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CHIMPANZEE USE IN INVASIVE BIOMEDICAL RESEARCH: THE ONE-PERCENT DIFFERENCE THAT AFFECTS ONE-HUNDRED-PERCENT OF THE STUDIES

SAMANTHA FOX*

"Here is the fundamental paradox of our treatment of . . . chimpanzees in particular. We use them because they are so close to human; it serves our convenience to treat them as so close to an animal. Nowhere has the paradox been starker than inside many research laboratories."¹

INTRODUCTION

Overwhelmed with fear of being shot with a dart gun, a chimpanzee screams and frantically flails around his cage. Trapped behind the bars of a steel cage, he has nowhere to escape. Horrified chimpanzees in nearby cages scream and bang on their cages with all their might, to no avail. The chimpanzee does not stand a chance. The technician lines him up in his sights and fires the gun, launching a pre-loaded syringe that tears through the skin of the chimpanzee. He slowly becomes groggy. It is a downward spiral for the life of a laboratory chimpanzee, right down to the cement ground beneath him.² Now imagine this, not once, but two hundred and eighty-nine times. Forty punch liver biopsies, three open wedge liver biopsies,³ three bone marrow biopsies, two lymph node biopsies, and

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¹ DALE PETERSON & JANE GOODALL, VISIONS OF CALIBAN: ON CHIMPANZEES AND PEOPLE 223 (1993).

² See *Nightline: Exclusive: Ex-Employees Claim 'Horrific' Treatment of Primates at Lab* (ABC television broadcast Mar. 3, 2009), available at http://www.humanesociety.org/news/press_releases/2009/03/investigation_chimps_sm_030409.html [hereinafter *Nightline Exclusive*] (revealing a video containing footage from a nine-month undercover investigation of New Iberia Research Center in Louisiana); *Latest HSUS Undercover Investigation Reveals Abuse of Chimps, Other Primates in Federally Funded Research Laboratory*, HUMANE SOC'Y OF THE U.S. (Mar. 4, 2009), http://www.humanesociety.org/news/press_releases/2009/03/investigation_chimps_sm_030409.html [hereinafter *Undercover Investigation*].

³ See *infra* text accompanying notes 67–68.

several HIV challenges later, the scientific community has gained nothing that has been practicably useful to human biology and medicine.⁴ This is the true story of Billy Jo, a chimpanzee that was trapped inside the walls of a research lab for fourteen years.⁵ However, Billy Jo is not a single isolated incident.⁶ The horrifying screams of chimpanzees fall on deaf ears every day inside research labs.

Millions of animals are used each year in American research facilities for varying purposes. Animals are commonly used to develop and test products, medical procedures, and medicine. The United States recognizes that animal experimentation reduces the dangers to human experimentation and exploitation of minority and low-income groups. At the same time, the United States has prided itself on the proper care and treatment of animals. Congress enacted the Animal Welfare Act in 1966 partly to afford laboratory animals protections and to ensure their humane treatment.⁷ Chimpanzees are among the animals covered under the Animal Welfare Act.

Chimpanzees are great apes, a species that also includes bonobos, gorillas, and orangutans. Although often mistakenly lumped in the category of monkeys, great apes are an entirely separate and distinct species from monkeys.⁸ The chimpanzee is the only nonhuman great ape species still used in research laboratories,⁹ and has gained increasing attention in recent years.

The United States has used chimpanzees in research since the 1920s¹⁰ and, as of May 2011, with 937 chimpanzees, uses more chimpanzees in invasive biomedical research than any other country.¹¹ Invasive research

⁴ See discussion *infra* Part II.

⁵ *Chimpanzees: Billy Jo*, FAUNA FOUND., <http://www.faunafoundation.org/html/billyjoprofile.html> (last visited Jan. 1, 2014) [hereinafter *Chimpanzees: Billy Jo*]; see *Billy Jo: The Chimpanzee Who Won Everyone's Heart*, PROJECT R&R (Feb. 14, 2006), <http://www.releasechimps.org/chimpanzees/their-stories/billy-jo>.

⁶ See, e.g., Chris Adams, *Some Chimps Never Recover From Stresses of Research*, MCCLATCHY NEWSPAPERS (Apr. 24, 2011), <http://www.mcclatchydc.com/2011/04/24/112432/some-chimps-never-recover-from.html> (describing the stories of multiple chimps, including the similar story of a seventeen-year-old chimpanzee, Lira, who took part in hepatitis research starting at the age of four).

⁷ See Animal Welfare Act, 7 U.S.C. § 2143(a)(3) (2012 & Supp. I).

⁸ See Tetsuro Matsuzawa, *The Chimpanzee Mind: Bridging Fieldwork and Laboratory Work*, in *THE MIND OF THE CHIMPANZEE* 1, 1 (Elizabeth V. Lonsdorf et al. eds., 2010).

⁹ See Kathleen M. Conlee, *Chimpanzees in Research and Testing Worldwide: Overview, Oversight and Applicable Laws*, in 6TH WORLD CONGRESS ON ALTERNATIVES & ANIMAL USE IN THE LIFE SCIENCES: PROCEEDINGS 111, 111 (Japanese Soc'y for Alts. to Animal Experiments ed., 2007), available at <http://altweb.jhsph.edu/bin/g/c/paper111.pdf> (noting that chimpanzees' continued use in labs is likely because they breed successfully in captivity and are smaller and easier to handle in comparison to other great apes, such as the gorillas and orangutans).

¹⁰ See *id.*

¹¹ See Jarrod Bailey, *An Examination of Chimpanzee Use in Human Cancer Research*, 37

refers to most psychological, as well as actual physical experimental research, covering any research that may cause death, injury, pain, fear, or trauma to a chimpanzee.¹² The United States government is heavily involved in promoting chimpanzee research, currently supporting 612 of these chimpanzees.¹³ The remaining chimpanzees are privately owned and supported.¹⁴ However, global trends prohibiting the use of great apes in invasive biomedical research leave the United States as the only developed nation in the world that still conducts medical research on chimpanzees.¹⁵ The global trend has been driven predominately by ethics, science, and economics. Ethical considerations have been based on the relatively new

ALTERNATIVES TO LABORATORY ANIMALS 399, 399 (2009), *available at* <http://www.releasechimps.org/pdfs/chimpanzees-and-human-cancer-research.pdf> [hereinafter *Cancer Research*]; INST. OF MED. & NAT'L RESEARCH COUNCIL, CHIMPANZEES IN BIOMEDICAL AND BEHAVIORAL RESEARCH: ASSESSING THE NECESSITY 10 (Bruce M. Altevogt et al. eds., 2011) [hereinafter *Assessing the Necessity*] (stating that, as of May 2011, 937 chimpanzees were available for biomedical research).

¹² Great Ape Protection and Cost Savings Act of 2011, S. 810, 112th Cong. § 3 (2011).

(3) INVASIVE RESEARCH.-

(A) IN GENERAL.- The term "invasive research" means any research that may cause death, injury, pain, distress, fear, or trauma to a great ape, including--

- (i) the testing of any drug or intentional exposure to a substance that may be detrimental to the health or psychological well-being of a great ape;
- (ii) research that involves penetrating or cutting the body or removing body parts, restraining, tranquilizing, or anesthetizing a great ape; or
- (iii) isolation, social deprivation, or other experimental manipulations that may be detrimental to the health or psychological well-being of a great ape.

(B) EXCLUSIONS.-

(i) IN GENERAL.- The term "invasive research" does not include--

- (I) close observation of natural or voluntary behavior of a great ape, if the research does not require an anesthetic or sedation event to collect data or record observations;
- (II) the temporary separation of a great ape from the social group of the great ape, leaving and returning by the own volition of the great ape;
- (III) post-mortem examination of a great ape that was not killed for the purpose of examination or research; and
- (IV) the administration of a physical exam by a licensed veterinarian or physician conducted for the well-being of the individual great ape.

