In vitro fertilisation first local success

Monash University scientists and clinicians from the Queen Victoria Medical Centre and Royal Women's Hospital this year achieved Australia's first successful pregnancy as a result of fertilisation of the mother's egg outside the womb.

The researchers believe this work could also lead to improved methods of contraception.

The team fertilised the woman's ovum with her husband's sperm in the laboratory and successfully transferred the embryo back into her womb.

The woman, 26 year-old Mrs Linda Reed, of Churchill in Gippsland, gave birth to a baby girl, Candice in June.

Principal organisers of the program, which involved more than 40 doctors and researchers were Monash scientists at the Queen Victoria Medical Centre, Professor Carl Wood, Associate Professor John Leaton and Dr Alex Lopata (now at Royal Women's) and Mr Ian Johnston, of The Royal Women's Hospital.

On the separate but related issue of artificial insemination by donor, Professor Wood has just edited a book which deals with the medical, genetic, social, ethical and legal aspects of AID.

AID has been an accepted practice in Europe and the United States for many years but it is only in the last decade, with the declining number of adoptable babies, that it has been widely practised in Australia.

About 600 couples are now treated in this country each year with a success rate of between 50 and 70 per cent.

In a section on law in the new book, a senior judge of the Family Court of Australia, Mr Justice Asche, writes that the legal problems arising from artificial insemination by donor semen are so far-reaching and present, so complicated that only clear and precise legislation can clarify the situation.

Way back for science graduates

The faculty of Science is offering refresher or retraining courses for graduates in science.

The proposal follows discussions within the faculty on a commitment to the ongoing education of science graduates (not only from Monash University) other than those formally engaged in postgraduate work.

As faculty Dean, Professor John O'Donnell, says: "The faculty believes that there must be many people who graduated in Science some years ago who would like an opportunity to update their knowledge, particularly in relation to a desire to take up employment in a science-based industry, or to move from one course of science specialisation to another."

Among the types of graduate the faculty believes may be interested in such courses are the following:

- Graduates who have just finished their degree but who now wish to update their knowledge in science with a view to entering employment in a science-based industry.

Subject change

- Graduates who are school teachers but who now wish that they knew enough Physics, say, to teach that subject rather than Biology, say, which they now teach.

It is hoped that the subjects of these refresher courses may include studies in: Mathematics, Physics, Chemistry, Biology, Geology, Geography and Computer Science.

In a "wrap-around" to the news pages of 'Reporter' we include a Year In Review section which seeks to present a "slice of life" for 1980.

Items of particular interest to graduates have been taken from issues of 'Reporter', Monash Review and Bound, publications of the Information Office.

Dr Alex Lopata has 'found a favoured reception among today's batch of unacademised mail!'
Breath of hope on asthma

Monash physiologists have produced a model of asthma in normal people which could lead to improved non-drug methods of alleviating the distress associated with the disorder.

Chronic obstructive disease of the air passages affects one in 10 people in Australia. The most prevalent of these distressing conditions is asthma and emphysema. Common symptoms are sensations of choking and increased effort in breathing.

Physiologists have suspected from many fragmentary clinical and research observations that the choking sensations and the person's awareness of increased effort in breathing arise mainly from signals received by the brain from sensory receptors in the many muscles which come into play when the airways are obstructed.

The problem is to identify the most important receptors and their location. With their model of asthma, the Monash physiology team, led by Dr Rod Westerman, has taken the first step towards this goal.

The research so far has been done with equipment developed in the Physiology department at Monash, but is to be transferred to the lung function unit at the Alfred Hospital, where Dr Westerman will continue it under clinical conditions.

Once the muscles most responsible for signalling the distressing information to the brain are identified, he says, it should be possible to partly alleviate the patient's distress by suitable physiotherapy, relaxation or bio-feedback techniques. Such physical therapy could also enhance the effectiveness of currently used drugs.

Researchers in the Monash Pharmacology department have found that relatively small doses of the herbicide 2,4-D-T can cause behavioural abnormalities in chickens.

