05-8794

IN THE

Supreme Court of the United States

CLARENCE EDWARD HILL

Petitioner,

-against-

JAMES R. MCDONOUGH, INTERIM SECRETARY, FLORIDA DEPARTMENT OF CORRECTIONS, *ET AL*.

Respondents.

On Writ of Certiorari to the
United States Court of Appeals for the Eleventh Circuit

BRIEF OF *AMICI CURIAE* DRS. KEVIN CONCANNON, DENNIS GEISER AND GLENN PETTIFER SUPPORTING PETITIONER

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QUESTIONS PRESENTED

1. Whether a complaint brought under 42 U.S.C. § 1983 by a death-sentenced state prisoner, who seeks to stay his execution in order to pursue a challenge to the chemicals utilized for carrying out the execution, is properly recharacterized as a habeas corpus petition under 28 U.S.C. § 2254?

2. Whether, under this Court's decision in *Nelson*, a challenge to a particular protocol the State plans to use during the execution process constitutes a cognizable claim under 42 U.S.C. § 1983?

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Other

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INTEREST OF THE *AMICI CURIAE*

Drs. Kevin Concannon, Dennis Geiser and Glenn Pettifer submit this brief of *amici curiae* in support of Petitioner Hill. Consent of Petitioner's counsel and Respondent's counsel has been obtained for the filing of this brief.[1]

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[1] Letters from both counsel consenting to the filing of this brief are being filed herewith. Counsel for a party did not author this brief in whole or in part. No person or entity, other than the *amici curiae* and their counsel, made a monetary contribution to the preparation and

Drs. Concannon, Geiser and Pettifer (the "Veterinary *Amici*") are experienced veterinarians, with extensive knowledge regarding veterinary anesthesia. They regularly face issues regarding humane euthanasia of animals and have specific expertise regarding the chemicals used by the State of Florida in lethal injection and the limits and effects of their use in euthanizing animals.

Dr. Kevin Concannon is a veterinarian and a diplomate of the American College of Veterinary Anesthesiologists. During nearly 20 years as a practicing veterinarian, he has taught veterinary anesthesia and served as a supervisor of clinical anesthesia at both the University of California – Davis and North Carolina State University College of Veterinary Medicine. Dr. Concannon also researched the measurement of consciousness in anesthetized laboratory animals, and has worked for the past nine years as an emergency/critical care clinician, anesthesia consultant and hospital administrator at the Veterinary Specialty Hospital of the Carolinas.

Dr. Dennis Geiser is a veterinarian and a diplomate of the American Board of Veterinary Practitioners. He is a professor of veterinary science at the University of Tennessee and the Assistant Dean of Organizational Development and Outreach at the College of Veterinary Medicine at the University of Tennessee. Dr. Geiser teaches equine respiratory disease and large animal anesthesia, conducts clinical work in anesthesiology and pain management and performs research in pain management, balance of anesthesia in animals and local and regional anesthesia.

Dr. Glenn Pettifer is a veterinarian and has a D.V.Sc. in veterinary anesthesiology. He is a diplomate and an

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submission of the brief.

executive board member of the American College of Veterinary Anesthesiologists. He currently practices veterinary anesthesiology at the Veterinary Emergency Clinic in Toronto, Canada. Dr. Pettifer formerly taught veterinary anesthesiology and pain management at Louisiana State University, and was later the Chief of Anesthesia Service there.

Based on their years of experience in the field of veterinary anesthesia and pain management, the Veterinary *Amici* respectfully present the Court with information concerning the methods by which humane euthanasia is achieved in animals, and the difficulties involved in achieving humane euthanasia using the chemicals and procedures involved in Florida's lethal injection protocol.

SUMMARY OF ARGUMENT

HUMANE EUTHANASIA

The primary goal of veterinarians who euthanize animals is to achieve death in the most humane manner possible, avoiding pain and suffering of the patient. The manner in which the combination of drugs are administered to prisoners according to Florida's lethal injection protocol, fails to comport with the minimum standards for the humane euthanization of animals in several respects.

