

# Great Ape Disgrace: How the US Laboratory Oversight System Failed Chimpanzees

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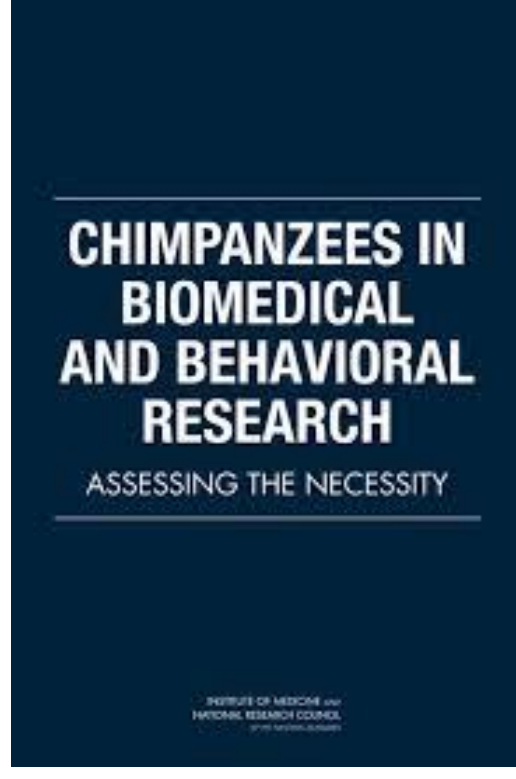
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## INTRODUCTION

### Background

- The US remains the last industrialized country to conduct invasive biomedical experiments on chimpanzees.
- Significant public opposition prompted a reappraisal of the scientific need for the controversial practice.



“[M]ost current biomedical research use of chimpanzees is not necessary” – landmark report by the National Academy of Science’s Institute of Medicine, Dec 2011

“[R]esearch involving chimpanzees has rarely accelerated new discoveries or the advancement of human health for infectious diseases....” – National Institutes of Health (NIH), Jan 2013



- In June 2013, NIH announced that it was cutting funding for the overwhelming majority of NIH-supported invasive experiments on chimpanzees and retiring at least 310 of the 360 federally-owned chimpanzees who are currently in laboratories to sanctuaries.

### Current study

- Until 2013, NIH had widely funded, conducted, and advocated for experiments on chimpanzees.
- The findings of both the IOM and NIH reports raise the question of how and why NIH was continuing to approve, fund, and conduct experiments on chimpanzees that were ultimately deemed “unnecessary.”



## METHODS

- A search of the NIH database, RePORTER, in October 2013 uncovered nine active NIH grants for intramural projects involving chimpanzees; the chimpanzee experiments associated with five of these grants were in process.
- Copies of chimpanzee protocols, approved by NIH’s Institutional Animal Care and Use Committee (IACUC), were acquired through the Freedom of Information Act and the justifications provided for chimpanzee use were contrasted with the IOM and NIH reports.

## ANALYSIS OF PROTOCOLS

NIH Protocol, Experimental Methods Used [Number of Chimpanzees Used]	Justification for Chimpanzee Use Provided in Protocol	Findings of the IOM or NIH Reports
<b>Norovirus infection in chimpanzees:</b> Juvenile chimpanzees were infected with a norovirus; monitored for clinical signs of gastroenteritis (vomiting, diarrhea, fever, and anorexia); and subjected to blood draws and intestinal, liver, and bone marrow biopsies. [16]	“Chimpanzees remain an important animal model in the study of human noroviruses because of their close genetic relatedness with humans.”	NIH: “[R]esearch involving chimpanzees has rarely accelerated new discoveries or the advancement of human health for infectious diseases.”
<b>Evaluation of respiratory viruses in monkeys and chimpanzees:</b> Chimpanzees were infected with a respiratory syncytial virus (RSV); observed for signs of infection; and subjected to tracheal and bronchoalveolar irrigation and tissue biopsies. [16]	“[T]here is no alternative to the use of living animals”	IOM: There are alternatives to the use of chimpanzees in RSV research; such research can be performed ethically using humans; forgoing the use of chimpanzees will not hamper progress.
<b>Pathogenesis of viruses that infect the human and chimpanzee liver:</b> Juvenile and small adult chimpanzees were infected with hepatitis viruses, including hepatitis C virus (HCV) and subjected to blood draws, bile aspiration, and liver, bone marrow, skin, intestinal, and lymph node biopsies. [Up to 28]	“There is at present no alternative to the use of living animals ... In addition, the chimpanzee is particularly useful as a surrogate to humans in vaccine development studies.”	IOM: Chimpanzees are not necessary for HCV antiviral drug discovery and development or for the development and testing of an HCV vaccine.
<b><i>P. Vivax</i> and <i>P. falciparum</i> parasites in a chimpanzee:</b> A male chimpanzee, subjected to a splenectomy and infected with a parasite associated with malaria, had 1,000 to 2,000 parasite-carrying mosquitoes placed on his shaved abdomen; was observed for clinical signs such as diarrhea, lethargy, and anorexia, and was subjected to blood draws and bone marrow biopsies. [1]	“In order to genetically map the determinants of drug resistance, we must analyze genetic recombinants, which are only generated in the mosquito during the production of sporozoites. The only way to recover infectious recombinants is by transmission of the sporozoites by mosquito bite to a live, susceptible animal.”	NIH: “[R]esearch involving chimpanzees has rarely accelerated new discoveries or the advancement of human health for infectious diseases.”

## DISCUSSION AND CONCLUSIONS

- Each of the NIH experiments summarized above inflicted significant harms on the chimpanzees involved. These painful and invasive experiments were approved, funded and conducted for years despite the existence of superior alternatives. These very experiments were deemed by the IOM and NIH to be unjustifiable and unnecessary.
- The IOM and NIH reports underscore limitations in the current review system that prevent adequate ethical and scientific evaluation of projects involving animals.

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