Testimony of
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Before the Committee on Judiciary
Pennsylvania General Assembly

In re: House Bill 873, To Regulate Animal Research

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Mr. Chairman and Members of the Committee, I am Doctor Thomas G. Davis, Vice President for Worldwide Medical Affairs of Smith Kline & French Laboratories. I also practice medicine at Presbyterian University of Pennsylvania Medical Center.

Furthermore, I am here as a direct beneficiary of the use of animals in medical research. I suffered a heart attack in 1963, at age 36. I was one of the first humans in Philadelphia on which a coronary catheterization was performed. It --and I need hardly remind you that the procedure was first developed in experimental animals-- it enabled my cardiologists to make an accurate diagnosis, thereby providing me with a program that, in the final analysis, saved my life.

Testifying with me today are: Ceil Hedburg, DVM, PhD, Veterinary Manager of Drug Safety Evaluation at McNeil Laboratories, Fort Washington, PA; D. Richard Knauff, DVM, Associate Director of Research and Development Administration at Wyeth-Ayerst Laboratories, Radnor, PA and Michael Kastello, DVM, PhD, Director of Laboratory Animal Resources at Merck Sharp & Dohme Research Laboratories, West Point, PA.

Also joining us, as counsel to the Pennsylvania pharmaceutical firms, is Kathy Speaker MacNett, Esq., of the Harrisburg law firm of Buchanan & Ingersoll.

Mr. Gerald Gornish, a distinguished former attorney general of Pennsylvania, had also planned to testify today, on possible conflicts between HB 873 and Federal laws and on the bill's search warrant provisions. A scheduling conflict makes it impossible for Mr. Gornish to appear today. He has asked me to apologize to you and say that he will be available to the Committee at your convenience at a later date, if that is agreeable to the Chair.

My colleagues and I appreciate the opportunity the Committee has accorded us to present our views on the need for animal research in the pursuit of new medicines to treat or prevent the diseases of man and animals.

The pharmaceutical manufacturers of Pennsylvania acknowledge that the sponsors of HB 873 are motivated by a concern for animals. We share their concerns. We strongly believe that research animals must be treated humanely. We believe as well that research facilities must be staffed by well trained people. We further believe that these facilities must be inspected thoroughly and with adequate frequency by competent authorities.

But we also believe that the environment in which research and development are conducted must be free of excessive, redundant or conflicting regulation, and that enforcement of humane animal care and use must remain in the control of competent professional authorities.

Our reading of HB 873 convinces us that it would impose excessive, conflicting and redundant regulation, casting a shadow over the future of research in Pennsylvania. We also believe that the cost of administering such a law

--just the hiring and training of inspectors to sit on every animal care committee in the state and conduct prescribed inspections, to say nothing of the cost of developing and enforcing the many regulations the bill requires--these costs to the Pennsylvania taxpayer will be excessive. For these reasons, Mr. Chairman, the pharmaceutical firms of Pennsylvania respectfully ask the Committee to reject HB 873.

While there is much in the bill that is troubling, its search warrant provision is particularly of concern in the current environment, Mr. Chairman. We know that most advocates of animal welfare loath violence. But the fact is that fringe elements of the movement are using terrorist tactics, and we are deeply concerned that the search warrant provisions of HB 873 would be abused by such individuals.

We do not raise these concerns lightly, Mr. Chairman. The stridency that increasingly characterizes a small part of the animal rights movement cannot be ignored. The time has come for we who spend our lives working with animals in the fight against human and animal disease to voice our concerns. We need the Commonwealth's continued support, not its unintended exposure to disruption and uncertainty.

Our concern is heightened by the fact that it is not necessary to enact a search warrant provision to protect research animals. The substantial resources of the Federal government and the civil and criminal penalties that apply when the animal welfare laws are violated are powerful tools for handling suspected cruelty or other crimes against animals.

Enactment of HB 873 would reverse Pennsylvania's longstanding policy of protecting research facilities. It could unintentionally help individuals who would enter laboratories solely to destroy them or render test results useless, as has happened in this country and overseas. Even though such occurrences would be rare, this bill would introduce an atmosphere of uncertainty and disruption in the research process itself.

The level of the research community's concern about this measure is indicated by the very presence of the panel before you today, Mr. Chairman. I believe that today's hearing marks the first time that scientists from the academic community and the pharmaceutical industry, representing institutions from all over the state, have come to Harrisburg together on any issue. We are here to set the record straight on why animals are essential in research, how we use them, and why this bill must not become law.