The abnormalities are expressed as increased fear and retardation in visual discrimination learning.

The doses are below those needed to produce serious birth deformities. Although there are problems in extrapolating from chickens to humans, the research team, honoured student Christine Sanderson and ARGC Fellow Dr Lesley Rogers, believe the results of the study underline the threat to pregnant women from exposure to even small amounts of the herbicide, and the need for extreme caution in its use.

During the late Ordovician period, about 450 million years ago, when the first vertebrates appeared on Earth, south-eastern Australia was a deep ocean basin.

From central-northern NSW southwards into north-eastern Victoria there was a chain of volcanic islands, an island arc, along which coral reefs were growing. Antarctica lay adjacent to south-eastern Australia and remained that way until about 448 million years ago, when the two continents started to move apart.

Tasmania, in the late Ordovician, was a broad shallow marine shelf with localised reef masses.

This picture of south-eastern Australia from 466 million years ago to 448 million years ago — a "time slice" of 20 million years in the Earth's geological history — emerges from research by Monash geologist Dr Ray Cas, Dr Keith Crook, of the Australian National University, and Dr Chris Powell, of Macquarie University.

Dr Cas has been attempting to reconstruct the geography of the region from about 600 million years ago to about 300 million years ago. The research stops at 300 million years when south-eastern Australia had evolved into a geologically stable continent.

In their attempt to construct a palaeographic history of the south-eastern Australian region, Dr Cas and his colleagues have examined rocks and sediments and other geological data, and compared the emerging picture with the geography of various regions today.

The Ordovician picture of south-eastern Australia is very similar to a north-south reversed version of the Andaman basin today, Dr Cas says.

The Andaman basin in the north-east Indian Ocean includes the Andaman and Nicobar Islands, formed from submersed mountain ranges which extend from Burma through Sumatra and Java to the Little Sundas islands.

"What we have in the Andaman basin is a broad shallow marine shelf with localised reef masses," Dr Cas says. "It's a line of islands fringed by prolific coral reef systems.

"If you use a bit of sleight of hand and transpose north and south and compare the picture with that of south-eastern Australia in Ordovician times, you will see that the two regions are essentially equivalent."

Research on Roberts' art

Some of the best works of Australian painter Tom Roberts — the prime mover in the famous Heidelberg School — are "hidden" in private collections.

And at least two works in major public collections are fakes, or, at least, have been wrongly attributed to him.

This re-appraisal of one of Australia's greatest painters is the result of research by Ms Helen Topliss, a senior tutor in the Monash department of Visual Arts.

The result of her investigation will be published by Oxford University Press as a fully illustrated, two-volume critical catalogue of the painter's work — the first of its kind on any Australian artist.
Two relatively new bodies representing 'special interest' groups of Monash graduates are reporting considerable success in gaining new members.

The groups, which are seen as complementary to the long-established Monash Graduates' Association, are:

- The Association of Monash Medical Graduates, and
- The Master of Administration Graduate Association.

News of the activities of the two bodies was reported at an informal meeting of interested on-campus parties chaired by the Warden of the Union, Graeme Sweeney, last month.

Dr Richard Dargelvice, president of the Association of Medical Graduates, said his association now had a membership of 280 (out of some 1500 medical graduates).

It publishes a regular newsletter, this year conducting a well-attended annual meeting (addressed by Emeritus Professor Rod Andrew, founding Dean of the Medical Faculty), offering a prize for an outstanding first-year student (voted on by students themselves), and is considering a scheme to provide financial assistance to needy students.

Other activities are strongly profession-oriented, and there's considerable self-help — in matters such as giving advice on setting up practice.

Professor Peter Fitzroy, of the department of Administrative Studies, said that the Master of Administration Graduate Association was attracting a number of people who wanted to maintain contact with the department and was serving as a forum for professional development.

In the past year the association had held three meetings, of a professional nature, with guest speakers. Attendances had varied from 40 to 60, out of a total of 290 graduates.

