

**VOLUME 27 ISSUE 1****AUGUST 2009**

<b>BUSINESS BRIEFS</b>	<b>1</b>
<b>BLOOD &amp; BIOTECHNOLOGY</b>	<b>4</b>
<b>RESEARCH &amp; DEVELOPMENT</b>	<b>6</b>
<b>PLASMA FRACTIONATION NOTES</b>	<b>9</b>
<b>PRODUCT SAFETY UPDATE</b>	<b>10</b>
<b>PEOPLE</b>	<b>11</b>
<b>NEW PRODUCTS AND SERVICES</b>	<b>11</b>
<b>RECENT U.S. PATENTS</b>	<b>12</b>
<b>MEETINGS / SUBSCRIPTION FORM</b>	<b>15</b>

---

**COMPANIES IN THIS ISSUE**


---

<b>AABB</b>	<b>GRIFOLS</b>
<b>ABBOTT BIOTECHNOLOGY</b>	<b>GTC BIOTHERAPEUTICS</b>
<b>AccuVein</b>	<b>HAEMONETICS</b>
<b>AMERICA'S BLOOD CENTERS</b>	<b>KAMADA</b>
<b>AMERICAN RED CROSS</b>	<b>LEK PHARMACEUTICALS</b>
<b>AMGEN</b>	<b>LFB</b>
<b>ARTERIOCYTE MEDICAL</b>	<b>MacoPharma</b>
<b>Baxter BioScience</b>	<b>MERCK PATENT GmbH</b>
<b>BECKMAN COULTER</b>	<b>NABI BIOPHARMACEUTICAL</b>
<b>CANGENE</b>	<b>OCTAPharma</b>
<b>CaridianBCT</b>	<b>PLURISTEM LIFE SYSTEMS</b>
<b>CERUS</b>	<b>Regado Biosciences</b>
<b>CHEMOSEROTHERAPEUTIC</b>	<b>SDI</b>
<b>CorCell</b>	<b>STICHTING SANQUIN</b>
<b>CORD BLOOD AMERICA</b>	<b>TALECRIS BIOTHERAPEUTICS</b>
<b>CryoCord Sdn Bhd</b>	<b>VERAX BIOMEDICAL</b>
<b>CSL</b>	<b>ViroPharma</b>
<b>FENWAL</b>	<b>WYETH PHARMACEUTICALS</b>
<b>FRESENIUS</b>	

**BUSINESS BRIEFS**

- \* **TALECRIS BIOTHERAPEUTICS filed two updated registration documents with the U.S. Securities and Exchange Commission last month, a move that may signal that the North Carolina-based plasma fractionator is contemplating an initial public offering (IPO) of its stock.** Talecris first filed for an IPO in June 2007, but subsequently withdrew it in the face of deteriorating market conditions for initial stock offerings. A proposed acquisition of the company by CSL was terminated in June 2009 after the U.S. Federal Trade Commission filed a complaint alleging that the deal would violate antitrust regulations (see the June 2009 issue of International Blood/Plasma News).

These new SEC filings suggest that Talecris plans to raise as much as \$1 billion if it goes through with an initial stock offering, according to a report in *The News & Observer*. The company reported a 43.7% gross profit margin for the first quarter of 2009 ending March 31, well ahead of the 32.3% margin posted for the year-earlier period and the 35.3 – 35.8% margins for all of 2007 and 2008. Plasma fractionation volume climbed to 910,000 liters in the first quarter of 2009, up from 820,000 liters in the same period in 2008. Talecris' *Gamunex* polyvalent intravenous immune globulin product accounted for \$703 million in worldwide revenue in 2008, followed by *Prolastin* alpha-1 proteinase inhibitor with \$316.5 million; 2008 product revenues totaled just over \$1.3 billion.

