

## Book Review

***Xenotransplantation: Law and Ethics***, by Sheila A. M. McLean and Laura Williamson.

Ashgate 2005, (290 pp incl. Index), ISBN 0754623793, £55.

**xen•o•trans•plan•ta•tion (noun)** - The surgical transfer of cells, tissues, or especially whole organs from one species to another.

In the late nineteen-nineties, in the face of a lack of organs and cells for human transplantation purposes, someone suggested we use animals. There had been animal to human transplantation attempts before, none of which could be said to have “succeeded”. Nevertheless, with the promise of pigs genetically engineered so their tissues provoke less of an immune reaction in humans, xenotransplantation became headline news. In the UK, a non-statutory body entitled the “United Kingdom Xenotransplantation Interim Regulatory Authority” (UKXIRA) was founded in 1997 after the publication of two prominent reports discussed in *Xenotransplantation*. At this stage it could technically approve applications for xenotransplantation research on humans. The authors, McLean and Williamson, rightly display concern that this is despite a lack of remit to conduct an ethical assessment of animal to human transplantation. From 1998 to 2003, UKXIRA only received four applications, none of which were approved mostly due to a failure to provide sufficient information. UKXIRA published its last annual report for the period of January 2002 to September 2003, and during a meeting in May 2006 it was stated that “there is currently very little going on in terms of xenotransplantation – specifically no large animal organ transplants have been carried out”.<sup>1</sup>

*Xenotransplantation* can be seen as a commentary on both the UK and International reaction to this novel and promising technology from inception up until 2003. The ethical and legal issues highlighted by McLean and Williamson may even provide a clue as to why it has somewhat fallen from the limelight recently. For instance, a report introduced from the Council of Europe on the *State of the Art in the Field of Xenotransplantation*<sup>2</sup> insists that xenotransplantation should only be used should no appropriate alternative options be available. Perhaps stem cells are currently favoured to provide such options? The same Council of Europe report includes details on practice individual countries, discussed in detail in the book, which first highlights that research on xenotransplantation is still going on, albeit in animals, and second that in 2003, 20% of countries surveyed could conduct xenotransplantation without any specific authorisation being required.<sup>3</sup> This figure is enough to make one realise that serious considerations still need to be given to the legal and ethical issues behind xenotransplantation.

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<sup>1</sup> UKXIRA “Summary Notes of Thirty-Second Meeting,” Tuesday 9<sup>th</sup> May 2006, online at: <http://www.advisorybodies.doh.gov.uk/ukxira/UKX32SUM.htm> (last accessed 12 October 2006).

<sup>2</sup> Council of Europe (2003), Council of Europe: Strasbourg, p. 54.

<sup>3</sup> *Ibid.*, p. 75 Table 25.

McLean and Williamson focus on ethical issues such as the use of animals and the costs and benefits for individuals and society, including autonomy and public health. The discussion on animal welfare is interesting, especially because “the procedure actually offers humans potential benefits: the animals involved will only experience harms” (page 175). How does one weigh animal costs against human benefits?

The legal issues mentioned include consent, monitoring and surveillance, resources, human rights and liability for harm. The monitoring and surveillance that McLean and Williamson note must be part of any xenotransplantation procedure for biosecurity reasons is shown to have implications for surrendering life choices, withdrawal of consent (impossible?), the role of relatives/carers, confidentiality and privacy. McLean and Williamson then outline the possibilities for future regulation, concluding that “the role of UKXIRA will be significantly hampered unless statutory backing is provided” (page 268).

In summary, despite the lack of attention given to xenotransplantation recently, the technology has not gone away.<sup>4</sup> The main criticisms for *Xenotransplantation* would be that the material discussed only extends until around the end of 2003, a little too much time is spent on introducing the topic, and in parts it feels a little repetitive due to the method of reviewing each report separately. However, aside from this, it is an interesting introduction to, and commentary on, xenotransplantation and certainly makes the reader feel uneasy that their recommendation has not been followed.

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<sup>4</sup> See, for example Cook, Kendall, Michael and Brown “Xenotourism and Xenotravel: Some notes on global regulation” In *Proceedings Social Change in the 21st Century*, QUT Carseldine. The opening paragraph discusses that a Mexican treatment centre currently offers to transplant insulin-producing cells from pigs into diabetics.