

Why the MRC didn't fund research that led to the birth of the world's first test tube baby

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Thirty-two years ago today, the world's first baby was born after in vitro fertilisation. However, the work that led to the birth of Louise Brown on 25 July 1978 had to be privately funded after the UK's Medical Research Council decided in 1971 against providing the Cambridge physiologist Robert Edwards and the Oldham gynaecologist Patrick Steptoe with long-term financial support. Today, an intriguing paper published in Europe's leading reproductive medicine journal *Human Reproduction* [1] reveals for the first time the reasoning behind the MRC's much-criticised decision.

The authors of the research, led by Martin Johnson, Professor of Reproductive Sciences at the University of Cambridge, and funded by the Wellcome Trust, write: "The failure of Edwards' and Steptoe's application for long-term support was not simply due to widespread establishment hostility to IVF. It failed, we argue for more complex reasons".

These reasons included:

- A strategic error by Edwards and Steptoe when they declined an invitation from the MRC to join a new, directly funded Clinical Research Centre at Northwick Park Hospital, Harrow. They preferred to ask for long-term grant support at the University of Cambridge, but this meant they had to compete for funding with all the other research projects bidding for MRC support. This

was also difficult for Cambridge, which lacked the back-up of an academic Department of Obstetrics and Gynaecology at that time.

- Most of the MRC referees who were consulted on the proposal considered, in line with government policy, that it was more important to limit fertility and the growth of Britain's population than to treat infertility. Treating infertility was seen as experimental research rather than as therapeutic.
- Concerns about embryo quality (would babies be born with severe abnormalities?) and patient safety made the referees doubt the wisdom of funding embryo transfer without conducting studies in primates first.
- Edwards' and Steptoe's high profile in the media antagonised the referees who strongly disapproved of this method of public discussion of the science and ethics of treating infertility.

An additional obstacle for Edwards and Steptoe was that they were seen by the MRC as not being part of the "medical establishment". In their paper, Prof Johnson and his colleagues write: "Steptoe came from a minor northern hospital, while Edwards, though from Cambridge, was neither medically qualified nor yet a professor." Edwards had a PhD in developmental genetics from the Institute of Animal Genetics at the University of Edinburgh, then the leading UK centre in the field.

Prof Johnson said: "The MRC's negative decision on funding of IVF, and their public defence of this decision, had major consequences for Edwards and Steptoe and set MRC policy on IVF research funding for the next eight years. This decision was only reversed after the birth of two healthy babies from seven IVF pregnancies. In its 1978/79 Annual Report, the MRC announced a change of policy and from that time on

became a strong and major supporter of research on human IVF and human embryos, although curiously not research follow-up of IVF pregnancies."

Since then, an estimated 4.3 million babies have been born worldwide with the help of a range of fertility treatments developed since the birth of Louise Brown [2].

Prof Johnson and his colleagues, Sarah Franklin, Matthew Cottingham and Nick Hopwood, spent three years studying the MRC records at the National Archives at Kew in Surrey, and also documents from the Royal College of Obstetricians and Gynaecologists, Addenbrooke's Hospital, Cambridgeshire County Council and Cambridge University Library. Bob Edwards' wife, Ruth, gave them access to his private papers, and the researchers also interviewed many of the key players involved in the MRC's decision in 1971 not to fund the research.

In an accompanying editorial [3], Professor John Biggers from Harvard Medical School (USA), writes: "By taking us back 40 years, the authors have demonstrated the importance of understanding a decision in light of the culture and circumstances at the time the decision was made.

Although the grant was rejected, Edwards' and Steptoe's visions and persistence have benefited an enormous number of infertile people, both male and female."

Prof Johnson said: "The story of the MRC's non-funding of IVF belies the cliché that science 'races ahead' of society. Similarly, the standard view, that ethical consideration of bioscience and biomedicine can only ever be reactive, is contradicted by the evidence of extensive ethical debate surrounding the prehistory of clinical IVF - most of it actively stimulated by Edwards himself. Although attitudes to medical scientists in the media have changed significantly since the 1970s, scientists and clinicians engaged in high-profile work still face a dilemma. If they

encourage public discussion of their work - which they may see as both necessary to securing support and desirable to ensure full ethical debate - must they inevitably weaken their standing among their peers?

"Finally, our case study questions the myth of two courageous mavericks pitted against a conservative establishment. This myth does capture important elements of truth: Edwards and Steptoe were outsiders and did pioneer—against prevailing wisdom—new ideas, therapies, values, public discourses and ethical thinking. But the process of decision-making was more complex than the myth allows. Our research provides a fuller understanding of what happened at the birth of the IVF revolution."

Prof Johnson believes that today the decision-making processes involved in awarding funding for projects are more open and transparent, with discussion in the wider community and in the media actively welcomed, as was the case with the two Human [Fertilisation](#) and Embryology Acts in 1990 and 2008.

"A continuing problem, however, is more to do with the fact that there are some very fashionable topics that can create a buzz and attract huge research interest and funding, sometimes in disproportionate amounts; then it was fertility limitation, more recently genome sequencing would be an example. This can leave other Cinderella topics languishing in the ashes, with little financial support, even though they might well play an equally, if not more, important role in patient welfare."

More information:

[1] Why the Medical Research Council refused Robert Edwards and Patrick Steptoe support for research on human conception in 1971.

[doi:10.1093/humrep/deq155](https://doi.org/10.1093/humrep/deq155)

[2] From new data presented at the 2010 annual conference of the European Society of Human Reproduction and Embryology in Rome.

[3] Editorial. [doi:10.1093/humrep/deq156](https://doi.org/10.1093/humrep/deq156)

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