

## HEAMGEN & GIOSTAR Develop Patented Technology to Manufacture Safe, Abundant Human Red Blood Cells From Stem Cells

Disruptive technology is poised to revolutionize the world's blood supply chain

SAN DIEGO, CA, UNITED STATES,
October 6, 2021 /EINPresswire.com/ -HEAMGEN, Inc. a spinout company of
the Global Institute of Stem Cell
Therapy and Research (GIOSTAR), has
developed patented technology related
to manufacturing lifesaving mature red



blood cells from adult stem cells. HEAMGEN's stem cell derived, human blood provides numerous benefits including being donor-independent, universally acceptable, and ensures safety from pathogens.



Blood products are a Critical Infrastructure Key Resource. The present Coronavirus Pandemic has revealed the acute need for donor independent methods of providing blood during times of crisis."

Douglas Collins, Director of Business Development, HEAMGEN, Inc. "GIOSTAR has solved three main problems for the traditional way blood is collected," said GIOSTAR and HEAMGEN Co-Founder, Chairman and Chief Scientific Officer Dr. Anand Srivastava. "Our innovative technology solves all those. First we no longer have to match the blood type. Second, we will no longer need to worry about having enough supply or the shelf life. And third, when blood is transferred from one person to another person, there is a risk of transfer of disease. Now we can generate clean blood that is 100% free of disease and pathogens."

GIOSTAR/HEAMGEN technology simplifies the blood supply chain and will revolutionize the way blood is handled in the future. Currently, HEAMGEN is working with industry

leader Applikon Biotechnology on the customization and design of a bespoke type of bioreactor system in preparation for Phase I FDA trials. These bioreactors will be used in ISO 9001 standard plants to manufacture the human blood.

Benefits of the HEAMGEN's advanced biologically manufactured blood include:

Donor Independent - The blood is created utilizing a bioreactor that permits the production of mature red blood cells, under strictly controlled conditions, for transfusion therapy. This replaces the need for human blood donors and related expenses.

Universally Accepted - The blood created is type O-negative, which is universally accepted by all recipients regardless of their blood type, eliminating the need to match the blood types.

Abundant Supply - Blood manufacturing plants will be constructed globally to ensure abundant, safe supply of red blood cells. Today, blood supply is typically running at a 50% deficit.

Longer Shelf Life - The blood will have a shelf life of up to 2 years. Today, donated blood is typically "good" for only 42 days.

Safe - The red blood cells are made utilizing a bioreactor under strictly controlled conditions for therapy that replaces the need for human blood donors. GIOSTAR/HEAMGEN blood is safe and not compromised by diseases such as hepatitis B & C, HIV and syphilis to name a few.

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Worldwide, there is a massive shortage of blood with barely more than half of what is needed being collected. The World Health Organization (WHO) published an analysis on the global supply and demand for blood in October 2019 and found that 119 out of 195 countries do not have enough blood in their blood banks to meet hospital needs. While total blood supply around the world was estimated to be around 272 million units, in 2017, demand reached 303 million units.

Since 2008, the GIOSTAR leadership team consisting of a coalition of world-class scientists, physicians and entrepreneurs in the field of regenerative medicine and stem cell research has been working on the science.

For more information about GIOSTAR or HEAMGEN, please visit <u>www.giostar.com</u> or <u>www.heamgen.com</u>.

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## **About GIOSTAR**

GIOSTAR is the pioneer and established leader in the field of stem cell research. Under the leadership of Co-Founders Dr. Anand Srivastava and Deven Patel, the San Diego-based Institute

has a tradition of groundbreaking research in stem cell science spanning more than two decades. For more information about GIOSTAR and its science behind regenerative medicine and stem cell therapy, please visit <a href="https://www.giostar.com">www.giostar.com</a>.

## About HEAMGEN

HEAMGEN, Inc. – a spin out of Giostar Inc. – has developed a patented, disruptive technology to manufacture O-negative Red Blood Cells (RBCs) from Stem Cells. This technology will ensure the blood supply chain resiliency in that blood and blood products remain safe and available for patients, both in the military community and the civilian medical sphere, especially in terms of sourcing, storage and distribution.

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