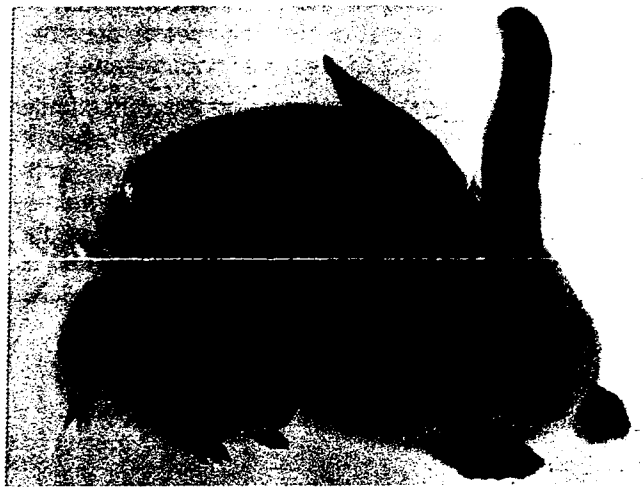
RESEARCH REVIEW

A SMALL SELECTION OF THE TRUST'S CURRENT RESEARCH PROJECTS

HEART RESEARCH WITHOUT HEARTACHE

Heart disease kills and disables more people than any other illness, yet doctors still don't understand what causes the underlying artery damage. The fact that many scientists study this by damaging the arteries of rabbits may have confused the picture.



Rabbits don't normally develop heart disease, so the results can be misleading as well as causing pain and distress to innocent animals.

The Trust's major new award to reasearchers at the Western Infirmary in Glasgow, will help establish the crucial link between cholesterol and calcium in the blood and how, sometimes, they combine to cause heart disease. This research is the first in the world to use human tissue to study this particular problem.

THE PARADOX OF PARKINSON'S DISEASE

Parkinson's disease is a brain deterioration which can lead to crippling movement disorders. Some scientists

chemically injure the brains of monkeys, cats and mice in efforts to find out more about the illness. These experiments, because they create symptoms artificially, reveal nothing about the *cause* of Parkinson's disease.

By funding research at Nottingham University, using cell cultures and post-mortem tissue, the Trust is showing that animal experiments aren't necessary or sufficient to study the causes of Parkinson's disease.

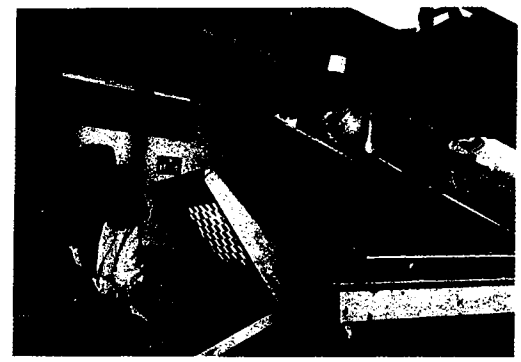
BATTLE AGAINST BREAST CANCER

Despite the best efforts of researchers, 15,000 women still die of breast cancer in Britain each year, mainly because their tumours gradually stop responding to treatment. To look at this problem some scientists induce tumours in dogs, mice and monkeys, but at the Queen's University in Belfast the Trust's grant is supporting a study of breast cancer using human cancer cells.

Already, the research has provided an important new insight into the hormonal causes of drug resistance.

A BRAINY BREAKTHROUGH

In the world's laboratories, cats and monkeys endure brain damage in experiments to study sight, hearing, memory and other brain functions. However, at the University of Aston, the Trust is financing the development of a new scanner called MEG, which could replace many of these experiments.



A volunteer has a MEG scan at Aston University

MEG can pinpoint tiny groups of brain cells in human volunteers, and is much more sensitive than an EEG. This research could mean not only the replacement of animal experiments, but also better methods of diagnosing neurological problems in patients.

ACTION ON AIDS

The AIDS epidemic continues to spread, and one in ten people with the illness develops dementia, because the AIDS virus can infect the brain. At St Mary's Hospital Medical School in London, the Trust's project applies modern techniques of molecular research to study how the AIDS virus is able to enter the cells of the brain.

A successful outcome of the research will allow therapies to be designed to prevent this distressing symptom. In other laboratories, chimpanzees, monkeys, rabbits, guinea pigs and cats are used in AIDS experiments, so our research will again benefit people *and* animals.

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