modlinska K. Animals in Search of Stimulation and Information: A Review of over 10 years of our Research on Spontaneous Exploration in Rats as a Response to Novelty in Low-Stress Paradigm. *Anim Behave Cogn*. 2023; 10 (4), 187-303. doi: 10.26451/abc.10.04.01.2023.

²¹ Flandreau EI, Toth M. 2017. Animal Models of PTSD: A Critical Review. In: Vermetten, E., Baker, D.G., Risbrough, V.B. (eds) Behavioral Neurobiology of PTSD. *Current Topics in Behavioral Neurosciences*, vol 38. Springer, Cham. doi.org/10.1007/7854_2016_65.

²² Ihm VE. Two wrongs do make a right: Animal models. February 10, 2025. *LinkedIn*. Accessed February 14, 2025.

<https://www.linkedin.com/pulse/two-wrongs-do-make-right-animal-models-ihmve/?trackingId=TbywK5fQ11Ak12aLu2IDPQ%3D%3D>.

²³ Zhang KK, Matin R, Gorodetsky C, Ibrahim GM, Gouveia FV. Systematic review of rodent studies of deep brain stimulation for the treatment of neurological, developmental and neuropsychiatric disorders. *Transl Psychiatry*. 2024 Apr 11;14(1):186. doi: 10.1038/s41398-023-02727-5.

²⁴ National Health and Medical Research Council. 2013.

²⁵ Sun et al. 2025.

²⁶ Ihm. 2025.

²⁷ Knight A. Andrew Knight [LinkedIn page]. LinkedIn. Accessed February 21, 2025. <https://www.linkedin.com/in/andrew-knight-409b7434/?originalSubdomain=uk>.

²⁸ Stock. 2025

Rat Strangulation Experiment Appears to Violate *Brain, Behavior, and Immunity* Guidelines

Additionally, it appears the authors of this Monash rat strangulation experiment did not adhere to guidelines set by *Brain, Behavior, and Immunity*. According to the *Guide for Authors*, which states, “All animal experiments should comply with the ARRIVE guidelines ... and the authors should clearly indicate in the manuscript that such guidelines have been followed.”²⁹ The authors clearly indicated that such guidelines were followed, stating, “Procedures were approved by the Alfred Medical Research and Education Precinct Animal Ethics Committee and conducted in accordance with the ARRIVE guidelines... .” However, on numerous occasions throughout the experiment, the authors apparently failed to adhere to the ARRIVE guidelines.

There are 20 such guidelines, but the ARRIVE essential 10 guidelines are “the basic minimum to include in a manuscript. Without this information, readers and reviewers cannot assess the reliability of the findings.”³⁰ Detailed below are instances in which the authors of this Monash rat strangulation experiment apparently failed to adhere to ARRIVE essential 10 guidelines:

- ARRIVE Guideline 2b states: “Explain how the sample size was decided. Provide details of any a priori sample size calculation, if done.” The authors explained the sample size as based on a previous experiment that they conducted.³¹ However, their explanation in the previous experiment only detailed why the animal group size was lower than intended due to exclusions from animal deaths, and did not explain why the original group size was the size that it was.
- ARRIVE Guideline 4a states: “State whether randomisation was used to allocate experimental units to control and treatment groups. If done, provide the method used to generate the randomisation sequence.” The authors did not state whether they used such randomization.
- ARRIVE Guideline 4b states: “Describe the strategy used to minimise potential confounders such as the order of treatments and measurements, or animal/cage location. If confounders were not controlled, state this explicitly.” The authors did not describe any strategy to minimize potential confounders, and they didn’t state whether they controlled confounders.
- ARRIVE Guideline 5 states: “Describe who was aware of the group allocation at the different stages of the experiment (during the allocation, the conduct of the experiment, the outcome assessment, and the data analysis).” The authors described blinding during the conduction of the experiment, however they did not provide a description regarding blinding during allocation, outcome assessment, or data analysis.

Rat Strangulation Experiment Underscores Need to Modernize Publication Standards

By perpetuating the use of outdated models, experimenters divert resources away from more human-relevant approaches and detract from essential questions that can better help the victims of domestic

²⁹ Elsevier Science Direct. *Brain, Behavior, and Immunity Guide for Authors*. Accessed February 18, 2025. <https://www.sciencedirect.com/journal/brain-behavior-and-immunity/publish/guide-for-authors>

³⁰ ARRIVE. *The ARRIVE guidelines 2.0*. Accessed February 18, 2025. <https://arriveguidelines.org/arrive-guidelines>

³¹ Shultz SR, Sun M, Wright DK, et al. Tibial Fracture Exacerbates Traumatic Brain Injury Outcomes and Neuroinflammation in a Novel Mouse Model of Multitrauma. *Journal of Cerebral Blood Flow & Metabolism*.

abuse.³² Furthermore, approvals for this experiment raise serious ethical and judgment questions^{33,34} about adherence to the rules of sound scientific practice and to the 3Rs principle to reduce, refine and replace the use of animals in experiments where possible.³⁵ It is evident that the decision-makers failed to adhere to these rules and principles, resulting in significant animal suffering.

You may contact me directly via e-mail at SamuelP@peta.org. Thank you for your attention to this important matter, and we look forward to your response.

Sincerely,



Samuel Pons, M.A.
Special Projects Associate
PETA U.S.



Mimi Bekhechi
Senior Policy Advisor
PETA Australia

cc: Ruth Barrientos, PhD.
President-Elect PNIRS
(Ruth.Barrientos@osumc.edu)

³² Ihm. 2025.

³³ Ihm. 2025.

³⁴ Stock. 2025

³⁵ *National Health and Medical Research Council*. 2013.