Id.

¹³ *Assessing the Necessity*, *supra* note 11, at 10.

¹⁴ *Id.*

¹⁵ See Brian Vastag, *Chimpanzee Research an Endangered Species as Experts Debate Usefulness, Ethics*, WASH. POST (Aug. 13, 2011), http://www.washingtonpost.com/national/health-science/chimpanzee-research-an-endangered-species-as-experts-debate-usefulness-ethics/2011/08/12/gIQAGt0xDJ_story_1.html (noting that the only other country conducting medical research on chimpanzees is Gabon, a country in West Africa).

and rich amount of information discovered about the cognitive and emotional capacities of chimpanzees.¹⁶ Scientific considerations have been fueled by overwhelming proof indicating that chimpanzees are poor research subjects for human biology and medicine.¹⁷ Lastly, economic considerations, such as the astronomical cost of maintenance and housing, have also contributed to the trend.¹⁸

A nine-month undercover investigation of the nation's largest primate research facility,¹⁹ the New Iberia Research Center in Louisiana,²⁰ revealed the pain and suffering chimpanzees used in research laboratories endure. The research center is home to more than six thousand primates and over three hundred chimpanzees, one of the largest captive chimpanzee populations in the world.²¹

The footage from the investigation is disturbing. Chimpanzees used in drug studies were isolated in steel cages enclosed within cinderblock walls for months, a far cry from their natural habitat.²² Chimpanzees infected with hepatitis C were "knocked down," which is lab lingo for sedated, up to four times a day.²³ The chimpanzees had tubes shoved down their throats, some while they were completely alert and awake, or were poked and prodded with IVs.²⁴ Then their livers were repeatedly stuck with long

¹⁶ Stephen R. Ross, *How Cognitive Studies Help Shape Our Obligation for the Ethical Care of Chimpanzees*, in *THE MIND OF THE CHIMPANZEE* 309, 310–11 (Elizabeth V. Lonsdorf et al. eds., 2010); Frans B. M. de Waal, *Research Chimpanzees May Get a Break*, 10 PLOS BIOLOGY 1, 1 (2012) available at <http://www.plosbiology.org/article/doi/10.1371/journal.pbio.1001291&representation=PDF>.

¹⁷ See discussion *infra* Part II.

¹⁸ See *Cancer Research*, *supra* note 11, at 399; see also Alex Kirby, *Campaign Demands EU Ape Research Ban*, BBC NEWS (Mar. 28, 2001), <http://news.bbc.co.uk/2/hi/science/nature/1243876.stm>; (estimating the cost of a lab chimp who lives to age fifty-two can cost \$1.4 million over its lifetime).

¹⁹ See *Nightline Exclusive*, *supra* note 2.

²⁰ *The HSUS Investigates Primate Use at the New Iberia Research Center (NIRC) New Iberia, Louisiana*, HUMANE SOC'Y OF THE U.S. 1 (Mar. 2009) [hereinafter *HSUS Investigates*], http://www.humanesociety.org/assets/pdfs/animals_laboratories/case_report-hsus_undercover_investigation_new_iberia_research_center_march_2009.pdf (discussing the basis for some of the ANDREW WESTOLL, *THE CHIMPS OF FAUNA SANCTUARY* 206–07 (2011) 112 allegations of possible Animal Welfare Act violations relating to chimpanzees); Karina L. Schrenghorst, Note, *Animal Law—Cultivating Compassionate Law: Unlocking The Laboratory Door and Shining Light on the Inadequacies & Contradictions of the Animal Welfare Act*, 33 W. NEW ENG. L. REV. 855, 894 (2011).

²¹ WESTOLL, *supra* note 18, at 201.

²² *HSUS Investigates*, *supra* note 20, at 1.

²³ *Id.*; see Jennifer Epstein, *Rep. Roscoe Bartlett: Ban Research on Chimps*, POLITICO (Aug. 11, 2011, 6:05 AM), <http://www.politico.com/news/stories/0811/61084.html> (quoting Maryland Congressman Bartlett about how a simple biomedical procedure that is performed on humans, like taking a blood sample, is much different when performed on a chimpanzee that is five times stronger than a human, and often requires traumatizing restraint of the chimpanzee and can require a knockdown to protect the researchers from injuries).

²⁴ *HSUS Investigates*, *supra* note 20, at 1.

needles for biopsies, while sedated, but with no painkillers following the procedure.²⁵ The investigation also revealed sedated chimpanzees falling from their metal perches to the hard cement or thick steel floors of their cage after being shot with a dart gun and left unattended.²⁶ Baby chimpanzees that were separated from their mothers, sometimes immediately after birth, resorted to rocking—a self-comforting behavior associated with maternal deprivation and fear.²⁷ Severe psychological distress was also exhibited by self-mutilation.²⁸ The footage ends with a shot of Sterling, a twenty-one-year-old chimpanzee, hiding in the corner of his empty cage. It was later revealed Sterling had been permanently removed from research protocols because of stress-induced psychosis.²⁹

This Note addresses the need to pass federal legislation banning chimpanzee use in biomedical research, requiring permanent retirement of all government-owned chimpanzees currently warehoused in research laboratories to sanctuaries, and codifying the National Institutes of Health's current administrative moratorium, which bans any government-funded breeding of chimpanzees.³⁰ The legislation would also address the rare instance when an exception to the total ban would be allowed. The possibility of an exception could arise with the occurrence of an unexpected outbreak of a life-threatening condition in human beings, provided it satisfies certain criteria, which will be discussed in more detail *infra*. This resolution would end the unnecessary physical and psychological harm and suffering chimpanzees endure in research laboratories and provide the protection they deserve while still serving the interest of saving human lives.

Part II discusses the reasons why chimpanzees have been and should continue to be afforded greater protection than any other laboratory animal. Part III discusses the prevailing view that using chimpanzees as research subjects for human disease and drug testing has been ineffective. This part also discusses a reliable alternative method and underlying economic

²⁵ *See id.*

²⁶ *See id.* at 2.

²⁷ *Id.*; see Tetsuro Matsuzawa, *The Chimpanzee Mind: Bridging Fieldwork and Laboratory Work*, in *THE MIND OF THE CHIMPANZEE* 8 (Elizabeth V. Lonsdorf et al. eds., 2010) (explaining that infant chimpanzees that are torn from their mother show symptoms of depression, such as claspings their knees, rocking, and losing the shine in their eyes); see also ANDREW WESTOLL, *THE CHIMPS OF FAUNA SANCTUARY* 71 (2011) (explaining that chimpanzees in the wild are not weaned until they are four or five years old and they are strongly bonded to their mothers, emotionally and physically, until they are approximately eight years old).

²⁸ *HSUS Investigates*, *supra* note 20, at 3.

²⁹ *See* WESTOLL, *supra* note 27, at 203.

³⁰ *See* discussion *infra* Part III.A.

aspects of the debate. Part IV discusses the current state of legislation and explains why the legislation is inadequate and ineffective. Part V addresses the possible solutions, along with the advantages and disadvantages of each. Part VI advocates the adoption of federal legislation, modeled after a European Directive, banning the use of chimpanzees in invasive biomedical research.

