

ANTI-VIVISECTION INFORMATION SHEET

“The vast majority of drugs – more than 90 per cent – only work in 30 or 50 per cent of the people.”

“I wouldn’t say that most drugs don’t work. I would say that most drugs work in 30 to 50 per cent of the people. Drugs out there on the market work, but they don’t work in everybody.”

(Dr Allen Roses, worldwide vice-president of genetics at GlaxoSmithKline, The Independent (UK), 8 December 2003.)

If drugs have such variability in humans then how can testing on animals possibly prove safety or efficacy?

“Well, shall we try it? It heals chickens, but it kills dogs”



(CIVIS Foundation Report, Nr 12, Fall-Winter 1991/92)

WHY ANIMAL EXPERIMENTS MUST STOP

Every species of animal is a different biomedical and biochemical entity. Non-human animals are different not only from humans, but also from each other, anatomically, physiologically, immunologically, genetically, and histologically (down to the base cellular structure). The dog is different from the cat and the cat is different from the rat. The rat is different from the mouse. And they are all different from human beings.

Animals react differently to different drugs, vaccines, and chemical substances, not only from humans, but also from each other. Aspirin kills cats and penicillin kills guinea-pigs. Yet guinea-pigs can safely eat strychnine – one of the deadliest poisons for humans, but not for monkeys. The list is endless. Consequently every year thousands of pharmaceutical drugs – drugs that had been found “safe” based on animal tests and approved for human consumption – are pulled off the shelves because of the serious health problems they cause in human beings.

Human diseases cannot be recreated in animals – or in human beings for that matter – simply because once a disease is “recreated”, it is artificial and it is no longer the original, natural disease that the body itself produced. For example, if you don’t have epilepsy, no-one can give it to you, and much less to a non-human animal. The exception to this is in the case of infectious diseases. However, animals do not get human infectious diseases. Among other reasons, there are huge differences between the immune system of humans and that of other animals (rats live in sewers, dogs drink water from puddles, cats lick dirt off their bodies without getting sick!)

Our environment – air, land, water, and food supplies – is being systematically destroyed by thousands of pesticides and toxicants that, no matter how destructive, are routinely and conveniently found “safe” – and thus allowed to be marketed – based on inherently invalid and misleading animal tests.

Increasing numbers of doctors and scientists agree that the only way to deal with our mounting health problems is to engage in prevention and clinical research (the observation and treatment of human beings suffering from human diseases).

REAL SCIENTIFIC

METHODS

ANTI-VIVISECTION

Those with vested interests in animal experimentation claim that vivisection has been responsible for improvements in public health and progress in medicine. On the contrary, medical historians have shown the exact opposite to be the case. True scientific methods that are directly applicable to humans accounted for any real advances, and because of its misleading and contradictory results, animal experimentation had rather than contributed anything worthwhile, continually brought about confusion and hindrance. Sadly, animal experimentation became the vogue early last century after the chemical/pharmaceutical companies realised the importance of a research method whose misleading and contradictory nature can provide malleable results that can conceal the dangerousness of their chemical products. Consequently, true scientific research methods that can provide accurate results are starved of much needed funding, while billions are wasted on unscientific animal experiments.

Fortunately there are currently numerous research methods available that are truly scientific and not of the same haphazard nature as animal experimentation.

PREVENTION

We all know that prevention is better than cure, don't we? So why don't the majority of us practice preventative health measures? Well one reason could be that we are not given the information; there are no big campaigns to educate us. We see adverts for drugs on TV and in newspapers, to 'cure' headaches, hay fever, colds, etc. We do not see adverts for preventative health measures. The reason is, of course, financial. Whereas there is little money to be made from healthy people, the profits from selling pharmaceutical drugs run into billions of pounds each year.

We are all responsible for our own health and adopting a healthy lifestyle is vital. In the UK 50% of people will die from heart disease – as we know, the causes of heart disease are related to lifestyle and so it must stand to reason that heart disease is largely preventable. Cancer claims the lives of one in four people in the UK, yet 80% of cancers are related to lifestyle and environmental factors and so are also preventable.

CLINICAL AND EPIDEMIOLOGICAL SURVEYS

The single most important research method is the study of human disease in individuals and in specific populations. Clinical surveys use human volunteers, clinical case studies, autopsy reports, and statistical analysis linked with clinical observation of disease. This permits far more accurate observation and use of actual environmental factors related to human disease than is possible with unnaturally confined animals.

