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## NEWS

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### EARLY DIAGNOSIS OF CANCER

Research into a new test so sensitive that it may be able to detect cancer at its earliest or pre-cancerous stage is being carried out at Southampton University in Southern England. If successful, it will allow treatment to start before any tumour has developed.

Dr. Andrew Sincock, research scientist in charge of a project investigating the early diagnosis of breast and cervical cancer, has developed a technique for staining sections of tissue with a dye that indicates the amount and age of DNA in cells.

Cancerous and pre-cancerous cells contain large amounts of newly formed DNA, which stains more deeply than the DNA in normal cells. The research is being funded by a voluntary organization known as Quest for Tests for Cancer. Dr Sincock reports that the new method of diagnosis is sensitive enough to pick up even cell-size carcinomas of the breast.

A cervical project is investigating the role of viruses in initiating cervical cancer. It employs DNA profile analysis to quantify virally induced changes in cells.

By using the new technique on exfoliated cells and biopsy specimens still thought to be healthy, it has already been possible to detect changes in breast and cervical cells before actual malignancy has developed. Investigations are now being carried out into detecting cancer of the bowel and lungs at the earliest pre-cancerous stage.

Existing tests, which rely on the appearance of cells, are largely dependent on a human observer identifying what he or she considers to be abnormal. By using the Sincock method, however, it is possible to quantify DNA that would still appear normal to the observer. The possibility of human error is reduced by using a microdensitometer in conjunction with a microcomputer, so that the measurements can be plotted on a visual display and stored for future recall. (*Spectrum* – British Science News, 1986, No. 196/10; British Information Services, British High Command, New Delhi 110028).

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A one week Inter disciplinary course on Electrobiological will be held at the Central Electrochemical Research Institute, Karaikudi 623006, during 10–16 July 1986. This course is intended to highlight the electrochemical principles in biological processes. bioenergetics, biological redox systems, photosynthesis, transmembrane potential, transport through membranes, bioelectromagnetism, electropotential measurement in plants, microbial

corrosion, bacterial leaching of metals, electrochemical techniques and methodologies applied to biology and medicine.

Research workers interested/working in the above areas may enrol for this course. The fee is Rs. 500/=. Last date for the receipt of prescribed form of application is 10th June 1986. For further information contact: The Director, Central Electrochemical Research Institute, Karaikudi 623006.

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