I. THE SPECIAL CASE OF CHIMPANZEES

It has been said that, "when you look at the ethics of [using chimpanzees for research], we must compare ourselves to what other developed nations are doing."³¹ Other developed nations, such as, the United Kingdom, Belgium, Japan, New Zealand, Netherlands, Sweden, and Australia, have banned experiments on great apes.³² The new European Directive on the protection of animals used for scientific purposes banning the use of chimpanzees in invasive biomedical research often underlies the claims that the United States is "lagging behind" and needs to "catch up" with the rest of the world.³³

Much of what underlies the growing global awareness that chimpanzees used in invasive biomedical research is morally wrong is their cognitive and emotional abilities that make them sympathetic.³⁴ The cognitive abilities of great apes are roughly equivalent to that of a three-year-old human. They have shown a greater variety of human-like behavior and abilities than any other species.³⁵ It is believed that chimpanzees generally perceive the world the way humans do.³⁶ Chimpanzees, like humans, possess cognitive abilities, including mental representation, self-conception, logical and mathematical abilities, tool use, the knowledge that minds exist,³⁷ and non-symbolic and symbolic communication, including

³¹ See *Undercover Investigation*, *supra* note 2 (Videotape Statement of Wayne Pacelle, at 3:01–3:08).

³² See *id.* at 11.

³³ *Id.*; see Press Release, project r&t, Chimpanzees and Bad Research: It's in the Genes (Jan. 25, 2012), <http://www.releasechimps.org/resources/article/chimpanzees-and-bad-research>.

³⁴ See Chris Adams, *Some Chimps Never Recover From Stresses of Research*, MCCLATCHY NEWSPAPERS (Apr. 24, 2011), <http://www.mcclatchydc.com/2011/04/24/112432/some-chimps-never-recover-from.html> ("Chimps are among humans' closest genetic cousins, and given their range of emotions and their level of understanding, researchers themselves afford chimps special protections that other research animals don't get, even monkeys.").

³⁵ Richard Wrangham, *Meanings of Chimpanzee Mind*, in *THE MIND OF THE CHIMPANZEE* 370, 370 (Elizabeth V. Lonsdorf et al. eds., 2010).

³⁶ STEVEN M. WISE, *RATTLING THE CAGE: TOWARD LEGAL RIGHTS FOR ANIMALS* 180 (2000).

³⁷ See *id.* at 195 ("[A]pes have an implicit, and perhaps explicit, theory of mind, are self-aware, engage in joint attention [the ability to share the world], imitate, point, teach, intentionally deceive [and] empathize . . .").

language.³⁸ Therefore, on top of the evident physical pain chimpanzees endure in research facilities, their psychological well-being, or torment, has been arguably the dominant concern. Studies show many chimpanzees suffer from psychological illnesses from their lives in laboratories, which persist even after they are retired to sanctuary.³⁹ Like humans, chimpanzees are found to suffer post-traumatic stress disorder.⁴⁰ For example, Billy Jo bit off his index finger during one of his anxiety attacks.⁴¹ Other anxiety attacks were so severe that they left Billy Jo choking, gagging, and convulsing.⁴² This psychological effect is an additional consideration in evaluating the physical pain and suffering chimpanzees endure in research labs.

The conditions of chimpanzees' lives in laboratories, which deprive them of anything reminiscent of their usual habitat, are relevant to both ethical and scientific considerations, due to the effects of stress. Chimpanzees experience stress from the start of their confinement,⁴³ and it only worsens with each procedure.⁴⁴ Stress has particular consequences for immune system function, which is crucial in the study of infectious diseases, including HIV/AIDS and hepatitis C. Stress also affects vital organs, including the liver, which is important for the metabolism of drugs.⁴⁵ This chronic and traumatic stress harms chimpanzees' health and in turn compromises the results of experiments conducted on them, just as it would in human studies.⁴⁶ When it comes to human clinical studies, no one argues

³⁸ *Id.* at 181.

³⁹ See G.A. Bradshaw et al., *Building an Inner Sanctuary: Complex PTSD in Chimpanzees*, 9(1) J. OF TRAUMA & DISSOCIATION 9, 9 (2008), available at <http://www.releasechimps.org/pdfs/ExecSumTraumaFINAL.pdf>.

⁴⁰ See *id.*; see also *Ban Chimp Testing*, SCIENTIFIC AM. (Sept. 28, 2011), <http://www.scientificamerican.com/article.cfm?id=ban-chimp-testing>.

⁴¹ *Chimpanzees: Billy Jo*, *supra* note 5.

⁴² *Id.*

⁴³ *Assessing the Necessity*, *supra* note 11, at 27 (mentioning that when chimpanzees are deprived of their usual habitats, which includes the "the presence of conspecifics and sufficient space and environmental complexity to exhibit species-typical behavior," they experience a chronic stress response, compromising behavioral as well as physiological signs).

⁴⁴ See Public Testimony of Theodora Capaldo at 5 (Aug. 2011), available at http://my.neavs.org/site/DocServer/NEAVS_capaldo_written_final.pdf?docID=842&autologin=true&AddInterest=1022 ("[C]himpanzees placed in a standard laboratory squeeze cage, in their impotent attempts to escape, thrash frantically, scream, fear grimace, defecate and manifest a full range of fearful, panicked behaviors and, if measured, accompanying biophysiological stress indicators. This huge degree of stress that they are subjected to is then followed by a blood draw, administration of a virus, or other experimental protocol for which the resulting data does not, because it cannot, account.").

⁴⁵ *Id.* at 6.

⁴⁶ Roscoe G. Bartlett, Op-Ed., *Stop Using Chimps as Guinea Pigs*, N.Y. TIMES, Aug. 10, 2011, at A23, available at http://www.nytimes.com/2011/08/11/opinion/stop-using-chimps-as-guinea-pigs.html?_r=1&ref=opinion.

with the proposition that stressed humans are not considered proper candidates, due to concerns of adverse effects on the results. The same should be taken into account with chimpanzees.

II. CHIMPANZEES ARE INEFFECTIVE RESEARCH SUBJECTS

Society funds and supports research on chimpanzees because it mistakenly believes that it leads to cures and treatments for Auto Immune Deficiency Syndrome (AIDS), cancer, hepatitis C, and other diseases. Although chimpanzees share up to 99% of human DNA, the 1% difference accounts for the scant knowledge to our understanding of human biology and medicine from past chimpanzee research.⁴⁷ Chimpanzees' immune systems respond differently than humans' immune systems to viruses and diseases. There is also a difference in absorption, distribution, and metabolism of substances, which affect toxicity of drugs. Therefore, results of studies on chimpanzees are not predictive or beneficial to humans. Relying on misleading chimpanzee studies has had significant adverse ramifications, as discussed below in the context of HIV.⁴⁸

A. HIV/AIDS

HIV research and testing on chimpanzees has largely been labeled a failure.⁴⁹ The research has not produced any vaccine or treatment for HIV due to, what scientists repeatedly note, the fact that the progression of HIV in chimpanzees is completely different from the progression of the virus in humans.⁵⁰ Former director of Yerkes Regional Primate Center, whom is considered a pioneer of chimpanzee research,⁵¹ stated, "I can't tell you what it is that those [chimpanzee] studies have given us that has really made a

⁴⁷ See Ray Greek et al., *A Scientific Case for Elimination of Chimpanzees in Research*, PROJECT R&R 11-12 (2005), <http://www.releasechimps.org/pdfs/A-Scientific-Case-for-the-Elimination-of-Chimpanzee-Research.pdf>.

⁴⁸ See *id.* at 9; see also Jarrod Bailey, *A Brief Introduction to Human/Chimpanzee Biological Differences*, PROJECT R&R (2007), <http://www.releasechimps.org/pdfs/Bailey-web-summary.pdf>. [hereinafter *Biological Differences*] (describing a study of respiratory syncytial virus on the chimpanzee where the vaccine induced immune responses in primates but exacerbated disease in children).