The preferred method for humane euthanasia by veterinarians involves the use of a single drug: an overdose of sodium pentobarbital. Sodium pentobarbital is a stable and long-lasting anesthetic, which places the patient in a deep – surgical plane[2] of – anesthesia, which then progresses to apnea as a result a respiratory depression, and then cardiac

[2] A surgical plane of anesthesia is defined as a level of anesthesia deep enough to ensure that a surgical patient feels no pain and is unconscious for the duration of the surgical procedure.

arrest. The advantages of such a method are speed of action; minimal or transient pain merely associated with the injection; and cost. 2000 Report of the American Veterinary Medical Association ("AVMA") Panel on Euthanasia, 218 J. Am. Veterinary Med. Ass'n 669, 679-80 (March 1, 2001) (hereinafter, "AVMA Report").

The best available information about Florida's current lethal injection protocol is that it calls for the injection of three active drugs. Two of these substances – pancuronium bromide, and potassium chloride –will cause severe pain and suffering when administered to a patient who is not anesthetized to a **surgical plane** of anesthesia.

Specifically, the inmate first is injected with at least two grams of sodium thiopental, which is an "ultra short-acting barbiturate" intended to anesthetize the inmate. *See Sims v. State*, 754 So.2d 657, 666 n.17 (Fla. 2000). After receiving saline solution to flush the injection apparatus, the inmate is injected with at least fifty milligrams of pancuronium bromide, a neuromuscular blocking agent. The effect of the pancuronium bromide is to paralyze the inmate's voluntary muscles. After again receiving an injection of saline solution, the inmate is finally administered at least one hundred and fifty milliequivalents of potassium chloride, which results in a fatal alteration in impulse generation in the heart, leading to cessation of cardiac activity and directly causing the inmate's death.

When injected into an unanaesthetized – or inadequately anesthetized – patient, potassium chloride causes pain and consequent suffering both upon injection and when death ultimately ensues. For that reason, veterinary standards require that if potassium chloride is used at all, a patient must first reach a surgical plane of anesthesia.

While Florida's lethal injection protocol provides for an initial injection of anesthetic, several factors create a real possibility that the inmate will not receive adequate anesthesia to achieve and maintain the surgical plane of anesthesia a veterinarian would require before using potassium chloride to euthanize an animal. First, the Florida protocol does not allow for the assessment necessary under veterinary standards to determine if a surgical plane of anesthesia has been reached and maintained.

Second, sodium thiopental is an "ultra short-acting barbiturate," which has the potential to wear off if any delays occur during the execution, or if the complete dosage is not properly administered. That does not occur in the euthanasia of animals where the individuals who administer the drugs are specifically trained to do so.

Importantly, Florida's lethal injection protocol does not require that an individual trained in anesthesiology determine that the inmate is, in fact, fully unconscious prior to injecting pancuronium bromide or potassium chloride. Again, in the euthanasia of animals, there is constant contact with the patient to assure the plane of anesthesia achieved and maintained. Unlike standard practice in veterinary medicine, there is no requirement under the Florida lethal injection protocol that the patient be observed for any period of time, or that executioners monitor or perform any tests on the patient. To the contrary, publicly available information regarding lethal injection procedures indicates that there is no observer – much less a trained observer – in close enough proximity to the inmate to determine the plane of anesthesia. In contrast, a veterinarian euthanizing an animal accesses and evaluates a number of physiologic parameters, described more fully herein, to ensure that the animal is anesthetized to an appropriate plane of surgical anesthesia prior to administering a drug that causes the animal's death.

