

Cell removal technique could lead to cheaper drugs

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Researchers at the University of Edinburgh have pioneered a simple way to remove dead cells from cell cultures used to make protein-based drugs, which are increasingly prescribed to treat a range of illnesses.

Such medicines are expensive to make, with high costs resulting from the time-consuming and labour-intensive nature of developing them in cell culture.

Scientists have streamlined this process using magnetic beads coated with special antibodies that bind to dead cells without harming the remaining healthy cells. A magnet is then used to draw the dead cells out, leaving the living cells to produce beneficial proteins more effectively.

Professor Chris Gregory, of the University's Centre for Inflammation Research, said: "We are essentially mimicking what happens in the body when scavenger cells remove dead and abnormal cells. If the dead cells are not removed, then this affects how healthy cells behave.

"Not only will this make the production of drugs more efficient, but it will also streamline research into new medicines which use cell culture."

A spin-out company, Immunosolv, has been formed to market the technology following support through Scottish Enterprise's Proof of Concept Programme and a SMART award.

Researchers have found that removing dead cells can increase productivity of cell cultures by more than 100 per cent. The method replaces lengthy and potentially damaging methods of cell removal, such as spinning cultures around at high speeds, which can traumatise healthy cells, and could also have implications for vaccine development and stem cell research.

Source: University of Edinburgh

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