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## **LETTER TO THE EDITOR**

## **Response to "Humanity and Inhumanity of Nonhuman Primate Research"**

Emily R. Trunnell, PhD and Donya Mand, MD

Responding to Kaitlin R. Weed's "Humanity and Inhumanity of Nonhuman Primate Research" in the September 2024 issue of the journal, we argue that, contra the author's claim, use of nonhuman primates (NHPs) and other animals is unjustified and highlight reasons for growing opposition to using NHPs in biomedical or behavioral experimentation, testing, or research.

While the *presence* of NHPs and other animals in past research arguably was valid, their *necessity* in research—especially now—is not.<sup>1</sup> Despite the use of NHPs in research, approximately 95% of new drugs fail in clinical trials.<sup>2</sup> In 2019, 99% of Alzheimer's disease (AD) research trials showed no difference between the intervention drug and placebo.<sup>3</sup> Despite recent (but controversial) advancements<sup>4,5</sup>—specifically, the approval of several monoclonal antibody therapies—major discord continues to surround the models used to mimic current theories of AD etiology and pathology, prompting greater scrutiny of preclinical animal models.<sup>6</sup> Moreover, of hundreds of HIV vaccines developed and tested in NHPs, none are approved for humans.<sup>7,8</sup>

Despite strong insistence from some researchers that halting chimpanzee use in research would stall clinical progress,<sup>9</sup> in 2011 the Institute of Medicine Committee on the Use of Chimpanzees in Biomedical and Behavioral Research concluded that most experimental uses of chimpanzees were unnecessary.<sup>10</sup> Poor translation of conclusions drawn from research on other animals to humans, combined with the increasing availability of non-animal methods, has generated a scientific landscape that is continuing to move away from animal use, as demonstrated by the implementation of the US Food and Drug Administration's (FDA's) New Alternative Methods Program<sup>11</sup> and the adoption in 2023 of the FDA Modernization Act 2.0.<sup>12</sup> The aforementioned legislation gives the FDA the statutory authority to consider preclinical testing performed using non-animal methods, meaning animal tests are not required before drugs are advanced to human trials.<sup>12</sup>

Opposition to research on NHPs has merit. The Silver Spring Monkeys case mentioned in Weed's article resulted in changes to laws intended to improve care of laboratory-based animals, but some facilities that use primates still fail to uphold minimal standards of the Animal Welfare Act, resulting in some NHPs being denied veterinary care<sup>13</sup> and sustaining injuries<sup>14</sup> or dying<sup>15</sup> due to improper handling, monitoring, or facility

maintenance. Moreover, removal of primates from their native habitats threatens wild populations,<sup>16</sup> and transporting these NHPs to laboratories risks transmission of zoonotic diseases (which can also confound data collected from infected animals).<sup>17</sup>

The depiction of a content rhesus macaque in Weed's article offers a misleading view of NHPs in research, obscuring the reality that they suffer when they are denied dignity, respect, and opportunities to live their lives in their native habitats on their own terms. It's time we stopped thinking of NHP research as something of value and recognize it for what it is: a practice that future generations will—especially if current trends of using fewer NHPs in research continue—likely look back on with incredulity and regret.

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**Emily R. Trunnell, PhD** is the director of the Science Advancement and Outreach Division for People for the Ethical Treatment of Animals.

**Donya Mand, MD** is the science policy advisor in the Laboratory Investigations Department for People for the Ethical Treatment of Animals.

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