In addition, the use of pancuronium bromide is wholly unnecessary, and not approved for euthanasia in veterinary medicine, alone or simultaneously with an anesthetic. Pancuronium bromide, as a neuromuscular inhibitor, paralyzes the patient, and inhibits the ability of a veterinarian to determine the level of consciousness of the patient. In addition, pancuronium bromide causes suffering in an inadequately anesthetized patient. As a neuromuscular blocker, pancuronium bromide inhibits all of the patient's voluntary muscular functions, including breathing, and ultimately causes the patient to suffocate. If a patient is injected with pancuronium bromide before the patient has reached a surgical plane of anesthesia, the patient will suffer the feeling of suffocation while conscious.

As described more fully below, therefore, Florida's discretionary procedures for lethal injection deviate in several respects from the minimum standards of care used by veterinarians to provide for the humane euthanization of animals. Based on the vast experience of veterinarians with euthanasia and the drugs involved here, the information herein should assist courts in determining whether inmates sentenced to death are subjected to gratuitous pain and suffering during the execution process under Florida's current protocol.

ARGUMENT

I. THE PREFERRED METHOD OF HUMANE EUTHANASIA USED BY VETERINARIANS IS THE USE OF SODIUM PENTOBARBITAL ALONE.

The preferred method of humane euthanasia used by veterinarians – and prescribed by Florida law – is the use of sodium pentobarbital without any additional drugs.

Barbiturates generally depress the central nervous system, with loss of consciousness progressing to anesthesia. With a sufficiently large overdose, deep anesthesia progresses to apnea and then cardiac arrest.

The most desirable barbiturates for humane euthanasia are those that are potent, long-acting, stable in solution and inexpensive. The most prominent barbiturate meeting those criteria is sodium pentobarbital. Use of sodium pentobarbital results in rapid loss of consciousness and minimal or transient pain associated merely with insertion of the needle or injection. AVMA Report at 679-80.

Consistent with that view, Florida law provides:

> Sodium pentobarbital, a sodium pentobarbital derivative, or other agent the Board of Veterinary Medicine may approve by rule shall be the only methods used for euthanasia of dogs and cats by public or private agencies, animal shelters, or other facilities which are operated for the collection and care of stray, neglected, abandoned, or unwanted animals.

Title XLVI Fla. Stat. ch. 828.058(1).

Thus, under Florida law, unless otherwise permitted by rule of the Board of Veterinary Medicine, humane euthanasia of dogs and cats is accomplished by the use of a single drug, sodium pentobarbital.

II. THE PROTOCOL FOR USE OF POTASSIUM CHLORIDE IN FLORIDA EXECUTIONS FAILS TO COMPLY WITH MINIMUM VETERINARY STANDARDS FOR HUMANE EUTHANASIA OF ANIMALS.

The use of potassium chloride under the Florida lethal injection protocol fails to comply with minimum veterinary standards for the humane euthanasia of animals. A potassium chloride solution for intravenous injection contains high concentrations of potassium and chloride ions, which can cause pain and consequent suffering in a patient following intravenous injection. Intravenous injection of potassium chloride to a conscious patient causes severe pain due to the potassium-induced irritation of the inner surfaces of the veins. Specifically, an injection of potassium chloride irritates the inner walls of a patient's veins, which are particularly sensitive to potassium. In animals, rippling of muscle tissue and clonic spasms have been observed following an injection of potassium chloride. AVMA Report at 681. Potassium chloride ultimately results in fatal alterations in impulse generation in the heart, leading to cessation of cardiac activity and death.

Because potassium chloride causes agony to an unanesthetized patient, AVMA standards provide that potassium chloride may only be administered to a patient under a surgical plane of anesthesia and that the anesthesia be administered by someone trained and knowledgeable in anesthetic techniques:

> It is of utmost importance that personnel performing this technique are trained and knowledgeable in anesthetic techniques, and are competent in assessing anesthetic depth appropriate for administration of

> potassium chloride intravenously. Administration of potassium chloride intravenously requires animals to be in a surgical plane of anesthesia characterized by loss of consciousness, loss of reflex muscle response, and loss of response to noxious stimuli.

AVMA Report at 680-81.

