

Our Mission

. . . . is to develop and manage medical materiel to protect and sustain the Warfighter on point for the Nation.

USAMRMC



**U.S. Army
Medical Research
Materiel Command**

Cryopreserved Platelets (CPP)



Our Vision

. . . . is to integrate with USAMRMC, Federal agencies, and the DoD, as part of the joint biomedical research and materiel community, to focus on delivering the best medical solutions for today and tomorrow.

Our products will be an integral part of the DoD Force Health Protection Program, to include vaccines, drugs, and medical devices, to prevent, diagnose, and treat infectious diseases, combat-related casualties, and CBRNE threats.

Our products will enhance far-forward medical care across the full spectrum of health care missions worldwide.



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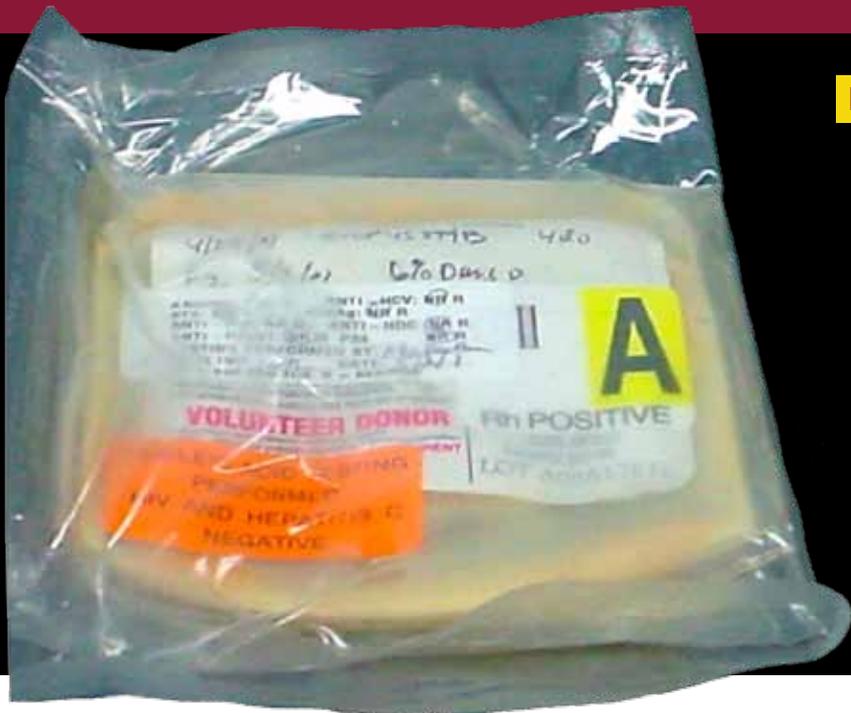
USAMMDA

**U.S. Army Medical Materiel
Development Activity**

*Developing Quality Medical Products
for U.S. Forces*

Protect the Warrior; Sustain the Force.

Cryopreserved Platelets . . .



Description . . .

Cryopreserved platelets (CPP) consists of frozen human platelets preserved in dimethyl sulfoxide (DMSO), frozen at -80°C and stored at -65°C. The DMSO is a solution that protects cells during freezing and is commonly used to prepare transfusions of bone marrow and stem cells.

** This product is under development and is not commercially available.*

Mechanism of activity . . .

Cryopreserved Platelets acts as a substitute for human platelets by helping the blood clotting mechanism in patients who have a deficiency of platelets. In battlefield casualties with severe blood loss, platelets are often deficient because of blood loss and because the platelets get consumed during blood clotting. The platelets may also have decreased activity because of blood loss itself (anemia) or because of abnormally low body temperature or abnormally elevated levels of acid in the blood.

Current status . . .

Cryopreserved Platelets is currently unapproved for clinical use by the FDA. It is used by the Dutch Military Services and has been fielded in the Balkans and in Afghanistan for use at Dutch medical treatment facilities by Dutch military physicians.

Advantages of CPP . . .

The usual means to replace platelets is to acquire platelets from blood donors and store them for up to 5 to 7 days. However, since platelets cannot be stored for more than 5 to 7 days, they are difficult to supply to the battlefield. CPP may be stored for up to 2 years and can be pre-positioned at battlefield locations.

USAMMDA's role in developing CPP . . .

USAMMDA's current activities in development of CPP include:

- Work with the Combat Developer in clarifying and defining the Warfighter need for CPP on the battlefield. Development of CPP for battlefield use.
- The target date for fielding is 2015. If approved by the FDA, CPP will be produced by military blood banks and managed as a blood product for the battlefield by the Armed Services Blood Program Office.

Current development Activities . . .

- Initial Phase 1 clinical study
- Manufacturing development

Safety and efficiency . . .

Cryopreserved Platelets was shown to be safe and effective for treatment of abnormal bleeding in cardiopulmonary bypass patients in a study in 1999.