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Synthetic blood: Artificially grown red blood cells

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Blood donations are one day a thing of the past; thanks to the creation of the first functional red blood cells grown in the lab. Embryonic stem cells (ESCS) are the origin of these cells. The breakthrough raises the prospect of producing mass supplies of the “Universal Donor” blood type O-negative, which is highly desirable because it can be safely transferred into patient, irrespective of their blood group. This type of blood is in short supply-of around Caucasians with 8% and just 0.3% of Asians. Instead of getting blood from countless donors making it from a few ESC lines may also help to stop the spread of disease, as it is easier to ensure such artificial blood is free of pathogens such as HIV and the viruses that cause hepatitis. To create the red blood cells, the cells were exposed to cultures of human ESCS to a sequence of nutrients and growth factors. This turned them to be named as Haemangioblasts, at the beginning which are precursors to blood cells, and then into mature red blood cells.

Biography

Kenneth P Grismore completed his PhD from University of South Carolina. He is the CEO of Xacobo Bio-Engineering. He was scout and a front line medic in the US Army. Worked for 5 years at MUSC as a Certified Anesthesia Technician and Supply Specialist. Proficient in all aspects of anesthesia and warehouse logistics. He is currently working on a classified project that will revolutionize the blood product industry.

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