

## Artificial chip mimics bone marrow, generates platelets

Scientists at Brigham and Women's Hospital (BWH) have developed a scalable, next-generation platelet bioreactor to generate fully functional human platelets in vitro. The work is a major biomedical advancement that will help address blood transfusion needs worldwide.

The study is published July 21, 2014 in [\*Blood\*](#).

"The ability to generate an alternative source of functional human platelets with virtually no disease transmission represents a paradigm shift in how we collect platelets that may allow us meet the growing need for blood transfusions," said Jonathan Thon, PhD, Division of Hematology, BWH Department of Medicine, lead study author.

According to the researchers, more than 2.17 million platelet units from donors are transfused yearly in the United States to treat patients undergoing chemotherapy, organ transplantation and surgery, as well as for those needing blood transfusions following a major trauma. However, increasing demand; a limited five-day shelf-life; and risk of contamination, rejection and infection have made blood platelet shortages common.

**Read the full, original story: [Scientists Successfully Generate Human Platelets Using Next-Generation Bioreactor](#)**