Other bodies in the University that maintain contact with graduates include the Halls of Residence Association and the Mechanical Engineers Club, which, although consisting principally of undergraduates and graduate students, frequently conducts social and technical-type functions to which graduates of the department are invited.

The Monash Graduates' Association reports that it is currently preparing a brochure listing the services and facilities available to graduates, and containing a useful guide to university residential accommodation in other states.

**Distinguished visitors**

A distinguished Australian historian, Mr Hugh Stretton, launched an all out attack on positivism in the social sciences which flourished in the '50s and '60s — labelling it "a technical mistake and a social and political disaster."

Mr Stretton is a reader in History at the University of Adelaide and delivered the sixth annual Professor Oscar Mendelsohn Lecture at Monash.

The basic positivist idea is that social science could and should aim at a purely objective knowledge of the world — our knowledge of society should be a passive, descriptive sort of knowledge which does not in itself recommend anything or value anything or approve or disapprove of anything.

In the lecture Mr Stretton traced the effects of positivist teaching — which stressed that science should deal only in the objective knowledge of the world — our knowledge of society should be a passive, descriptive sort of knowledge which does not in itself recommend anything or value anything or approve or disapprove of anything.

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The lecture was later published in *Australian Universities* (vol. 26/1, no. 22, May 1980).

Monash Graduates' Association has undertaken the distribution of a new high-quality wall plaque featuring the University coat of arms in embossed brass and rich, hand-applied enamel.

The coat of arms is mounted on a teak panel and would make a handsome graduation, Christmas or special-occasion gift.

The Association will arrange to mail the plaques to Monash graduates for the special price of $22.50. The price includes packing and postage, and your order will help to support the activities of the Association.

Cheques should be made payable to Monash Graduates' Association' and sent with your name and full address to:

Monash Graduates' Association
Mrs Vicki Thomson
University Offices
Monash University
Caulfield East 3145
Victoria

Plaques will be delivered within about five weeks of receipt of your order.

**Study to help kelp industry**

A team of Monash botanists last summer started a research project on kelp — an enormous brown form of seaweed which started a research project on kelp. The industry is based largely on King Island, and a report is scheduled for release this month.

The health of kelp industry

A report on the health of Monash graduates' bodies has been released by Monash Graduates' Association. The report, entitled "The Health of Graduates' Bodies," is available free of charge to all graduates.

The report includes a summary of the findings of a recent survey of the health of Monash graduates, as well as a discussion of the implications of the results for future graduates.

**Enrolments in schools: study**

Monash's Centre of Policy Studies has received a $27,000 grant from the top-level Australian Education Council to conduct a study on changing patterns of school enrolments and the implications for educational policy and management.

The investigation will identify a range of policy options for schools and Education Departments facing opportunities as well as problems — because of population mobility and declining birth rates.

The Australian Education Council is formed by the Education Ministers of the six States, the Northern Territory and the Commonwealth.

This is the first "outside" project to which the Council has granted funds.

Monash's Centre of Policy Studies was established about five years ago. It has a staff of nine, including five research assistants, and has access to specialist staff within the faculty of Economics and Politics and in other faculties when needed.
A brighter but right way to tell the time

The sun is the difference between local standard time and local sun time (which dictates that it is noon when the sun is at its highest in the sky). Sun dial traditionally have taken into account sun time only.

Dr Carl Moppert and sun dial. Photo: The Sun

\[ \text{Vol. 1,000,000} \]

The Monash University Library early this year took into stock its one millionth volume.

The book was Mammotactus Super Bbiliamed by Johannes Marchesini, printed in Venice in 1476 by Franciscus Renner. A gift from the Friends of the Library, it is the Library's oldest volume and its first incunable (a book produced before 1500 in the first 26 years of printing) which has been defined as a source of knowledge.

The clue to the probable cause of the low reproductive rate of the koala population was originally thought to be due to the high population density of the koalas and probable competition for scarce food resources.

This hypothesis was rejected after data were collected on the koala colony on French Island. The colony there is thriving despite very high animal numbers and substantial tree damage as a result of their feeding activities.

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