⁴⁹ See 2 PER SVENDSEN & JANN HAU, HANDBOOK OF LABORATORY ANIMAL SCIENCE 3 (Per Svendsen & Jann Hau eds., 1994); Jarrod Bailey, *An Assessment of the Role of Chimpanzees in AIDS Vaccine Research*, in 36 ALTERNATIVES TO LABORATORY ANIMALS 381, 420 (2008), available at <http://www.releasechimps.org/pdfs/assessment-of-the-role-of-chimpanzees-in-AIDS-vaccine-research.pdf> [hereinafter *Chimpanzees in AIDS Research*]; Kathleen M. Conlee, *Chimpanzees in Research and Testing Worldwide: Overview, Oversight and Applicable Laws*, in 14 ALTERNATIVES TO ANIMAL TESTING AND EXPERIMENTS 111, 112 (2007), available at <http://altweb.jhsph.edu/bin/g/c/paper111.pdf>.

⁵⁰ See *Chimpanzees in AIDS Research*, *supra* note 49, at 420.

⁵¹ *Biological Differences*, *supra* note 48, at 4.

difference in the way we approach people with this disease."⁵² One would expect chimpanzees are no longer used for HIV research, considering the vast proof and nearly uncontested view that chimpanzees are ineffective research subjects, specifically for HIV. Surprisingly, the government still funded nine HIV research projects using chimpanzees between 2001 and 2010.⁵³ Twenty years after billions of dollars have been spent on HIV research, a vaccine remains unavailable, and millions of Americans are infected with or die from HIV each year.

Moreover, chimpanzee studies have misled researchers and contributed to the suffering and death of thousands of people by failing to predict how HIV progresses in humans.⁵⁴ Leading French scientist, Claude Reiss, with forty years of research experience, describes this as the "French blood scandal that claimed thousands of innocent victims."⁵⁵ In the early 1980s, the observation that HIV did not affect the chimpanzee led experts to assume the same applied to humans.⁵⁶ Consequently, experts advised health authorities to allow transfusion with contaminated blood samples, leading to the death of thousands.⁵⁷ Reiss warns if the animal model continues to be used as a basis for gauging health risks, then tragedies, perhaps even more dramatic than had occurred in the 1980s, are to be feared.⁵⁸

B. Cancer

If chimpanzees are so "essential" to our understanding of cancer,⁵⁹ then one might expect that chimpanzees are used in all areas of cancer research, especially since cancer affects countless Americans. Despite these expectations, not a single biomedical chimpanzee study from 2007 to 2010 involved cancer, even though there was an abundance of available

⁵² *Id.*; *Chimpanzees in AIDS Research*, *supra* note 49, at 420.

⁵³ *Assessing the Necessity*, *supra* note 11, at 21.

⁵⁴ See Ray Greek et al., *A Scientific Case for Elimination of Chimpanzees in Research*, PROJECT R&R 56 (2005), <http://www.releasechimps.org/pdfs/A-Scientific-Case-for-the-Elimination-of-Chimpanzee-Research.pdf>.

⁵⁵ See *id.*; *HIV/AIDS Debacle: Research Attributes Lack of HIV/AIDS Vaccine to Use of Chimpanzees*, PROJECT R&R, <http://www.releasechimps.org/research/contemporary/hiv-aids>.

⁵⁶ See Greek et al, *supra* note 54.

⁵⁷ See *id.*

⁵⁸ *Id.*

⁵⁹ See Brian Vastag, *Chimpanzee Research an Endangered Species as Experts Debate Usefulness, Ethics*, WASH. POST (Aug. 13, 2011), http://www.washingtonpost.com/national/health-science/chimpanzee-research-an-endangered-species-as-experts-debate-usefulness-ethics/2011/08/12/gIQA6t0xDJ_story_1.html.

chimpanzees.⁶⁰ Like HIV, human and chimpanzee progression of cancer is vastly different; chimpanzees either do not get the disease or get a very different disease.⁶¹ The claims that chimpanzees are indispensable in human cancer treatment ring hollow.

C. Hepatitis C

Chimpanzees can be infected with hepatitis C virus, which, to some researchers, makes them an attractive subject for developing and testing vaccines.⁶² Hepatitis vaccine studies typically involve infecting the chimpanzee with the live virus and then testing them with a potential vaccine.⁶³ Routine blood samples, which often require a "knockdown,"⁶⁴ are taken to track the path of the virus over time.⁶⁵ Some vaccinated chimpanzees are reinfected with the virus to test the bounds of the vaccine.⁶⁶ Infected chimps undergo a series of punch liver biopsies, a process where a long needle is pushed through the abdomen wall and "punched" into the liver to obtain a piece of the liver for analysis.⁶⁷ Chimpanzees also undergo open liver biopsies, a full-blown surgery where the abdomen is opened and exposed and then a wedge-shaped piece of liver is removed.⁶⁸

While the majority of chimpanzee studies involve hepatitis C,⁶⁹ the results of the research and its relevance to humans is questionable and, in any event, limited. Again, this is due to the differences between humans and chimpanzees, which are clearly present with hepatitis C.⁷⁰ First, the likelihood of chronic infection in humans is seventy-five percent—much higher than the thirty-five percent rate in chimpanzees.⁷¹ Second, humans with hepatitis C regularly develop cirrhosis or fibrosis of the liver, a

⁶⁰ ANDREW WESTOLL, *THE CHIMPS OF FAUNA SANCTUARY* 207 (2011).

⁶¹ *BUAV Working with NEAVS to End Chimpanzee Research in the USA*, BUAV (Sept. 29, 2011), <http://www.buav.org/article/842>.

⁶² See WESTOLL, *supra* note 60, at 68–69.

⁶³ *Id.* at 69.

⁶⁴ See Jennifer Epstein, *Rep. Roscoe Bartlett: Ban Research on Chimps*, POLITICO (Aug. 11, 2011, 6:05 AM), <http://www.politico.com/news/stories/0811/61084.html>.

⁶⁵ WESTOLL, *supra* note 60, at 69.

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ *Id.* at 210.

⁷⁰ See *Hepatitis Detour*, PROJECT R&R, <http://www.releasechimps.org/research/contemporary/hepatitis> (last visited Jan. 21, 2014) [hereinafter *Hepatitis Detour*].

⁷¹ *Id.*

chronic degenerative condition—chimpanzees do not.⁷² Third, humans with hepatitis C frequently develop liver cancer, which is the primary reason why hepatitis C is dangerous—chimpanzees rarely do.⁷³ Lastly, the virus can be transferred from mother to fetus in humans—not in chimpanzees.⁷⁴ So while the research has led to a deeper understanding of hepatitis C in chimpanzees and may be interesting, interesting is not equivalent to useful or necessary to an understanding of hepatitis C in humans.⁷⁵ Accordingly, those who once relied on chimpanzees as test subjects have forgone such practice.⁷⁶

The FDA proclaimed it the policy of the Center for Drug Evaluation and Research *not* to request data from chimpanzee studies and further, if asked, "*discourages* sponsors from doing such studies."⁷⁷ GlaxoSmithKline and Genentech, two major pharmaceutical companies who once used chimpanzees in their processes to develop drugs, have acknowledged and confirmed that chimpanzees are no longer necessary. Scientists from both companies said they develop drugs without using chimpanzees. GlaxoSmithKline has an official published policy indicating its decision to end the use of chimpanzees in research and to no longer initiate or fund any studies using chimpanzees.⁷⁸ In the absence of chimpanzees, GlaxoSmithKline continues to develop therapies for hepatitis. Genentech also has forgone using chimpanzee studies. Genentech's director of safety assessment reiterated this ban at an Institute of Medicine meeting in August of 2011. The director informed the committee that Genentech's decision to end the use of chimpanzees was due to advances in scientific engineering that render the need to use chimpanzees obsolete.⁷⁹

⁷² *Id.*

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ Jarrod Bailey, *An Assessment of the Use of Chimpanzees in Hepatitis C Research Past, Present and Future*, in 38 ALTERNATIVES TO LABORATORY ANIMALS 471, 481 (2010), available at http://www.neavs.org/docs/chimps_hep_c_research_1_bailey.pdf; R.H. Bettauer, *Chimpanzees in Hepatitis C Virus Research: 1998–2007*, 39 J. MED. PRIMATOL. 9, 18 (2010), available at http://www.animal experiments.info/studies/healthcare/chimps_hcv_bettauer_2010_assets/Chimps%20HCV%20Bettauer%202009%20J%20Med%20Pr.pdf.

