

Red blood cell and platelet transfusions are routine life-saving procedures in medicine. The production of ex vivo-generated transfusable blood products, or Blood Pharming, remains one of the most promising, as well as perhaps one of the most distant, deliverables of current cell expansion technologies. While the relative ease of harvest and storage of these cell subsets enable this process, an adequate supply of suitable donor material remains problematic. We recently reviewed the individual challenges associated with production of red blood cells (RBCs), platelets, and neutrophils (25). The current technical limitations are both biological and engineering in nature.