

Point-Counterpoint on Medical School Animal Laboratories

PHYSICIANS COMMITTEE FOR RESPONSIBLE MEDICINE

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Following are some common justifications given for maintaining live animal laboratories and responses to those concerns.

Students must be exposed to complex living systems.

This exposure can be to human patients undergoing necessary surgeries. Much more can be learned about human anatomy and pharmacological/physiological responses this way than via a terminal exercise with a dog, pig, or other animal. Computer programs can be useful adjuncts, simulating biological systems and their responses to varied stimuli.

This is the students' first clinical experience, their first 'patient.'

Shouldn't a student's first clinical experience be life-affirming? Dealing with patients involves much more than just physiology, pharmacology, and surgery; it involves counseling, listening to their needs and, above all, helping instead of harming them. This is part of the reason why top medical schools involve students in clinics and operating rooms (under close supervision) early on in their training, and have eliminated animal laboratories.

We must show how drugs, alone and in combination, affect the body...it's important to see how some predictions made by computer programs or textbooks don't always come true.

This knowledge can be gained by observing how human patients react to drugs administered during routine care. Computer teaching programs are designed to provide variability as well and even allow students to administer drugs to a "virtual patient." Case studies also clearly demonstrate this variability.

Students need to see physiology in action, not out of a textbook.

Medical students need to see human physiology, not canine. There are ample opportunities to gain this experience from observing a variety of necessary procedures on human patients. Computer programs, CD-Roms, and videotapes also provide this reinforcement.

The institution would not be offering these laboratories unless the faculty thought they were important parts of the training.

Actually, many institutions may simply be continuing a tradition whose time has long passed. Many of the nation's top schools, such as Harvard, Columbia, Stanford and Yale, deem live animal laboratories unnecessary for medical training. If the laboratories were so crucial, why are countless doctors and other health care professionals educated every year, at top schools, without participating in them and with no detriment to their professional skills? Teaching techniques are constantly evolving and it is time for the schools that still have animal laboratories to join the 1990s.

A deep understanding of the mechanisms and functions of living mammalian systems is essential in the education of a modern physician.

There are many ways to gain this understanding. Much comes from textbooks and lectures. Models, computer programs and simulators offer additional knowledge. In fact, computer programs, models, and textbooks offer much more detailed information on the function of various mammalian systems than can any short laboratory. Ultimately, students learn about humans by studying humans. Physicians never perform surgery without first assisting experienced physicians who can show them the ropes in the human operating room.

Plastic models cannot duplicate the 'hands-on' feel, the sounds, and the responses that a physician will encounter when facing his or her first patients.

An animal laboratory will not duplicate this either. First, most animal labs are designed to demonstrate physiology or pharmacology and do not teach surgical technique. Second, the only way to produce all these phenomena is through observation of and ultimately supervised participation in human surgeries and clinical procedures. Students are poorly served by experimenting on dogs or other animals. Countless aspects—from the amount of incision pressure needed to break the skin to the size and placement of internal organs—on the dog are

different from those of humans. Certainly, less care is taken to prevent scarring and collateral trauma on an animal than would be taken on a human patient.

Students like the labs.

Many students do not. Many students simply do not voice their discomfort with or opposition to the procedure for fear of academic repercussions. Of course, compared to the tedium of classroom lectures, students enjoy putting on surgical gear and getting into the laboratory. They can gain this experience from observing needed procedures in the human operating room. Since this is often their first hands-on experience, students may enjoy that aspect of it, but they can experience this excitement by observing a human surgery.

Dogs will often be killed anyway in the pound.

If so, they will not be subjected to the trauma of continued confinement, shipping, preparation, and experimentation before death in the laboratory. Additionally, dog laboratories undermine animal control efforts, since many people will not bring animals to a shelter if they might be given up for experimentation. Therefore, many more animals are simply abandoned or left to the elements. Not uncommonly, dogs begin to wake up during the laboratory or are further traumatized by a faulty procedure. This often traumatizes the students as well.

The more opportunities to practice a procedure before using it on a patient, the better.

Students are best prepared for procedures on humans by observing and taking a limited role in those procedures,

under close supervision, and by manipulating life-like human anatomical simulators and trainers. Most animal laboratories don't teach procedures anyway, they simply demonstrate the known effects of pharmacological or physiological agents. Computer programs, CD-ROMS, simulators, and videotapes also allow for repeated use and practice, according to the students' needs.

It's not proper for students to question what the university thinks they need to know in order to be good doctors. They're not qualified to make that determination.

Students have a duty to speak up when asked to do something that violates their principles. Part of being a good doctor is living by the principles that first motivated one to pursue study in the healing arts, and those that come with ethical growth, such as "First, do no harm," Hippocrates' famous admonition. Every student is qualified to determine what is right and wrong according to his or her personal moral beliefs. Students, who pay for their education, should be able to question and object to a part of their program that is unnecessary, outdated, and/or violates their ethics. The American Medical Student Association (AMSA) supports the right of medical students to opt out of animal laboratories.

We allow students who oppose the animal laboratory to sit out, but every year the majority of the class participates.

Students will often participate in an animal laboratory for fear of standing apart from their fellow students and courting undue attention or disfavor from the professor. Many students also worry that they may be at a disadvantage during a test. However, the American Medical Student Association's policy is that the students should not be penalized for not participating in an animal laboratory.