Blood-forming stem cells produced in laboratory for potential use in cancer treatment

Scientists in Melbourne and Sydney, Australia, have discovered how the body produces blood-forming stem cells which exist in bone marrow.

While other stem cell varieties are being researched for potential clinical applications, these “haematopoietic” cells are already in common use to treat cancers and blood disorders such as anaemia.

Peter Currie, a geneticist with the Australian Regenerative Medicine Institute at Monash University, said they were the “Brownlow medallists” of stem cells. But researchers had been unable to find a way of producing them in the laboratory, leaving supplies dependent on matched bone marrow donors.

A study published today in the journal *Nature* now provides clues on how to generate them from base stem cells. The team discovered a gene which acts like a “molecular switch,” triggering the production of either muscle or haematopoietic stem cells.

Sydney University haematologist John Rasko, who was not involved in the study, said it would be widely recognised internationally. “It’s a long way from immediate clinical use, but it gives us an understanding of the molecular and cellular signals necessary to understand before we can (create haematopoietic cells) in a laboratory.”

Read the full, original story: Australian scientists unravel ‘champion’ stem cell