- \* **CANGENE reports that it has withdrawn Marketing Authorization Applications that it had initiated for its *WinRho SDF* Rho(D) immune globulin product in 16 European Union countries.** The Winnipeg-based biotherapeutics firm will also discontinue marketing *WinRho SDF* in the EU countries where Marketing Authorizations had already been obtained.

The company's decision to exit the EU market is based on "the challenges and cost of obtaining regulatory approval in the remaining 16 EU countries," as well as a re-evaluation of its marketing strategy and a current competitive landscape in which several products are approved to treat the same indications. "The **European** market has...been only a very small piece of our *WinRho SDF* business; we will focus our attention on our established markets and building relationships with new customers," a senior Cangene official said.

- \* **CORD BLOOD AMERICA has entered into a definitive agreement with an unnamed health care fund for a \$7.5 million capital commitment to be drawn down by selling preferred stock and warrants.** The Santa Monica, California-based company collects and preserves umbilical cord blood stem cells for research and treatment through its **CorCell** unit. Proceeds are expected to be used to fund new stem cell initiatives, potential acquisitions, and working capital needs.

- \* **GTC BIOTHERAPEUTICS has reported a net loss of \$10.8 million for the second quarter ended June 28, compared to \$2.2 million for the same period in 2008. The total net loss for the first six months of 2009 was \$21.1 million, compared to \$10.4 million for the first six months of 2008.** Revenues for the first six months of 2009 were about \$0.9 million, including sales of its recombinant human antithrombin, *ATryn* since its approval in the first quarter of this year.

With financial support from joint venture partner **LFB BIOTECHNOLOGIES** (*see the June 2009 issue of International Blood/Plasma News*), **GTC is working to advance its recombinant human factor VIIa (rhFVIIa) development program.** The company plans to submit an Investigational New Drug (IND) application to the U.S. FDA in the first quarter of 2010, seeking approval to initiate rhFVIIa clinical studies. An IND application for the recombinant human coagulation factor IX program is planned for the end of 2010. Both products will be manufactured using GTC's transgenic technology, with the goal of expanding patient access through offering lower priced alternatives to the existing commercial forms of these two therapeutic clotting proteins.

- \* **Some 26.2 million units of whole blood were collected in 2008 to meet the transfusion needs of about 802 million persons living in 35 European countries,** according to **The Marketing Research Bureau's** newly released market research report titled "**Blood Collections & Transfusion in Europe & Africa – 2008.**" With an aging donor pool and the majority of blood transfusion services reporting increasing difficulty recruiting young donors, the overall **European** blood donation rate continues to slowly decline; in 2007, it averaged 32.9 donations per thousand people.

In 28 European countries accounting for a total of 1.6 million single-donor platelet collection procedures, 43% were performed with cell separation equipment supplied by **CaridianBCT**, followed by 36% and 21% with **HAEMONETICS** and **FENWAL** equipment, respectively; less than 1% of procedures utilized **FRESENIUS** cell separators.

- \* **By contrast, some 4.2 million units of blood were collected in 2008 in 27 African countries surveyed for The Marketing Research Bureau's newly released "Blood Collections & Transfusion in Europe & Africa – 2008" report.** This translates into an average of only 6.9 donations per thousand people – one-fifth the rate in **Europe**. Donation rates varied dramatically across countries, from a low of just one to a high of 36 donations per thousand people.

Blood in most of the surveyed **African** countries is generally reserved for use in pediatric and gynecology cases. Leukocyte reduction is rare on the continent. Inadequate supplies, equipment and funding leaves many blood centers unable to separate the blood into components.

- \* **The U.S. FDA has ordered that ViroPharma immediately cease the dissemination of certain promotional materials, including a Bag Drop, Branded Panel and Abridged Sales Aid, used for CINRYZE, its recently licensed human plasma-derived C1 esterase inhibitor product.** *CINRYZE* is indicated for routine prophylaxis against angioedema attacks in patients with hereditary angioedema (HAE). These materials are “false or misleading because they fail to reveal important risk information or minimize the serious risks associated with *CINRYZE*,” the agency said in a letter to the company.