Use of potassium chloride on a conscious patient is "unacceptable and absolutely condemned." AVMA Report at 681. An execution conforming to veterinary standards, therefore, must provide that an inmate is administered a sufficient quantity of anesthetic to remain unconscious at a surgical plane of anesthesia through the potassium chloride injection, and for the duration of the execution.

A. Sodium Thiopental's Short-Acting Nature Precludes Or Limits Its Use In Veterinary Euthanasia.

Sodium thiopental is considered an "ultra short acting" barbiturate anesthetic. *Sims*, 754 So.2d at 666, n. 17. In contrast, most veterinary euthanasias are performed using sodium pentobarbital (a stable and longer acting anesthetic), which is used both to induce anesthesia and to cause death. Indeed, the AVMA standards for euthanasia indicate that the ideal barbituric acid derivative for use in euthanasia should be potent, long acting, stable and inexpensive. AVMA Report at 680. Sodium pentobarbital – not sodium thiopental – best fits that description. *Id*. Consistent with that mandate, absent separate approval by the state Board of Veterinary Medicine, Florida's animal euthanasia statute only allows for the use of sodium pentobarbital or a sodium pentobarbital derivative for euthanasia of dogs and cats. Title XLVI Fla. Stat. ch. 828.058(1).

As observed with veterinary patients, sodium

pentobarbital rapidly produces unconsciousness and then continues to depress the areas of the brain responsible for respiratory and cardiovascular control. With one injection, the patient rapidly progresses from a light to deep level of anesthesia and ultimately dies.

If a short acting anesthetic, such as sodium thiopental, were to be used for euthanasia of animals simply to induce anesthesia (as it is used in lethal injections), the veterinarian would need to assess the depth of anesthesia and loss of consciousness prior to administering any other drugs (such as potassium chloride) for the purpose of producing death. Importantly, consciousness must be assessed by a veterinarian after the anesthetic is injected and **prior to** injection of any other drug. A veterinarian would not make assumptions about consciousness without relying on a direct assessment of the patient and the patient's vital signs.

B. Florida's Lethal Injection Protocol Would Not Allow a Veterinarian to Adequately Ensure That a Patient Was Unconscious to a Surgical Plane of Anesthesia.

Examination of publicly available information regarding Florida's lethal injection procedures shows that no steps are taken to ensure that a surgical plane of anesthesia – a prerequisite for administration of potassium chloride under veterinary standards – is achieved and maintained. *See, e.g., Sims*, 754 So. 2d at 666 n.17. A surgical plane of anesthesia is described as "loss of consciousness, loss of reflex muscle response, and loss of response to noxious stimuli." AVMA Report at 681. Use of potassium chloride on an animal that is not in such a state is "unacceptable and absolutely condemned" by the AVMA. *Id.*

In veterinary science, evaluating whether a patient has achieved an appropriate plane of anesthesia is both a science

and an art. It is extremely difficult for an untrained individual to appropriately assess a patient's level of unconsciousness, and veterinarians rely on skill and experience to do so. The observer must perform a variety of tests and have the ability to look for and perceive sometimes subtle clues from the patient.

Typically, a veterinarian (or trained assistant) maintains constant contact with a patient throughout the process of administering anesthesia. In determining whether the patient is sufficiently anesthetized, a veterinarian assesses the level of consciousness by direct evaluation of the patient's physiologic parameters (vital signs). A veterinarian evaluates the patient's muscle tone and the level of the patient's muscle relaxation. A veterinarian should also locate the patient's pupils in orbit, and look for the presence or absence of any eye movement. The patient's respiratory and heart rate must be monitored. The veterinarian also tests the patient's reaction to stimuli by applying mildly painful stimuli and observing any movement by the patient. Veterinarians touch the patient to help assess these variables, as well as relying on monitors for data such as blood pressure and heart rate.

Such steps are necessary to ensure that the patient has reached the desired surgical plane of anesthesia, and require an experienced veterinarian to touch and observe the patient at close proximity. The process of examining the patient takes several minutes, as a variety of factors must be considered.