⁷⁶ *Assessing the Necessity*, *supra* note 11, at 23.

⁷⁷ Jarrod Bailey & Theodora Capaldo, *The Use of Chimpanzees in Biomedical and Behavioral Research: Post-Meeting Comments*, NAS/ION COMMITTEE MEETING 25 (Aug. 25, 2011) (emphasis added), available at http://my.neavs.org/site/DocServer/DrsCapaldo_Bailey_IOM_PostMeetingComments.pdf?docID=861&autologin=true&AddInterest=1022.

⁷⁸ *See Use of Non-Human Primates in the Discovery and Development of Medicines and Vaccines*, GLAZOSMITHKLINE, <http://www.gsk.com/content/dam/gsk/globals/documents/pdf/use%20of%20non%20human.pdf> (last updated Mar. 2011); *see also Assessing the Necessity*, *supra* note 11, at 23.

⁷⁹ Bailey & Capaldo, *supra* note 77, at 25 (noting that when asked by the IOM "What

D. A Promising Alternative: *In Vitro*

Scientific and technological advances have begun to shift research efforts away from the use of chimpanzees to a methodology that, unlike chimpanzee test subjects, is relevant and promising to human hepatitis C research, primarily *in vitro*.⁸⁰ In July of 2005, researchers reported a breakthrough in technology to grow the virus entirely in human cell culture. *In vitro* testing is conducted on living human cell cultures and tissues in containers such as test tubes or Petri dishes and is used to test the toxicity of substances. This method creates a relevant system for the study of the pathology of hepatitis C and testing of potential treatments and vaccines in the human context since human cells are used.⁸¹ In addition, it can be done in bulk rather than one by one, as done with individual chimpanzees.⁸² In light of the biological differences between humans and chimpanzees and the availability of *in vitro*, a more accurate, relevant, and faster alternative, any present and future chimpanzee research is unnecessary and redundant.⁸³

E. The Economics: What Are Taxpayers Paying For?

A chimpanzee that lives to age fifty-two in a laboratory is estimated to cost 1.4 million dollars over its lifetime.⁸⁴ One would assume if chimpanzee research is ineffective, then companies would not waste their money, time, and effort. However, this cost does not hinder companies engaging in chimpanzee research because it is heavily government funded

circumstances would the FDA require data from chimpanzees vs. other models?" the FDA responded, "It is CDER policy not to request data from chimpanzee studies" and when asked "Has the FDA seen any impact on the amount of chimpanzee data submitted as a result of the EU directive, which effectively bans the use of chimpanzees?" the FDA responded "Chimpanzee data in drug applications are very rare. If asked, FDA discourages sponsors from doing such studies.").

⁸⁰ See Ray Greek et al., *A Scientific Case for Elimination of Chimpanzees in Research*, PROJECT R&R 53 (2005), <http://www.releasechimps.org/pdfs/A-Scientific-Case-for-the-Elimination-of-Chimpanzee-Research.pdf>.

⁸¹ *Hepatitis Detour*, *supra* note 70.

⁸² PBS, *Chimpanzees: An Unnatural History*, NATURE, available at <http://www.pbs.org/wnet/nature/episodes/chimpanzees-an-unnatural-history/alternatives-to-chimp-testing/2500/>.

⁸³ Jarrod Bailey, *An Assessment of the Use of Chimpanzees in Hepatitis C Research Past, Present and Future*, in 38 ALTERNATIVES TO LABORATORY ANIMALS 471, 481 (2010), available at http://www.neavs.org/docs/chimps_hep_c_research_1_bailey.pdf; Chris Adams, *Some Chimps Never Recover From Stresses of Research*, MCCLATCHY NEWSPAPERS (Apr. 24, 2011), <http://www.mcclatchydc.com/2011/04/24/112432/some-chimps-never-recover-from.html> (discussing that many scientists say the knowledge once gained only by examining a live animal now can be learned in a petri dish and believe that chimpanzees do not work as human fill-in, despite what they once hoped).

⁸⁴ ANDREW WESTOLL, THE CHIMPS OF FAUNA SANCTUARY 206–07 (2011).

through grants.⁸⁵ The results of the research become irrelevant when the government is providing monetary incentives regardless.

In addition, although the cost associated with using chimpanzees in research laboratories has been cited to contribute to the trend against using chimpanzees, it has been secondary to ethical considerations and scientific considerations. It is not certain whether the cost of care of a chimpanzee will be necessarily much less in a sanctuary than it is in a research facility since sanctuary costs can only be speculated. The underlying economic consideration should not be framed as what is less expensive, research laboratories or sanctuaries. Rather, the more important question is what benefits are taxpayers receiving for their money? When the answer is no benefits or a benefit (conceding for the purposes of argument) that comes at an unnecessary moral cost that can be attained using alternative methods, putting an end to that research becomes more important regardless of economic cost.

Similarly, the cost of alternative research methods, such an *in vitro*, is often misguidedly raised in the discussion of whether to end the use of chimpanzees in biomedical research. Cost-effective analysis is applicable only when there are two effective means to compare. Since science has indicated that chimpanzees are ineffective research subjects, the cost of an effective research alternative is immaterial to deciding whether to end the use of the former. Again, ethical and moral considerations further eliminate any consideration of the cost of an alternative from the equation.

III. THE INADEQUATE LAW OF CHIMPANZEE PROTECTION

Current law pertinent to chimpanzees used in biomedical research includes the National Institutes of Health ban ("NIH ban"), the Chimpanzee Health Improvement, Maintenance, and Protection Act (the "CHIMP Act") and the Animal Welfare Act (the "AWA").

A. *The National Institutes of Health Ban*

The belief that chimpanzee research was the key to cure AIDS triggered one of the largest chimpanzee breeding efforts, and upon finding the contrary, a "surplus" of chimpanzees developed. This surplus led to the

⁸⁵ *Assessing the Necessity*, *supra* note 11, at 21; see *The HSUS Praises Institute of Medicine Finding That Invasive Biomedical Chimpanzee Experiments Are "Not Necessary"*, HUMANE SOC'Y OF THE U.S. (Dec. 15, 2011), http://www.humanesociety.org/news/press_releases/2011/12/the_hsus_praises_institute_of_12152011.html.