One of our most important purposes in coming before you is to re-define the issue. For years the animal rights movement has set the terms of the debate. They have made it appear that a vote against them is a vote for cruelty.

We must change the terms of the debate. A vote for legislation like HB 873 is not a vote for animals, it is a vote against animals, children, the aged and all others who are victims of incurable diseases. It is a vote against all whose illnesses are not well controlled now, or who need protection from chemicals of unknown toxicity. A vote for HB 873 will reduce protection against harmful products for both animals and man. And at a time when research-intensive firms are one of the few enterprises coming into the state, a vote for HB 873 will send them the wrong signal.

We realize that the bill as presently worded outlaws safety testing in animals of only household products and cosmetics. Prescription drugs could continue to be tested in animals. But new household products like spray polishes and liquid soaps could not be tested for their effects on the eye, the skin or the internal organs. Does the Assembly wish to do that, knowing that clever children (and their pets as well) have a way of ingesting things they shouldn't eat? Surely it is not the intent to require that safety testing be started on humans without the benefit of animal data. Careful, humane animal studies form the basis for careful, humane tests in man. Without them, we can not know how toxic any new products are --whether intended for the benefit of man or animals. We do not believe that that can be your intent.

The reasons are both ethical and legal:

- First, it strikes us as obviously unethical to ban --as HB 873 would-- all eye irritancy or acute toxicity tests. Some advocates of HB 873 stress that the LD_{50} test is not required by the FDA and is largely unneeded. But the bill ignores the fact that some foreign regulatory agencies and some U.S. laws still require LD_{50s}. And even more importantly, HB 873 bans <u>all</u> acute toxicity and eye irritancy tests for household products and cosmetics. That would mean that a manufacturer that develops what he hopes is a gentler shampoo for infants (or puppies) could not test that product in this state. The bill defines cosmetics so broadly that it could exclude even the testing of contact lenses and ophthalmic solutions, if one defines their purpose as enhancing "attractiveness or appearance" -- since testing of such a product in the eyes or on the skin of any animal would be banned if HB 873 were law.

- Second, this bill conflicts with the public policy underlying all Federal laws governing animal research. All such laws place the emphasis on protecting animals while encouraging research. This law seems intended to place progress against disease secondary to protection of laboratory animals. We feel sure that the Committee will review carefully those important conflict of law questions.

- Third, the bill ignores the protections of the Federal Animal Welfare Act of 1970, and the major amendments to it in 1976 and 1985. The 1985 amendments require animal care and use committees and set specific rules for the avoidance of unnecessary pain or distress. Whether a state has the Constitutional right to require more severe standards is more than a question for legal debate; from the perspective of a research-based pharmaceutical firm, the resultant regulatory overlap would create chaos.

- Fourth, HB 873 overlooks the fact that Federal laws require companies to perform the tests that HB 873 seeks to proscribe. These include the Federal Hazardous Substances Labeling Act, the Toxic Substances Control Act, under which EPA may mandate LD_{50} and Draize testing, and the Virus-Serum-Toxin Act, under which the Department of Agriculture requires LD_{50} studies for vaccines and other biological products, e.g., snakebite sera.

As a physician, and as an officer of SmithKline Beckman Corporation, I believe that a manufacturer of products that may be consumed or otherwise put in contact with humans or animals must explore and report on their toxicity as a matter of responsibility to consumers. I could not justify working for a firm

that did otherwise. I can assure you that the companies represented here today would conduct such tests even if doing so meant moving the research out of the state. These tests identify target organs for investigators to monitor during the human trials part of drug research --providing absolutely essential information, medically and for purposes of meeting regulatory approval requirements.

We do not conduct animal research in a vacuum, of course. To understand animal research, one must understand the overall R&D process and objective. The goal is to contribute essential information to the development of safe, effective medications and other products for patients all over the world. No work in man can begin until adequate animal studies are done. That work is not frivolous or pointless. The people who conduct it chose health science careers because they want to be part of a process that enriches and prolongs life and conquers disease-- in animals and humans.

Some opponents of animal testing will tell you that "alternatives" are at hand to take the place of animals in research. When people tell you that, ask yourself this: What profit-oriented enterprise would continue paying millions of dollars for animal testing if the information could be obtained out of a test tube or from a few computer chips? The truth is that it is just not possible today for computers, mathematical models and cell cultures to take the place of whole animals. Not today and not in the near future.

I want to use the few minutes remaining to tell the Committee, quite simply, why someone with worldwide medical and regulatory responsibility needs animal data. And then I'd like to remind you of some of the benefits that animal

research has provided and promises to provide to patients --human and animal- from just one company's perspective. I must emphasize that similar accounts could be given by representatives of the other Pennsylvania pharmaceutical firms.

