

# CORRESPONDENCE

## IVF: stars may have to consider the risk of stolen parenthood

SIR — Your Editorial 'Life after SuperBabe' (*Nature* **454**, 253; 2008) and Special Report 'Making babies: the next 30 years' (*Nature* **454**, 260–262; 2008) summarize the far-reaching social and ethical implications that arise from progress in *in vitro* fertilization (IVF) and stem-cell research. One aspect that has so far received scant attention is likely to have a substantial impact on both legal practice and everyday behaviour, at least for the rich and famous.

Scientific progress should eventually enable us to derive both sperm and egg from differentiated cells, using a combination of induced pluripotency (iPS) and directed differentiation (see 'New sources of sex cells' *Nature* **452**, 913; 2008). Before too long, it may be possible to collect a few hundred skin cells secretly from a used towel, a toothbrush or even an empty glass of water, then reprogram and differentiate these cells into sperm or egg. IVF could then be used to produce a child whose genetic parents are the involuntary tissue donors.

Such 'stolen' parenthood might be viewed as a dubious and expensive practical joke, if a child were to be conceived whose genetic parents were, say, Nicolas Sarkozy and Angela Merkel, derived from laundry at a G8 summit. But the widespread use of genetic evidence in paternity suits could provide a serious financial incentive for a woman to bear an iPS-derived IVF child whose genetic parents are herself and, say, Paul McCartney or Mick Jagger, presenting a lucrative opportunity to sue the genetic father for support for his 'illegitimate' child. And even if such financial incentives were to be removed through changes in legal practice, the problem of stolen parenthood is likely to



persist, given the significance that many people assign to kinship with famous people.

Two societal reactions might follow. First, abuse of human biological material in a wide sense is likely to become a statutory offence, generalizing the prohibition of secret genetic testing that has already been enacted in many countries. Second, persons who perceive themselves as potential victims of stolen parenthood might sterilize whatever waste they dispose of, unless of course they see their status soaring by allowing their parenthood to be stolen by as many groupies as possible.

**Christoph Bock** Department of Computational Biology, Max-Planck-Institut für Informatik, 66123 Saarbrücken, Germany  
e-mail: cbock@mpi-inf.mpg.de

## IVF: tight regulation may not be suitable for all cultures

SIR — In her Essay '30 years: from IVF to stem cells' (*Nature* **454**, 280–281; 2008), Ruth Deech reminds us of the role that the Human Fertilisation and Embryology Authority

(HFEA) has played through regulation in guiding the practice and scientific investigation of assisted-reproduction technology in the United Kingdom. But I disagree with her opinion that assisted reproduction in the United States is "nearly an unregulated black market". The medical aspects of assisted reproduction are in fact regulated extensively.

It is true that individuals and their physicians in the United States have the freedom to make decisions regarding who can reproduce and under what circumstances without the type of regulation provided by the HFEA. But it is against federal law to perform an *in vitro* fertilization (IVF) cycle without reporting that cycle and its results to the federal government; federal regulations require registration of clinics and extensive screening of potential gamete donors; all drugs and devices must be approved by the federal government; and health-care providers must be licensed by state governments.

In addition to complying with codified regulations, more than 90% of IVF clinics in the United States subscribe to unannounced on-site inspections and adhere voluntarily to guidelines developed jointly by the American

Society for Reproductive Medicine and the Society for Assisted Reproductive Technology. Publications in the scientific literature attest to the positive impact of these guidelines on patient outcomes.

The HFEA has had an important impact on assisted-reproduction technology and is an excellent example of extensive regulation. We cannot guess whether this degree of regulation in other countries would either be necessary or have comparable impact. Regulation can assume different forms, each dependent on individual cultures.

**David Adamson** American Society for Reproductive Medicine, and Fertility Physicians of Northern California, 540 University Avenue, Suite 200, Palo Alto, California 94301, USA  
e-mail: enicoll@asrm-dc.org

## A possible way out of the impact-factor game

SIR — Your Editorial 'Unbalanced portfolio' (*Nature* **453**, 1144; 2008) defends the scientific autonomy of researchers against pressure from bureaucrats seeking maximum economic returns. Although this position is admirable and likely to be popular among researchers, it might also be worth reflecting on our current situation.

Few scientists nowadays can afford to pursue research for science's sake, as suggested in the Editorial. Rather, most of us are trapped in a game of numbers, in which all our research output can be reduced to one or more of the following metrics: impact factors, average citations per article, total number of articles published, and the h-index.

This reductionist attitude towards scientific research has fostered an unhealthy research environment, evident in the copious examples of 'salami slicing' that litter scientific journals. Furthermore, the rules and significance of the game are