FDA noted that the sales materials failed to provide any information pertaining to the potential risk of thrombotic events with the use of *CINRYZE*. The agency also advised ViroPharma that a separate safety claim that the product is “well tolerated” treatment for routine prophylaxis against HAE attacks is misleading because “there are serious risks associated with *CINRYZE* that are inconsistent with the claim “well tolerated.” A statement in a ViroPharma Bag Drop that the product does not have “anabolic-steroid-like adverse reactions” was not supported by any comparative clinical trials evaluating anabolic steroids versus *CINRYZE* in routine prophylaxis against HAE, the FDA added in its letter.

- \* **GRIFOLS reports that gross operating profit for the first half of 2009 reached €140.8 million (\$202 million), an increase of 19.2% compared with the first half of 2008.** A sustained increase in sales volume paced a 14.8% increase in revenue from the Bioscience division to €351 million (\$505 million). An ongoing company policy of cost containment and control is credited for helping to boost earnings before interest, taxes, depreciation and amortization (EBITDA) to 29.9% from 29.0% in the first half of last year.

Grifols cites 14.3% growth in revenues in the second quarter and a 16.8% rise in EBITDA between April and June as evidence of continuing rising market demand for plasma products.

- \* **FENWAL announced that it has signed a five-year exclusive worldwide agreement with privately-held VERAX BIOMEDICAL to market, sell and distribute Verax’s proprietary *PanGenera Detection (PGD)* technology.** The Verax *PGD*, which comprises a handheld device and reagents, is a rapid diagnostic test used to detect bacterial contaminants in donated blood platelets. This rapid immunoassay targets antigens found on the surface of a wide spectrum of common bacteria known to be pathogenic to humans. It can be performed in fewer than 30 minutes and is designed for use in hospitals, cancer centers and other facilities as a safeguard immediately prior to transfusion.

The Verax *PGD* is currently cleared by the U.S. FDA as a rapid, qualitative immunoassay for the detection of bacteria in leukocyte-reduced apheresis platelets as an adjunct quality-control test following previous bacterial testing. It is also CE Marked in **Europe**.

- \* **The Malaysian biotechnology firm CryoCord Sdn Bhd has launched “CordMSCs,” an umbilical cord mesenchymal stem cell banking product.** The company, which currently controls 35% to 40% of the **Malaysian** stem cell banking market, aims to grow its market share to 50% next year by capitalizing on its status as the sole supplier of mesenchymal stem cells.

CryoCord hopes to recoup its RM 3 million (\$860,000) investment in developing “CordMSCs” over the next three years. In addition to Malaysia, CryoCord has an established presence in the **Philippines, Thailand, Indonesia** and **Brunei**. The company has more than 15,000 cord banking clients throughout **Southeast Asia**.

## BLOOD & BIOTECHNOLOGY

- \* **Thrombin generation is restored to only 20% of normal levels in venous blood from hemophilia A patients with inhibitors following recombinant factor VIIa (rVIIa) infusion,** according to an open controlled study by **Austrian** researchers in the August issue of the *European Journal of Clinical Investigation*. After infusion of rVIIa, peak thrombin levels increased on average to 40.7 nM, about 80.2% lower than the result in blood from healthy controls. The authors of this study speculate that the lower peak thrombin levels could reflect the effects of rVIIa on coagulation mechanisms, specifically in the context of the clinical coagulation defect involved in hemophilia A.
- \* **A subcutaneous course of granulocyte colony stimulating factor (G-CSF) significantly improved cognitive performance and reduced brain deposition of beta-amyloid in a mouse model of Alzheimer’s disease,** according to a report published online by University of South Florida researchers in the journal *Neuroscience*. These effects are thought to be related to the ability of **AMGEN’S** *Neupogen* (filgrastim) product to mobilize bone marrow-derived cells, as well as activate and increase mobilization of microglial cells in the central nervous system.

