UNIVERSITY OF LEICESTER

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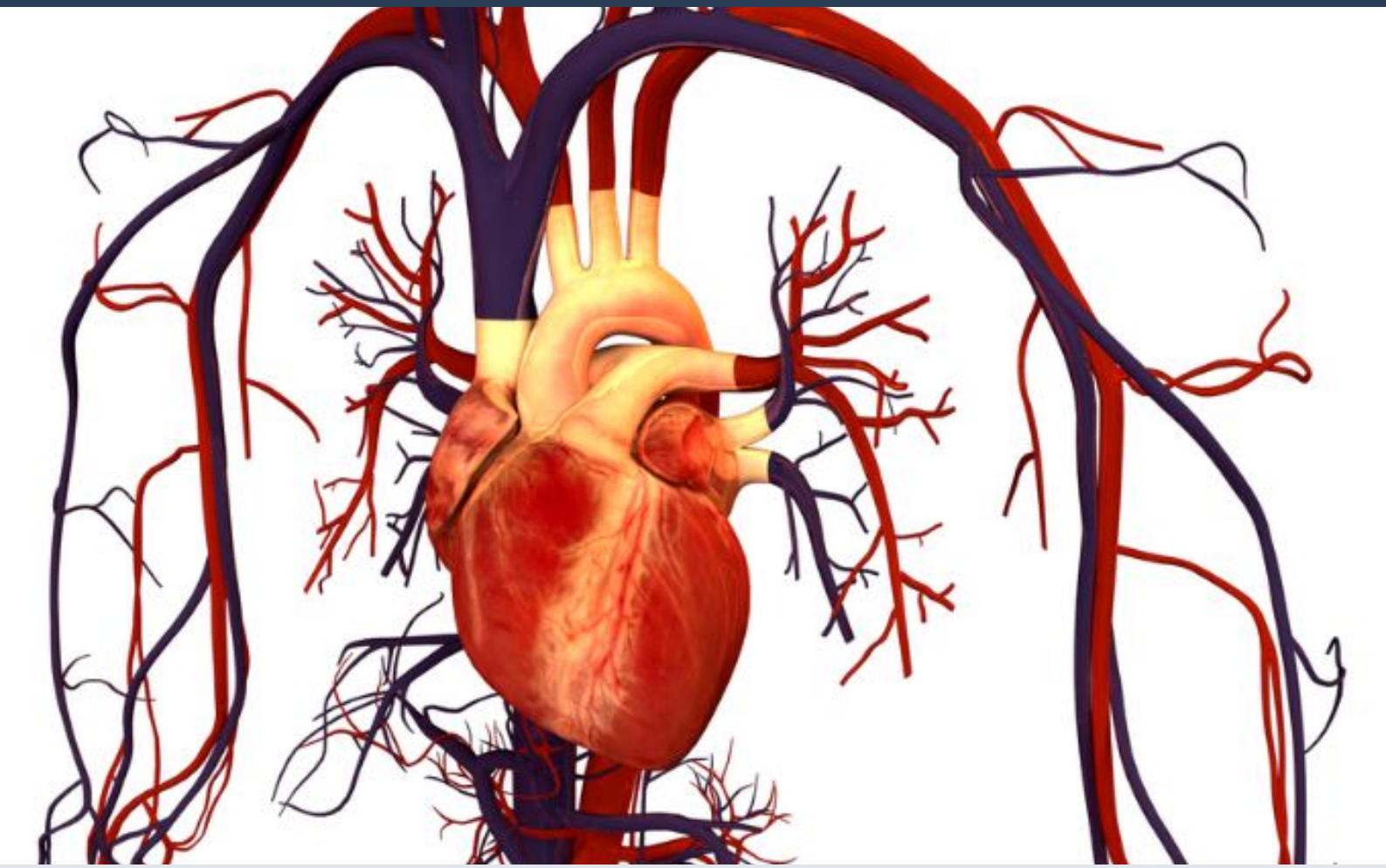
Cadatheter and the Near Virtual Autopsy

A cadaver-specific catheter which enables virtual autopsy through imaging techniques.



Please note, header image is illustrative. Source: Bryan Brandenburg, Wikimedia Commons, CC BY-SA 3.0.

IP Status

Patent application submitted

Seeking

Development partner, Licensing, Seeking investment

About **University of Leicester**

The University of Leicester works hand in hand with industry to generate business growth and find real applications for its leading innovation and research.

Background

While traditional coroners' post-mortems are often done as a matter of routine it is increasingly believed within the profession that there is a need to be more selective about which deaths should be investigated by these means. There is also an objection to post-mortems by many on religious and cultural grounds.

About 80% of post-mortems are on individuals that have died of coronary disease. As a consequence, there is currently a worldwide effort to explore the use of targeted, contrast enhanced, post-mortem computer tomography (PMCT) and MRI for cadaveric angiography.

To date there are no nationally or internationally agreed protocols in this area and no specific pieces of equipment designed for use in cadaveric angiography. There is, however, a need to develop a bespoke catheter that delivers contrast precisely to enable optimal visualisation of the coronary vessels.

Tech Overview

Using its expertise in PMCT, the University of Leicester has developed a custom catheter specifically for use in cadavers that delivers contrast with a high degree of precision as required (Figure 1). The University has also refined the methodology and protocol to ensure optimal imaging results.

PMCT is an alternative, or at least a complementary, method to the classic autopsy. During recent research in this area, it has become apparent that to realise the concept of 'near virtual' autopsy, PMCT will need to adopt clinical imaging practices. This will include the use of targeted contrast enhanced PMCT. For this purpose, researchers currently use standard catheters developed for alternative uses, but often with less than optimal results. However, with funding from the National Institute of Health Research, the University of Leicester has now developed a cadaver specific catheter for use in PMCT.

Benefits

- Custom designed catheter for cadaveric angiography.
- Delivers contrast with a high degree of precision.
- Optimised methodology and protocol for performing cadaveric angiography.

Applications

England and Wales alone experience about 500,000 deaths a year of which 46% are referred to a coroner. Of these deaths referred over 100,000 resulted in an autopsy. There is, however, a strong desire within the profession, as well as religious and social groups, to do fewer classical autopsies.

Professor Peter Furness, President of the Royal College of Pathologists, has said “We have long expressed the view that we want to be doing fewer overall coroners’ post-mortems and doing those we do to a higher standard” (Number of post-mortems in England and Wales should be cut – researchers say, The Guardian, 4th January 2011).

As more institutions and countries adopt the concept of the near virtual autopsy the demand will be global. The catheter developed by the University of Leicester will have limited reuse and, therefore, recurring sales can be expected. In essence, every cadaver in the future, examined as part of a ‘near virtual’ autopsy, would need to use such a device.

Opportunity

Investment/collaborative project opportunity for healthcare, medical device or forensics companies. Licensing opportunity.

Patents

- A priority patent application was filed in 2011. The patent is being prosecuted in the EU and US.

Appendix 1

Figure 1

Images of Cadatheter medical device.