In contrast, information available regarding Florida's lethal injection protocol indicates that no provision is made for any such examination of an inmate during the anesthetization process, much less by a physician or medical professional experienced in administering anesthesia. There is no indication that any person remains in sufficiently close

proximity to the inmate to perform any of the above-described tests. Evidence regarding similar lethal injection procedures in other states expressly indicates that observers and individuals performing the lethal injection typically remain in a separate room, where they cannot even see the inmate during the execution. Such complete disregard for the effectiveness of the anesthetic prior to injecting an inmate with potassium chloride falls far short of the minimum standards and applicable veterinary precautions for the humane euthanasia of animals.

Furthermore, anecdotal evidence regarding executions performed using the three-drug combination of sodium thiopental, pancuronium bromide and potassium chloride nearly identical to Florida's lethal injection procedure shows that in several cases, inmates seemed to retain consciousness throughout the execution. *See, e.g., Beardslee v. Woodford*, 395 F.3d 1064, 1075 (9th Cir. 2005)(several California inmates seemed to remain conscious despite the purported injection of five grams of sodium thiopental, as opposed to the two grams called for in Florida's lethal injection protocol). The internal survey performed by the Florida Corrections Commission prior to implementing the current lethal injection protocol expressly acknowledged that some recipients of the three-drug combination underwent a "violent reaction to lethal drugs," raising grave concerns that the inmates were not, in fact, fully anesthetized prior to receiving either pancuronium bromide or the potassium chloride injections. Florida Corrections Commission, Supplemental Report – Methods of Execution Used by States (1997) (hereinafter, "FCC Report") at 10 (available at http://www.fcc.state.fl.us/fcc/reports/reports.html).

Finally, proper veterinary procedure demands that a veterinarian administering euthanasia solution to a patient ensure that all of the euthanasia solution was delivered to the patient's vein. Sodium thiopental must be properly

administered intravenously, which can be extremely difficult—indeed, impossible – for an untrained individual. If the anesthetic is not properly mixed and injected directly into the patient's vein, the medication will leak into surrounding tissue, and lessen the effectiveness of the intended dosage.

The FCC Report notes that "difficulty locating a viable vein to establish the intravenous connection" is a common problem in lethal injections. FCC Report at 10. Other cited problems include the tightness of the leather straps around the inmate, which may lead to problems in circulation of the lethal injection drugs, and clogging of the tubes carrying the drugs because of the mixture of two or more of the solutions, and necessitating the replacement of the tubes during the execution. *Id*. Finally, evidence obtained in autopsies performed on inmates executed pursuant to Florida's lethal injection statute is inconsistent with effective delivery of all drugs to the inmates. At least three inmates (of 16 executed by lethal injection in Florida) suffered through lengthy executions marked by errors in obtaining correct insertion to a vein, and several puncture wounds on the inmates.

Given the myriad of potential problems created by the complex lethal injection procedure, the administration of drugs by inexperienced personnel with inadequate training only increases the risk that the sodium thiopental anesthetic will not be properly delivered to the inmate, and that the execution will not proceed under humane conditions, as the inmate will remain inadequately anesthetized or even conscious during the administration of potassium chloride. Without providing for careful monitoring of an inmate's level of consciousness, Florida's lethal injection protocol falls far short of the precautions required in humane veterinary euthanasia.

III. THE USE OF NEUROMUSCULAR BLOCKERS IN THE FLORIDA LETHAL INJECTION PROTOCOL IS CONTRARY TO HUMANE VETERINARY EUTHANASIA AND MASKS CONSCIOUSNESS.

The use of neuromuscular blockers in the Florida lethal injection protocol is unnecessary, contrary to humane veterinary euthanasia and adds risk to the procedure because the drug masks consciousness. Pancuronium bromide is a neuromuscular agent that completely paralyzes a patient's voluntary muscles. Veterinarians do not typically use pancuronium bromide or any other neuromuscular blocking agent when euthanizing animals and the AVMA has severely limited its use.