“G-CSF has been used and studied clinically for a long time, but we’re the first group to apply it to Alzheimer’s disease. This growth factor could potentially provide a powerful new therapy for Alzheimer’s disease – one that may actually reverse disease, not just alleviate symptoms like currently available drugs,” the study’s lead author said. Their encouraging findings in 52 elderly mice, whose ages correspond roughly to humans aged 60 to 80 years, have prompted the **ALZHEIMER’S DRUG DISCOVERY FOUNDATION** to fund a pilot clinical trial that will test the safety and effectiveness of G-CSF in 12 patients with mild to moderate Alzheimer’s disease.

- \* **WYETH PHARMACEUTICALS' recombinant, plasma/albumin-free, B-domain-deleted factor VIII, XYNTHA, exhibited equivalent pharmacokinetics to full-length recombinant factor VIII,** according to hemophilia specialists at the Oregon Health and Science University. In a pair of clinical studies enrolling a total of 204 patients in with preexisting target joints, nearly half (45.7%) had no bleeding episodes; a low annualized bleed rate was achieved (median 1.9 bleeds). Nearly 93% of hemorrhages required  $\leq 2$  infusions of *XYNTHA*.

Just three subjects (1.5%) developed *de novo* inhibitors, which were low and transient; there was an absence of neoantigenicity. In their report in the July 15 issue of *Haemophilia*, the investigators concluded that their dataset “demonstrates the safety and efficacy” of *XYNTHA* for patients with hemophilia A.

- \* **Applying its proprietary “NANEX” cell expansion technology, ARTERIOCYTE MEDICAL SYSTEMS claims that it has successfully created human red blood cells from stem cells at a rate that could allow the military and hospitals to produce units of blood on-site,** according to a report in the *Cleveland Plain Dealer*. The technique, also described as “blood pharming,” isolates stem hematopoietic stem cells from umbilical cord blood and introduces them into a vessel containing electrospun nanofibers. These nanofibers create a synthetic bone marrow “niche” environment that allows stem cells to rapidly proliferate while maintaining their undifferentiated “stemness” property.

Arteriocyte was awarded \$1.95 million by the Defense Advanced Research Projects Agency (DARPA), which is affiliated with the U.S. Department of Defense, to develop a “blood pharming” technology that could be used in the battlefield setting. “Our biggest challenge now is continuing to automate the process and scaling up red blood cell production to produce the yields that we’d need,” a senior Arteriocyte researcher said. DARPA anticipates that the company’s “NANEX” technology will be ready to evaluate in clinical trials in about two years.

- \* **Hemophilia A mice injected with a specially encapsulated “Sleeping Beauty” factor VIII transposon exhibited factor VIII levels that were comparable to those of normal mice, with bleeding times and partial thromboplastin times that were similar to those of normal mice at five and 50 weeks,** according to researchers at the University of Minnesota. Generated using dispersion atomization, nanocapsules coated with hyaluronon and asialoorosomuroid were used to direct B domain-deleted canine factor VIII genes to liver sinusoidal endothelial cells and hepatocytes.

“Sleeping Beauty” transposon targeted to liver sinusoidal endothelial cells mediated long-term expression of factor VIII with no evidence of antibody formation. The investigators hope that their alternative approach to viral vector-based gene therapy will ultimately prove successful in clinical trials in persons with hemophilia A. Their study appears in the July issue of the *Journal of Clinical Investigation*.