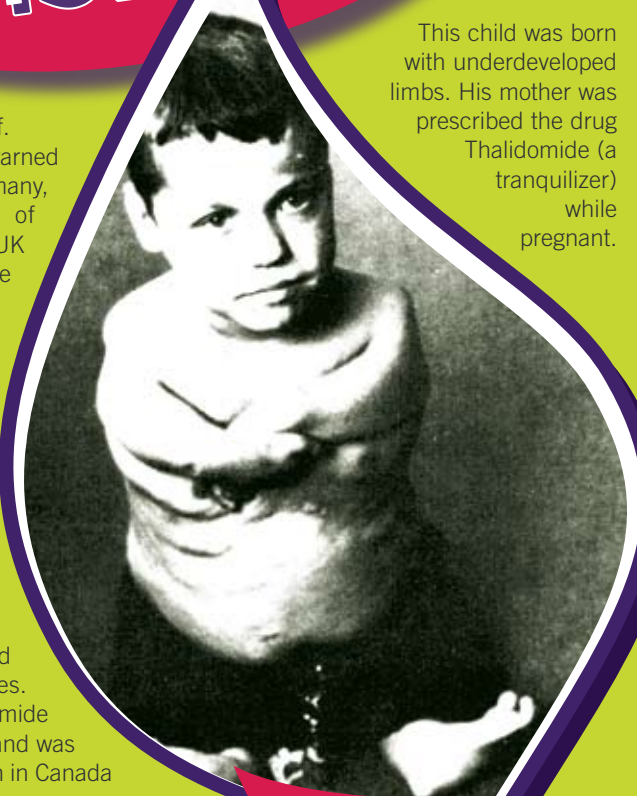
Pathology is the study of the diseases of the individual. Epidemiology is the study of the diseases of whole populations. How can we study the diseases that occur in humans? One of the most natural and immediate methods is that of observation. Observing that which occurs spontaneously in as great a number of human models as possible scattered throughout the world. The concept of epidemiology includes this kind of observation and is a method which permits the multiplication of individual observations by a sufficient number of times to form conclusions analogous to those which in the mechanical and physical sciences are called 'laws'.

This knowledge enables preventative measures to be taken against many diseases. For example, epidemiology demonstrated the necessity for sterile techniques in surgical operations.

Epidemiology has shown that there is a greater incidence of skin cancer in

A VICTIM OF VIVISECTION

On January 6 and February 3 1962, Prof. Widijung Lenz who had warned against Thalidomide in Germany, published evidence of deformities in *Lancet* (a UK medical journal). Chemie Grunenthal continued prescribing Thalidomide, stepping up its advertising and intensive marketing despite criticism of doctors. At the time of withdrawal of Thalidomide in Germany (March 4, 1962) thousands of malformed babies had been born, thousands of women required extensive psychiatric treatment and there were many suicides. In some countries Thalidomide continued to be prescribed and was doled out to pregnant women in Canada until August 1962.



This child was born with underdeveloped limbs. His mother was prescribed the drug Thalidomide (a tranquilizer) while pregnant.

(Bette Overell, *ANIMAL RESEARCH TAKES LIVES* – Humans and Animals BOTH Suffer, page 113.)

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INFORMATION SHEET

Europeans living in the tropics, connecting the illness to excessive exposure to ultraviolet light. In the 1960s, five thousand people agreed to take part in a study involving a series of clinical and laboratory examinations and replying to a questionnaire concerning their lifestyle, eating habits, tobacco and alcohol use, the amount of daily exercise etc. The conclusion? The most at risk from heart disease are people who smoke, drink, eat too much animal fat, do not take enough exercise, are obese and suffer from high blood pressure. These risk factors are so well known today we do not question them. We can all see the truth of these facts in our everyday lives. Epidemiology studies of cancer yield some interesting facts. It is surprising to realise how many conditions seem to cause cancer, but as none of these conditions gives rise to cancer in everyone exposed to them, one has to conclude that they may not be causal but may favour its emergence. How much is due to environmental factors, how much to genetic or racial factors? Breast cancer is common in North America and Europe, rare in China and Japan. Tumours of the central nervous system occur frequently in Israel and are rare in Asia and Africa. We can see that it is not necessary (or possible) to recreate the above studies in other animals or laboratory conditions. To help humans we need to study the diseases which occur in humans, and they are all around us, an invaluable source of information.

TISSUE AND CELL CULTURES

Single cells from human or animal tissues (for use in veterinary medicine) are grown outside the body after separation from their original tissue or organ. Each generation of these cells breeds identical cells almost without limit, thus providing a constant supply of identical test materials that can be kept free of contamination for years. This level of accuracy is impossible with living, changing animals, and what is more important, by testing substances on cells of the same species of animal, you do not have the problem of species differences. These tests are extremely useful for toxicity and irritancy testing.

ORGAN CULTURES

Groups of cells from a single organ are grown in a feeding medium. The normal structure of the organ is retained, and the reactions and effects

of substances upon a complete organ can be tested with results similar to those in an intact body. These cultures can be used in biochemistry, cancer research, genetics, immunology, microbiology, pharmacology, physiology, radiation, toxicology, and virus research.

Developments based on culture techniques have included discovering the mechanism of the growth of nerves, establishment of the number of chromosomes in the human cell, the discovery that Down's syndrome is due to genetic defect, studies of the activities of hormones, study of muscle physiology, and study of electrical activity of nerves.

NON-INVASIVE IMAGING TECHNIQUES

The development of non-invasive imaging devices, such as CAT, MRI, PET and SPECT scans, has revolutionised clinical investigation. These devices permit the ongoing evaluation of human disease in human patients. For example, these scanning machines have been valuable in the early diagnosis and evaluation of Alzheimer's disease, Huntington's disease, and musculoskeletal tumors, and they have also contributed to the body of knowledge in the basic sciences, such as physiology of vision.