National Institutes of Health ban. The National Institutes of Health declared a moratorium in 1995 of the breeding of federally-owned chimpanzees, which was declared permanent in 2007.⁸⁶ However, this victory was limited to chimpanzees that were federally owned and used solely for breeding purposes. Therefore, chimpanzees subjected to procedures were left unprotected. Further, the limited progress is negated by the fact that millions of state funding dollars continue to fund the breeding of captive chimpanzees for research.⁸⁷ Documents received by the Humane Society of the United States reveal that the National Institutes of Health has and continues to give money to New Iberia Research Center to produce infant chimpanzees, clearly violating its own policy.⁸⁸

B. The Chimpanzee Health Improvement, Maintenance, and Protection Act

The first piece of legislation solely directed to chimpanzees used in research laboratories was signed in 2000, known as the Chimpanzee Health Improvement, Maintenance, and Protection Act (the "CHIMP Act"), which required the federal government to provide permanent retirement of chimpanzees identified as no longer needed for research.⁸⁹ The purpose of the Act was initially undermined by an exception within the Act, allowing chimps to be returned to research laboratories.⁹⁰ The exception was triggered if the Secretary deemed there to be: "special circumstances" in which there was a need for the chimpanzee; "technological or medical advancements" that have become available since the chimpanzee entered sanctuary that the researches now want to use in the research; and research that is "essential" to public health.⁹¹ An exception also existed for noninvasive and medical studies as long as the "study involves minimal physical and mental harm, pain, distress, and disturbance to the chimpanzee and the social group in which the chimpanzee lives."⁹² Fortunately, the

⁸⁶ See Kirsten Weir, *NIH Stops Chimp Breeding*, THE SCIENTIST (June 5, 2007, 1:37 PM), <http://classic.the-scientist.com/news/display/53270/>; see also Chimpanzee Health Improvement, Maintenance, and Protection Act, 42 U.S.C. § 283m (2012) ("The Secretary shall provide for the establishment and operation in accordance with this section of a system to provide for the lifetime care of chimpanzees that have been used, or were bred or purchased for use, in research conducted or supported by the National Institutes of Health, the Food and Drug Administration, or other agencies of the Federal Government, and with respect to which it has been determined by the Secretary that the chimpanzees are not needed for such research (in this section referred to as 'surplus chimpanzees').").

⁸⁷ See *Nightline Exclusive*, *supra* note 2.

⁸⁸ See *id.*

⁸⁹ See Chimpanzee Health Improvement, Maintenance, and Protection Act, Pub. L. No. 106-551, 114 Stat. 2752 (2000) (codified as amended in scattered sections of at 42 U.S.C.).

⁹⁰ See Pub. L. No. 106-551, 114 Stat. 2752 § 481C(d)(3)(A) (2000).

⁹¹ See *id.* § 481C(d)(3)(A)(ii).

⁹² *Id.* § 481C(d)(3)(A)(i).

CHIMP Act was amended in 2007 to prohibit the return of retired chimpanzees to research.⁹³ Although a positive step, the CHIMP Act benefits only chimpanzees identified as no longer needed for research and those who have already reached sanctuary. The CHIMP Act fails to benefit chimpanzees that are still currently being used as test subjects in research facilities.

C. The Animal Welfare Act

Perhaps most pertinent to the care of chimpanzees in research laboratories is the federal Animal Welfare Act of 1966. It was intended to ensure the humane treatment of animals under the U.S. Department of Agriculture.⁹⁴ The Animal Health and Plant Inspection Service, Animal Care, an agency of the United States Department of Agriculture, is responsible for inspecting all facilities covered under the Animal Welfare Act and performing any secondary inspections due to complaints of abuse and noncompliance.⁹⁵ Although one of three goals expressly listed in the Act is "to insure that animals intended for use in research facilities . . . are provided humane care and treatment,"⁹⁶ it must be questioned whether this goal is actually being satisfied, due to the Act's lack of requirements, specificity, and enforcement.

The Animal Welfare Act is replete with problems, from its language to its enforcement. The Act was amended in 1985⁹⁷ to authorize the Secretary of Department of Agriculture to promulgate standards for the handling, care, treatment, and transportation of animals by research facilities.⁹⁸ The Act directed that such standards "shall include minimum standards"⁹⁹ for "a physical environment adequate to promote the psychological well-being of primates."¹⁰⁰ Pursuant to this amendment, the Secretary of the United State

⁹³ See 42 U.S.C. § 283m (2012) (amended 2007) (removing the previous exceptions to chimpanzee retirement).

⁹⁴ Animal Welfare Act, 7 U.S.C. § 2143 (2012 & Supp. I). The Act's stated purposes are: (1) to insure that animals intended for use in research facilities or for exhibition purposes or for use as pets are provided humane care and treatment; (2) to assure the humane treatment of animals during transportation in commerce; and (3) to protect the owners of animals from the theft of their animals by preventing the sale or use of animals which have been stolen. See *id.* § 2131 (2012).

⁹⁵ U.S. DEPT. OF AGRIC., REP. NO. 33002-3-SF, at i-iii (2005), available at <http://www.usda.gov/oig/webdocs/33002-03-SF.pdf>.

⁹⁶ Animal Welfare Act, 7 U.S.C. § 2131 (2012).

⁹⁷ The 1985 amendments are known as the "Improved Standards for Laboratory Animals Act." Pub. L. No. 99-198, 99 Stat. 1354 (1985).

⁹⁸ 7 U.S.C. § 2143(a)(1) (2012 & Supp. I).

⁹⁹ *Id.* § 2143(a)(2).

¹⁰⁰ *Id.* § 2143(a)(1)-(2).

Department of Agriculture issued governing regulations, requiring an environmental enhancement plan that promotes the "psychological well-being" of chimpanzees. At a minimum the plan must "address" the social needs of chimpanzees.¹⁰¹ However, neither the Act nor the regulations define "psychological well-being." The governing regulation merely directs each facility to create an "appropriate" plan in line with customary standards, pointing to standards that are cited in "appropriate professional journals and reference guides."¹⁰² This vague regulation is susceptible to the interpretation of individually regulated entities whose experts are given unguarded discretion. Therefore, as long as the expert can find a journal or reference guide justifying any standard, however minimal, that is enough to comply with the regulations.¹⁰³ Furthermore, what may be in line with "customary standards" may be much lower than what is necessarily "appropriate." The inadequacy of the vague regulations was recognized as of 1996 and perfectly stated at an Animal Welfare Act symposium proceeding:

[W]hen you have a situation where you have so much flexibility, it actually can result in nonenforcement of the Act. I understand there was one License C [sic] who told a veterinarian who was inspecting him, 'You know, with regard to this plan for the psychological well-being of primates, there's nothing you can do to me because there's nothing in those regulations that tell me what I have to do. So as long as I have a plan, that's all that counts and you can't take any other action against me.' And I'll bet you that attitude is widely held, especially when there's no prosecutions of violations of that requirement. That message is out there that you can do whatever you want as long as you have a plan on paper.¹⁰⁴

This illustrates a facility interpreting the regulation as only requiring a plan on paper that addresses, theoretically rather than practicably, the psychological well-being of chimpanzees. For this reason, many have concluded the amendments to the Animal Welfare Act, as well as its corresponding regulations, are overwhelmingly problematic and

¹⁰¹ Animal Welfare Standards, 9 C.F.R. § 3.81 (2013).

¹⁰² *Id.*

¹⁰³ See Katherine M. Swanson, Note, *Carte Blanche For Cruelty: The Non-Enforcement of the Animal Welfare Act*, 35 U. MICH. J.L. REFORM 937, 953 (2002); *Can Chimpanzee Laboratory Confinement and Use Ever Be Justified?*, PROJECT R&R, <http://www.releasechimps.org/laws/overview/primate-regulations> (last visited Jan. 21, 2014) [hereinafter *Laboratory Confinement*].