Pancuronium bromide masks indicia of pain or consciousness in the patient during the euthanization process, and causes a conscious patient to suffer by experiencing suffocation.

A. Pancuronium Bromide Inhibits The Ability To Assess The Patient's Consciousness.

The muscle paralysis caused by pancuronium bromide masks indicia of consciousness, making it even more difficult for observers to ascertain whether the patient is properly anesthetized. As described above, determining whether a patient has achieved a surgical plane of anesthesia involves careful observation, including observation of the patient's muscle movements and response to stimuli. Paralyzing the patient makes it far more difficult for a veterinarian to effectively determine the patient's level of consciousness.

Pancuronium bromide does not contribute to anesthesia or unconsciousness. It is not an anesthetic, pain killer or an analgesic. The use of pancuronium bromide

could create the impression that a patient is unconscious, calm or serene when the patient is actually in extreme pain or suffering.

B. Pancuronium Bromide Causes A Conscious Patient To Experience Suffocation.

Use of pancuronium bromide following the administration of a short-acting anesthetic such as sodium thiopental increases the probability that the patient will endure pain or mental distress prior to death. Specifically, if the pancuronium bromide takes effect before the patient reaches a surgical plane of anesthesia as a result of sodium thiopental, a veterinary patient would be aware of the need to breathe, the inability to do so and the terrifying experience of suffocation.

As a result, Florida's euthanasia statute provides that "any substance which acts as a neuromuscular blocking agent . . . **may not be used** on a dog or cat for any purpose," except where "an emergency situation exists which requires the immediate euthanasia of an injured, diseased, or dangerous animal." Title XLVI Fla. Stat. Fla. Stat. 828.058(3).[3]

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[3] Florida is one of 30 states that prohibit the use of neuromuscular blocking agents in euthanizing animals, either expressly and/or by specifically mandating the use of a method such as sodium pentobarbital. Ala. Code 34-29-131; Alaska Stat. 08.02.050; Ariz. Rev. Stat. Ann. 11-1021; Cal. Bus. & Prof. Code 4827; Colo. Rev. Stat. 18-9-201; Conn. Gen. Stat. 22-344a; Del. Code Ann. tit. 3, § 8001; Ga. Code Ann. 4-11-5.1; 510 Ill. Comp. Stat. 70/2.09; Kan. Stat. Ann. 47-1718(a); La. Rev. Stat. Ann. 3:2465; Me. Rev. Stat. Ann. tit. 17, § 1044; Md. Code Ann., Crim. Law, § 10-611; Mass. Gen. Laws ch. 140, § 151A; Mich. Comp. laws 333.7333; Mo. Rev. Stat. 578.005(7); Neb. Rev. Stat. 54-2503; Nev. Rev. Stat. Ann. 638.005; N.J. Stat. Ann. 4:22-19.3; N.Y. Agric. & Mkts. Law 374; Ohio Rev. Code Ann. 4729.532; Okla. Stat. tit. 4, § 501; Ore. Rev. Stat. 686.040(6); R.I. Gen. Laws 4-1-34; S.C. Code Ann. 47-3-420; Tenn. Code Ann. 44-17-303; Tex. Health & Safety Code Ann. 821.052(a); W. Va. Code 30-10A-8; Wyo. Stat. Ann. 33-30-216.

In a veterinary context, pancuronium bromide is wholly superfluous to the goal of humane euthanization. Its only effect is to mask any suffering endured by the patient and to interfere with an assessment of consciousness. Its use as contemplated by the Florida lethal injection protocol is contrary to veterinary standards and humane euthanasia of animals.

CONCLUSION

For all the foregoing reasons, the Veterinary *Amici* respectfully submit that the protocol for execution by lethal injection, as presently articulated by the State of Florida, fails to comport with veterinary standards for humane euthanasia.

March 3, 2006

Respectfully submitted,

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