## RESEARCH AND DEVELOPMENT

- \* **Administration of intravenous immunoglobulin (IVIG) for conditions unrelated to Alzheimer's disease was associated with a 42% reduction in the incidence of Alzheimer's and related disorders (ARD),** according to a retrospective case-control analysis of medical claims in persons age 65 years and older. U.S. collaborators from the **ALZHEIMER'S DRUG DISCOVERY FOUNDATION, SDI, Baxter BioScience** and two academic medical centers identified 847 patients who received IVIG at least once for humoral immunodeficiency, chronic lymphocytic leukemia, thrombocytopenia or other disorders, and 84,700 control patients matched for Alzheimer's disease risk factors. Visit records of the two groups of patients were followed for a minimum of 731 days to capture new diagnoses of ARD.

Overall, **2.0% of patients treated with IVIG were diagnosed with ARD in the post-index period, compared with 4.1% of untreated controls** ( $p = 0.002$ ). Similar gaps in the incidence of ARD appeared for each of three age intervals that were examined:

*Proportion of patients diagnosed with ARD*

<i>Age cohort</i>	<i>IVIG-treated cases</i>	<i>Untreated controls</i>	<i>p value</i>
Age 65 to 74	0.6%	2.2%	0.021
Age 75 to 84	3.7%	6.2%	0.062
Greater than age 84	5.0%	12.0%	0.177

The investigators caution that “data derived retrospectively from claims may not adequately control for differences between the study cohorts on ARD risks.” In their report in the July 21 issue of *Neurology*, they call for prospective studies to evaluate the relationship between IVIG exposure and diagnosis of ARD.

- \* **An analysis of 18 studies involving cardiac surgery, colorectal surgery and intensive care unit patients failed to document a relationship between age of transfused red blood cells and risk of morbidity or mortality,** according to **Belgian** investigators reporting in the July issue of *Transfusion*. By contrast, five of six trauma trials probing for an association between death, multiorgan failure or hospital length of stay and age of transfused red blood cells found some evidence of a direct association, particularly in the context of massive trauma transfusion. The 24 reviewed studies were published between 1983 and 2008.

The authors concluded that “it is difficult to determine whether there is a relationship between the age of transfused RBCs and outcome in adult patients, except possibly in trauma patients receiving massive transfusion.”

- \* **The Israeli biopharmaceutical company KAMADA has announced that the U.S. FDA has accepted its Biologics License Application (BLA) for intravenous human plasma-derived alpha-1 antitrypsin (AAT-IV) for use as replacement therapy to treat congenital alpha-1 antitrypsin deficiency.** The FDA's acceptance of this BLA indicates that the submission satisfies the agency's preliminary requirements for review.

This high-purity, liquid, ready-to-use AAT-IV product will be evaluated within the standard Prescription Drug User Fee Act (PDUFA) timeframe, with an expected action date in the second quarter of 2010. Kamada expects an FDA visit to inspect its manufacturing facilities in **Israel** during this review period. The company completed a pivotal Phase III clinical trial of its AAT-IV in April 2008 and submitted its BLA in June 2009 (*see the June 2009 issue of International Blood/Plasma News*). Following U.S. marketing approval, Kamada says it plans to launch the drug in the second half of 2010

- \* **OCTAPHARMA is nearing completion of a Phase III clinical study in the U.S. to evaluate the efficacy, safety and tolerability of its *octaplex* prothrombin complex concentrate against fresh frozen plasma (FFP) to reverse the anticoagulant effects of oral vitamin K antagonists in patients who have a need for an urgent surgery or other invasive procedure.** Patients must have a clinical circumstance where oral or parenteral vitamin K therapy is deemed too slow in its action to reverse Coumadin or warfarin anticoagulation; they must also have an international normalized ratio (INR) of 2.0 or above.

Dubbed "LEX-205," this clinical trial will enroll and randomize a total of 164 subjects to receive *octaplex* or FFP. Dosing of the two agents will depend on patient body weight and baseline INR. Final data collection for the primary outcome measure – correction of the INR to <1.5 following the primary infusion – is expected to be completed next month.