¹⁰⁴ Valerie Stanley, *Animal Welfare Act: Historical Perspectives and Future Directions Symposium Proceedings*, 12, (Sept. 12, 1996), available at <http://www.nal.usda.gov/awic/pubs/96symp/awasymp.htm>.

insufficient to protect chimpanzees' well-being.¹⁰⁵

Furthermore, The Animal Welfare Act made clear that "[n]othing in this Act . . . shall be construed as authorizing the Secretary to promulgate rules, regulations, or orders with regard to the design, outlines, or guidelines of actual research or experimentation by a research facility."¹⁰⁶ So while the Act is aimed to ensure the humane treatment of animals in research laboratories, it does not set any standards for the content and conduct of the actual research.¹⁰⁷ Another key provision requires each research facility to have a committee that "shall represent society's concerns regarding the welfare of animal subjects used at such facility."¹⁰⁸ Only to be followed by a provision that states the committee is to be appointed by the chief executive officer of the facility.¹⁰⁹ The chief of a research facility has a dominant interest and direct economic stake in the profitability of the research and therefore will have a strong bias when appointing the committee to represent the welfare of animals. The chief is likely to appoint people who are less likely to scrutinize and disapprove of the studies he or she directs. In most cases this would not be a person concerned with animal welfare or protection. Therefore, the Act is fraught with a conflict of interest undermining what seems to be a layer of protection on the face of the Act.

Enforcement of the Act is essentially an impossible task. The United States Department of Agriculture is required to inspect each research facility at least once a year.¹¹⁰ Although there are only six research facilities housing chimpanzees, the Animal Welfare Act covers all animal research facilities,¹¹¹ totaling over one thousand. Under the Act, the same inspection requirements exist for facilities involved with exhibition, breeding, or dealing of animals.¹¹² Accordingly, the United States Department of Agriculture is responsible for inspecting over twelve thousand facilities.¹¹³ Yet, only one hundred and fifty employees are

¹⁰⁵ GARY L. FRANCIONE, *RAIN WITHOUT THUNDER: THE IDEOLOGY OF THE ANIMAL RIGHTS MOVEMENT* 90 (2005) (noting that the amendments were heavily influenced by input from the scientific community whose interests are not with the animals); see *Laboratory Confinement*, *supra* note 103.

¹⁰⁶ Animal Welfare Act, 7 U.S.C. § 2143(a)(6) (2012 & Supp. I).

¹⁰⁷ FRANCIONE, *supra* note 105, at 89 (noting that those who supported the legislation made it clear that they did not oppose animal experimentation).

¹⁰⁸ Animal Welfare Act, 7 U.S.C. § 2143(b)(1) (2012 & Supp. I).

¹⁰⁹ *Id.*

¹¹⁰ 7 U.S.C. § 2146(a) (2012 & Supp. I).

¹¹¹ *Id.* § 2146.

¹¹² *Id.*

¹¹³ Theodora Capaldo, *Inadequate Laws Don't – But Research Alternatives Will – Protect Animals in Labs*, BILL OF HEALTH (Jan. 14, 2013), <http://blogs.law.harvard.edu/billofhealth/2013/01/14/guest-post-on-animal-research-inadequate-laws-dont-but-research-alternatives-will-protect-animals-in-labs/>.

responsible for regulating and inspecting these facilities,¹¹⁴ making enforcement difficult, nearly impractical, and, in any event, ineffective. This was illustrated in the U.S. Department of Agriculture's audit report that identified problems with inspections and enforcements, including the following:

A[nimal] C[are]'s Eastern Region is not aggressively pursuing enforcement actions against violators of the AWA. . . . Discounted stipulated fines assessed against violators of the AWA are usually minimal. . . . Some V[eterinary] M[edical] O[fficer]s did not verify the number on animals used in research or adequately review the facilities' protocols and other records. . . . Some IACUCs are not effectively monitoring animal care activities or reviewing protocols. . . . AC's Licensing and Registration Information System does not effectively track violations and prioritize inspection activities. . . .¹¹⁵

Although the audit report was issued in 2005, no evidence exists to lead anyone to believe anything has changed; rather, ample evidence suggests the exact opposite—nothing has changed.¹¹⁶ In 2009, an undercover investigation resulted in an one hundred and eight page complaint with the United States Department of Agriculture alleging over three hundred possible violations of the Animal Welfare Act.¹¹⁷ The complaint provided no evidence that the nation's largest facility for primates was adhering to any standard that took into account chimpanzees' psychological well-being.¹¹⁸

The current law is inadequate in protecting chimpanzees. Neither the NIH ban on breeding of chimpanzees nor the CHIMP Act protects chimpanzees actively and currently used in research facilities. The NIH ban only protects chimpanzees used for breeding purposes and the CHIMP Act only protects those no longer needed for research. While the Animal

¹¹⁴ *Id.*

¹¹⁵ U.S. DEPT. OF AGRIC., REP. NO. 33002-3-SF, at i-iii (2005), available at <http://www.usda.gov/oig/webdocs/33002-03-SF.pdf>.

¹¹⁶ See *Nightline Exclusive*, *supra* note 2; see also GARY L. FRANCIONE, RAIN WITHOUT THUNDER: THE IDEOLOGY OF THE ANIMAL RIGHTS MOVEMENT 115–16 (2005) (discussing other government reports from 1985, 1986, 1995 that appear to have identified the same critiques as offered in the 2005 report, including: inadequate frequency of lab inspections; inconsistent and uneven inspection quality and reporting; failure to follow up on serious deficiencies in a satisfactory manner; APHIS lack of authority to effectively enforce the requirements under the AWA; the APHIS' ineffective use of their enforcements powers; failure to monitor animal care committees properly, resulting in insufficient assurance that the committees minimized pain and discomfort to research animals).

¹¹⁷ See *HSUS Investigates*, *supra* note 20, at 4.

¹¹⁸ *Id.* (noting the complaint contains 112 allegations of possible violations of the AWA relating to chimpanzees and 226 possible violations of the AWA relating to monkeys).

Welfare Act's purpose is to ensure the humane treatment of animals used in research laboratories, the vague language, lack of requirements, and lack of adherence and enforcement continue to leave that purpose unfulfilled.

IV. THE OPTIONS AND IMPLICATIONS

The option to do nothing stands at one side of the spectrum while the option of a total ban on chimpanzee use in invasive biomedical research stands at the other. However, neither of these two options effectively balances the two interests of humane treatment of chimpanzees and the interest of saving human lives. Moral and ethical considerations, scientific considerations, and economic considerations must all be taken into account to reach the proper solution.

If nothing is done, thousands of chimpanzees will continue to be treated inhumanely and suffer from both physical and psychological harm at the hands of researchers. Unnecessary chimpanzee studies will only distract and delay the discovery of treatments of human diseases at the cost of American taxpayers. The option to do nothing would leave researchers as is; free to do what they want, when they want, without regard to the welfare of chimpanzees.

On the opposite side of the spectrum lies the Great Ape Protection and Cost Savings Act, which proposes a total ban on chimpanzee research. This proposed legislation was introduced in August of 2011 with bipartisan support in both the United States Senate¹¹⁹ and House of Representatives.¹²⁰ The legislation would specifically phase out the use of chimpanzees in invasive research over a three-year period, require permanent retirement of all government-owned chimpanzees currently warehoused in research laboratories to sanctuaries, and codify the current National Institutes of Health ban.¹²¹ The advantages of a total ban are certain; chimpanzees would no longer be subjected to inhumane and ineffective studies. Efforts and attention could be redirected to more reliable methods of study.

However, an inescapable question lingers: What happens if a new disease surfaces in the future that threatens the human population in the United States, or worse yet, what if there is a global pandemic? A total ban ignores this possibility. This makes the option of a total ban a problematic one. In response to this concern, proponents of a total ban have pointed to

¹¹⁹ Great Ape Protection and Cost Savings Act of 2011, S. 810, 112th Cong. § 1 (2011).

¹²⁰ Great Ape Protection and Cost Savings Act of 2011, H.R. 1513, 112th Cong. § 1 (2011).