I am worldwide medical director at Smith Kline & French. In that job I chair a medical review board. One of the board's responsibilities is to oversee the clinical development of new medications in the more than 100 nations we serve. Some perspective on the dimensions of that task is provided by the fact that SmithKline's worldwide R&D budget this year will exceed $500 million. We are evaluating several hundred compounds in animals at any moment, and we have perhaps 30 medicines and vaccines in clinical trials throughout the world. None of these products can go into the clinic before we have the best possible understanding of how they are absorbed, what effects they have on organ systems, how they are metabolized, and their disposition in living creatures.

That absolutely essential information is given to us by our colleagues in laboratory animal science. It is their work, combined with what we can learn from the literature, that provides the biostatistical base on which it may be possible to build a new drug.

The usual course of events in drug discovery today involves creation in the lab of a molecule that the chemists and pharmacologists theorize might attack a given disease in a novel way. Modern technologies permit us to almost literally hand make a compound to fit a given theoretical use. As wonderful as these techniques are, they predict toxicity only crudely at best. Before

candidate compounds can be given to man, we need to know how they react in living tissue and then in whole animals.

It is in those studies, which typically take more than a year for each compound, that we learn the most about the compound. Unfortunately, what we normally learn is that the compound cannot be taken into man. That is the case more than 90% of the time, so that of a thousand compounds tested in animals, a few may survive. Of those, I might add, fewer than one in ten will be safe and effective enough to even consider for marketing. At the end of the process, 100,000 compounds will have been discarded, an average of 10.5 years of study will have passed, in excess of $125 million will have been expended --and one new medication will be available to your doctor to prescribe. The animal work is thus as critical to the integrity of a new drug as the foundation is to a new building. Without it, not only would it be unethical to test in man, it would be in most nations illegal. We simply could not do it.

Of course animal rights advocates sometimes assert that despite animal testing, some products make it through the screens only to show terrible toxicity to man --and that is a true statement, on its face. But that argument is no more convincing than one saying that a roof on one's house isn't useful, since roofs sometimes leak. In reality, Mr. Chairman, animal studies document the toxicity of potential new products every day. And every day such products are prevented from reaching the market, where they might harm patients or pets.

The point I wish to stress here is that none of the progress we have made in medicine could have happened without animal studies on which human trials could be based. In many cases, animal studies have been notably helpful to animals as well as man. For example,

- In Heartworm: We were among the first firms to market a successful drug for the prevention of heartworm in dogs -- a disease that kills every pet it invades.

- In Feline Leukemia: Several years ago, we were able to introduce an innovation to prolong the lives of pet cats, a vaccine that prevents feline leukemia --progress that of course would have been impossible, but for animal research.

Such highly productive research in pursuit of better health for animals may have applicability in man as well. An example is SK&F's 'Zentel', originally developed and very widely used to control worm infestations in food animals, it has now been proven to be very effective against the four most common worm infestations in man. This product now stands a good chance of making a material difference in both the human vitality and the economic strength of dozens of third world nations.

Smith Kline & French is widely known for our 'Tagamet' brand of cimetidine, a compound that heals duodenal and gastric ulcers and prevents their recurrence. That compound was the first major product specifically designed to prove a theory of disease management --the notion that special receptors in

the stomach turned stomach acid off and on, and that we could design a drug that would turn those receptors down so that ulcers could heal. The theory was documented in animals, and some 700 compounds were rejected because they proved toxic in animal studies. Finally 'Tagamet' proved safe, and the result was a revolution in ulcer disease --millions of patients cured without surgery, millions of ulcer recurrences prevented, many millions of dollars saved. Before 'Tagamet', there were 600 deaths from the complications of ulcer disease each month in this country. Today, such deaths are unheard of. 'Tagamet' and its record would not exist were it not for data --precious, invaluable knowledge, given to us by our work with animals.

Stories like these are not unusual, Mr. Chairman. They typify the real world where animal research carries enormous promise for enhancing life, prolonging productivity, preventing disease and relieving pain in animals and man.

The goal of all this effort is not at all complex. It is to serve patients, both animal and human. Our goal is to eliminate disease and with it the suffering that afflicts its human and animal victims alike. That is the reality of the research process. This bill, however well intended, does not encourage or support that process. Quite the contrary. That is why, with respect, we recommend that you reject HB 873.

This concludes our formal testimony, Mr. Chairman. My colleagues and I will be happy to respond to your questions.