- \* Separately, **OCTAPHARMA is evaluating the ability of two dosage regimens of *octaplex* to rapidly reverse hypocoagulability patients experiencing intracranial hemorrhage induced by oral anticoagulant therapy.** Called "LEX-206," this prospective, randomized open-label study is being conducted in **France**, where *octaplex* has been licensed since October 2004 for the treatment of bleeding, and for perioperative prophylaxis against bleeding during vitamin K antagonist therapy.

Intracranial hemorrhages are the deadliest forms of stroke, according to Octapharma, with mortality ranging from 30% to 50% in patients on oral anticoagulant therapy.

- \* **With minimal complications, therapeutic plasma exchange reduced ABO antibody titers and permitted ABO-incompatible kidney transplants**, according to a 46-subject retrospective study by U.S. investigators at Johns Hopkins. A mean of  $6.2 \pm 2.5$  therapeutic plasma exchange treatments were performed pre-transplantation, achieving a mean reduction of 53.5% in the total agglutination reactivity score at the anti-human globulin (AHG) phase.

The median titer remained reduced at three to six months after transplantation. During at least one procedure, about one-third of patients had urticaria or pruritis, 39% experienced mild citrate-induced hypocalcemia, 10% had hypotension and 13% had nausea or vomiting. All of these adverse events were transient and self-limiting. The authors concluded that therapeutic plasma exchange is a safe and effective means to allow ABO-incompatible kidneys to be transplanted, and thereby significantly expand the live donor pool available to the tens of thousands of patients who cannot find an ABO-compatible donor and may otherwise die. Their report appears in the June issue of *Transfusion*.

- \* **Primary and secondary prophylaxis with recombinant factor VIII reduced both bleeding frequency and arthropathy development relative to on-demand treatment (ODT) in children with severe hemophilia A**, according to findings from a 10-year, randomized clinical trial involving leading Italian, Swedish and German hemophilia treatment centers. Forty children aged  $\leq 7$  years with negative clinical-radiological joint scores at entry and at least one bleed during the previous six months were randomized to receive either BAXTER'S *Recombinate* (and later *ADVATE*) 25 IU/kg three times a week or ODT starting with a dose of at least 25 IU/kg until complete healing.

Ten of 21 prophylaxis subjects required indwelling catheters, versus none of 19 ODT subjects; three and two subjects developed inhibitors in the respective groups. Below are other key findings:

	<i>Prophylaxis</i>	<i>On-demand</i>	<i>p value</i>
Breakthrough bleeds/patient/month	0.52	1.08	<0.05
Joint bleeds/patient/month	0.20	0.52	<0.02
Hemophilic arthropathy signs	6/21 (29%)	14/19 (74%)	<0.05

Prophylaxis was most effective when started in the first 36 months of the child's life. The authors, who presented their work at last month's annual meeting of the International Society on Thrombosis and Haemostasis (ISTH) in Boston, concluded that this study confirms the safety, feasibility and efficacy of prophylaxis in preventing bleeds and arthropathy in all children with severe hemophilia A.

- \* **Existing guidelines that recommend rabies postexposure prophylaxis following bedroom exposure to a bat should be reconsidered**, say **Canadian** researchers in the June 1 issue of *Clinical Infectious Diseases*. In a 2007 survey of more than 14,000 households in the province of Quebec, the authors found that exposure to a bat while sleeping and without known physical contact occurred at a rate of 0.099% per year, which they characterize as “substantial when viewed on a population level.” Separately, random surveys indicate that the prevalence of rabies in wild bats is less than 1%. However, the rabies prevalence rate goes higher in other specific contexts: it is 2% to 3% when there was a household exposure without direct contact with the bat, and 10% to 12% in bats tested following direct contact with a person.