GAS CHROMATOGRAPHY AND MASS SPECTROMETRY

These are methods used in the molecular analysis of such bodily fluids as blood, urine and gastric fluids. Solutions are separated through vaporisation into their basic elements and then identified by mass. These methods have proven very successful in vitamin and drug research, and in determining the type and amount of drugs taken in the case of an overdose.

THE AMES TEST

Invented by Dr. Bruce Ames of the University of California at

Berkeley, this in vitro test checks substances for carcinogenicity by using strains of the salmonella bacteria, which produce cancer in humans and other mammals. The test takes 2-3 days and costs a few hundred dollars rather than the 2-3 years and US\$150,000 required for typical animal tests.

PLACENTA

The human placenta, which is usually discarded after the birth of a child, can be used for practicing techniques of microvascular surgery, and for testing toxic side effects of chemicals, drugs and pollutants. It provides a medium far superior to animal tissues because it is human, and it's entirely without cost.

MECHANICAL MODELS

Sophisticated mechanical models are used as subjects for safety testing, such as car crash studies and tests of fireproof fabrics, and as teaching devices. Complex models are now available for use in medical and surgical training, and can provide reactions to many different drugs. A simulator has been created that includes a heart circulatory system, lungs and a respiratory system, along with a means of testing responses to drugs and kidney functions.

QUANTUM PHARMACOLOGY

This is a computer based technique used in theoretical chemistry to study the molecular structure of drugs and

"After intensive study of the issue, I am convinced that the Draize eye irritancy and the Lethal Dose 50 tests are inaccurate, unreliable, costly and cruel to the animals.

The tests deceive the very consumers whom they are supposed to protect, by certifying as safe household products and cosmetics that cause two hundred thousand hospital-recorded poisonous exposures annually."

—(Paula Kislak, D.V.M., Sherman Oaks, California.)

(Bette Overell, ANIMAL RESEARCH TAKES LIVES
— Humans and Animals BOTH Suffer, page 267.)

INFORMATION SHEET

their receptors in the body. By using existing knowledge, it is now possible to predict from a drug's structure what its effect will be on any given target organ in humans. This can be extrapolated to the point where the actions of a new drug, as yet unsynthesised, can be studied.

Quantum pharmacology has been used in the studies of, for example, nerve transmitters, hormones, beta-blocking heart drugs, histamine, anti-depressants and anaesthetics, amongst many others.

COMPUTERS AND MATHEMATICAL MODELS

Developments in computer technology have made available a wide range of sophisticated programmes which can be used for research and training. They have made possible studies and predictions of

drug actions of various organ systems, and allowed further developments based upon these predictions.

These systems 'fit' molecules of the various chemicals being tested into the computer's model of the chemical 'receptors' in the body, and predict the outcome.

Some programmes keep records of the makeup of known chemicals so that when the makeup of a new chemical is fed in, a comparison of the likely effects can be made.

Others allow simulation of the normal physiology of organs such as the heart, or respiratory control and kidney function.

Computer models of the human circulatory and respiratory systems are now

used as teaching devices in medical schools. HUMTRN (pronounced HYOOM-tran) is a "living" ever-changing computer data bank that provides access to 10 million bits of information about how a human body will react to any given substance. It is programmed to eat, breathe, perspire and age.

AUDIO-VISUAL AIDS

The primary use of these techniques is in the field of education, from primary school level right up to medical school and beyond. They include models, television, film, slides and audio/video tape. These allow repeated viewing, playback, and holding on a specific area of a demonstration.

EXAMPLES OF MAJOR DRUG HAZARDS SINCE THALIDOMIDE NOT PREDICTED BY ANIMAL EXPERIMENTS

DRUG	HARMFUL EFFECT
Chloramphenicol	fatal blood disorder (aplastic anaemia)
Clindamycin	often fatal intestinal disease
Clioquinol	nerve damage
Domperidone	heart problems
Eraldin	eye damage (blindness)
Halicon	amnesia
Halothane	liver damage
Isoprenaline aerosols	asthmatic deaths
Opren	fatalities, skin rashes, light sensitivity
Oral contraceptives	blood clots
Phenacetin	kidney damage
Phenylbutazone	aplastic anaemia
Zelmid	nerve damage, liver toxicity

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Anti-Vivisection WA

PO BOX 1366
East Victoria Park WA 6101
Tel: (08) 9487 0947
Fax: (08) 9470 4155

"Opren, Tanderil, Butazolidin, Closic, Zomax, Flenac, Eraldin, Ibufenac, Flosint and Suprol are arthritis drugs given to hundreds of millions of people worldwide after being declared safe by animal testing. All were subsequently removed from the market as 'dangerous' after causing many deaths."

(Bette Overell, ANIMAL RESEARCH TAKES LIVES - Humans and Animals BOTH Suffer, page 208.)

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