¹²¹ 157 CONG. REC. S2454 (daily ed. Apr. 13, 2011) (statement of Sen. Maria Cantwell).

the speculative nature of the possible future need of chimpanzees. Scientist Jarrod Bailey has stated, "the probability that suddenly at some point in the future only a chimpanzee will be able to provide a valid model for the investigation of some bioterrorism agent must be considered a miniscule possibility at best."¹²² Although ample evidence suggests chimpanzees are ineffective research subjects for diseases known today, because it cannot be said with absolute certainty that they will be ineffective research subjects for an unknown future disease, a total ban without a narrow exception addressing that possibility is problematic.

An intermediate solution to amend the Animal Welfare Act to make it more effective would not properly deal with the enforcement issues and would ignore other important considerations. Assuming, *arguendo*, that Congress amended the Animal Welfare Act by tightening the language and adding more requirements and specific guidelines, under enforcement of the Act would remain. Also, this is highly unlikely considering the United States Court of Appeals has deferred to the United States Department of Agriculture decisions regarding specificity of the Act and its governing regulations, recognizing the Secretary's broad discretion.¹²³ Furthermore, the Act covers all animals, although it has a special provision for primates, and thus amending the act would theoretically affect more than just chimpanzees. Amending the Act also ignores scientific considerations by improperly assuming that chimpanzees are effective research subjects and should continue to be used for human research.

Another approach could be to exclude chimpanzees from research for diseases that chimpanzees are known to be ineffective research subjects for, such as cancer and HIV. However, this approach would essentially ask, "Has the research already been done with no practicable results?" This after-the-fact approach is also problematic in that the question could be answered only after research efforts and taxpayer dollars have already been spent and chimpanzees have suffered. This framework fails to take into account the moral aspects in treating chimpanzees humanely and only focuses on purely scientific considerations.¹²⁴

¹²² Jarrod Bailey, *The Use of Chimpanzees in Biomedical and Behavioral Research: Post-Meeting Comments*, NAS/ION COMMITTEE MEETING 5 (June 1, 2011), available at http://my.neavs.org/site/DocServer/Bailey_PostMeetingMay2011Comments.pdf?docID=881&autologin=true&AddInterest=1022.

¹²³ See *Animal Legal Def. Fund v. Glickman*, 204 F.3d 229, 235 (D.C. Cir. 2000).

¹²⁴ *Assessing the Necessity*, *supra* note 11, at 2 (asserting that even though they were to conduct a study of the scientific necessity for using chimpanzees in research, because the topic raises ethical issues "any analysis of necessity must take these ethical issues into account"); NUFFIELD COUNCIL ON BIOETHICS, *THE ETHICS OF RESEARCH INVOLVING ANIMALS* 33 (2005), available at [http://www.nuffieldbioethics.org/sites/default/files/The ethics of research involving animals - full](http://www.nuffieldbioethics.org/sites/default/files/The%20ethics%20of%20research%20involving%20animals%20-%20full.pdf)

V. ADOPTING FEDERAL LEGISLATION OF A TOTAL BAN WITH A NARROW EXCEPTION

It is essential to find a solution on the continuum that serves both the interests of the humane treatment of chimpanzees as well as the serious concern of an unpredictable fatal disease arising in the future, where chimpanzees may be helpful in the prevention or treatment of that disease. Therefore, Congress should adopt federal legislation which would ban chimpanzee use in invasive research, require permanent retirement of all government-owned chimpanzees currently warehoused in research laboratories to sanctuaries, and codify the current NIH moratorium on government-funded breeding of chimpanzees, and include a rare exception for the occurrence of an unexpected outbreak of a life-threatening condition in human beings, provided researchers demonstrate the use of species other than great apes would not serve the purpose of the procedure, no alternative methods exist, the study is well-designed, as few as possible are used, and pain and suffering is minimized.

When taking a close look at the European directive, there is a "safeguard clause" that states, in relevant part, a Member State may adopt a provisional measure allowing the use of great apes in procedures where it is "essential for the preservation of the species or in relation to an unexpected outbreak of a life-threatening or debilitating clinical condition in human beings."¹²⁵ Therefore, when comparing the United States to other developed nations, an exception accompanying a total ban would be entirely consistent.

A total ban with an exception serves both the best interests of chimpanzees as well as the best interests of the health and lives of humans. It is important to acknowledge the possibility of a situation arising that would invoke the exception. However, this situation would be rare, considering animal alternatives to chimpanzee test subjects as well as alternative methods to using animal models, such as *in vitro*, remain. In no way am I advocating for an exception allowing for research of new human conditions that do not rise to the severity of being considered life threatening. The implementation of the exception would be carefully constructed and strictly followed to ensure the exception is only triggered under specific and certain circumstances.

The determination of whether a certain event triggers the exception and

report.pdf.

¹²⁵ Council Directive 2010/63, art. 55, of the European Parliament and of the Council of 22 Sept. 2010 on the Protection of Animals Used for Scientific Purposes, 2010 O.J. (L 276) 33, 50.

whether the research project meets all requirements would need to be properly determined by a review board. Under the Department of Agriculture, the Secretary would appoint a committee of members representing both animal welfare groups and scientists. The prerequisite would be an unexpected outbreak of a life-threatening condition in human beings, like a pandemic. Therefore, even if a new disease arises but it is not life threatening, it would not qualify. The researchers proposing the study to the review board would then have to demonstrate that the use of species other than great apes would serve no purpose, no alternative methods exist, the study is well-designed, as few chimpanzees as possible are used, and pain and suffering is minimized. The committee then must review and reevaluate their decision in light of the progress or lack of progress in the specific research at intervals set and indicated in the committees' initial decision.

It has been argued that waiting until a pandemic occurs is too late. However, that is the very nature of a pandemic and there is no way to be able to conduct a study at an earlier point. Further, it is important to note that this legislation would impact only research on chimpanzees and would not restrict researchers' studies on other animals. The justification for such strict standards flows from the test subjects sought, chimpanzees, which, for the reasons discussed, require safeguards to ensure them the protection they deserve.¹²⁶ Anything less would ignore the moral and ethical considerations the United States should be obligated to recognize. It would be in the committees' expert opinion and discretion whether it is too late. Undoubtedly, timing would thus be a major factor in the review board's determination, after hearing all information presented by the researchers.

What this proposal does not ban is pure behavioral research of chimpanzees that does not require a laboratory setting, such as observational research that can be conducted exclusively in a sanctuary setting. It also would not prohibit physical exams administered for the well-being of the chimpanzee in a sanctuary setting.

CONCLUSION

Roughly twenty years ago, the United States was among six other countries using chimpanzees for invasive biomedical research. Now governments everywhere are concluding the moral, scientific, and

¹²⁶ *Assessing the Necessity*, *supra* note 11, at 5 (noting that due to chimpanzee's genetic proximity to humans "chimpanzees should face the most stringent requirements for justification" and "higher animals comes at higher moral costs").

economic costs of subjecting our closest evolutionary relatives to invasive research render it unjustifiable. The United States now stands alone. Chimpanzee research has failed to predict how diseases like HIV, cancer, and hepatitis C occur in humans and continues to indirectly delay medical progress and divert research funds from more appropriate and relevant methodology, like *in vitro*. Chimpanzee use in biomedical research was first pursued under circumstances where little to nothing was known about the abilities and capacities of chimpanzees. However, that has changed. Mahatma Gandhi once said, "the greatness of a nation and its moral progress can be measured by the way its animals are treated." With a better and deeper understanding of the emotive and cognitive abilities of chimpanzees comes the obligation to change the way humans treat them. By adopting the proposed solution banning invasive research on chimpanzees while allowing for a rare exception under rigorous standards, the United States would be making both an ethically and scientifically sound decision. In turn, chimpanzees would be afforded the protection they have so long been deprived of within the confines of a research lab.