Depending on whether one includes only bedroom exposures or other household or unknown exposures as well, the incidence of rabies in such scenarios ranges from one case per 318 million person-years to one per 2.7 billion person-years. The investigators calculated that the number of persons needed to treat to prevent a single case of human rabies in such situations would range from 314,000 to 2.7 million people. “We conclude that bat rabies in humans is rare, especially without direct bat contact,” they said. **“For noncontact bedroom exposure, the benefit-to-risk ratio of rabies postexposure prophylaxis is unclear, [and] the resources needed to prevent a single case of rabies are orders of magnitude higher than most interventions considered to be reasonable.”**

## PLASMA FRACTIONATION NOTES

- \* **In Tunisia, a plasma fractionation plant operated by the Military Blood Transfusion Service will soon reopen after it was upgraded and renovated.** With a throughput of about 10,000 liters per year, it produces enough albumin (approximately 6,000 vials, 50 ml, 20%) to meet one-third of country’s albumin requirements. The balance of the need is met by the Ministry of Health’s Central Pharmacy through annual tenders.

Several blood centers (Tunis, Sfax, and Sousse) send their recovered plasma to **LFB in France** for processing into therapeutic plasma proteins under a contract agreement. In 2007, the Tunisian Ministry of Health initiated a plasmapheresis program to increase the volume of plasma available for fractionation, and thereby reduce reliance on imported plasma-derived products.

## PRODUCT SAFETY UPDATE

- \* **The UK's Advisory Committee on Safety of Blood Tissues and Organs (SaBTO) has concluded that "implementation of prion filtration is not cost-effective under the majority of scenarios modeled for risk," placing into doubt whether MacoPharma's *P-Capt* filter designed to remove the prion responsible for variant Creutzfeldt-Jakob disease (vCJD) will ultimately be implemented as a means to reduce risk of transmission of vCJD through transfused red blood cells.** Experts have cautioned that use of this technology could double the cost of producing a unit of red blood cells, from £50 to about £100; this would translate into an added cost of about £100 million (\$170 million) to be absorbed by the country's National Health Service.

More than 60 adult surgical patients have received red blood cells processed with the *P-Capt* filter, in trials overseen by the **UK's** National Blood and Transplant Authority. The *P-Capt* filter removes more than 99.9% of infective prions, according to MacoPharma. It received **European** regulatory approval (CE Mark) in September 2006.

- \* **The U.S. FDA has published a Final Guidance with specific recommendations for the use of nucleic acid testing (NAT) for human parvovirus B19 to screen source and recovered plasma used in the manufacture of plasma derivatives.** The agency recommends the following:

- Perform parvovirus B19 NAT as an in-process test to ensure that the B19 viral load dose not exceed  $10^4$  IU/mL;
- Use parvovirus B19 NAT on minipool samples to screen plasma units intended for further manufacturing into plasma products; primers and probes should detect all known genotypes of the virus; and
- When identified, do not use individual plasma units when such units are found to have a titer of parvovirus B19 DNA that might result in plasma manufacturing pools exceeding a B19 DNA titer of  $10^4$  IU/mL.

Additionally, the FDA encourages manufacturers to reduce the time between plasma collection and in-process testing to allow for notification of donors and recipients of positive test results within the dating period of cellular components.

The full text of this FDA guidance is available on the FDA website: [www.fda.gov/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances/Blood/ucm071592.htm](http://www.fda.gov/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances/Blood/ucm071592.htm).

- \* **Platelets treated with ultraviolet light and riboflavin** (*MIRASOL-PRT, CaridianBCT*) exhibited significantly better ATP maintenance and *in vitro* function than platelet treated with S-59 psoralen and UV light (*INTERCEPT Blood System, CERUS*). Most likely due to impaired oxygen consumption, pH and ATP decreased more rapidly in the *INTERCEPT*-treated platelets relative to *MIRASOL*-treated platelets or untreated control platelets, according to **German** researchers at the University of Cologne. Their findings are published in the July issue of *Vox Sanguinis*.

## PEOPLE

- \* The **AMERICAN RED CROSS** has appointed **Peggy Dyer** to the newly created position of chief marketing officer (CMO), in which she will oversee the development and execution of marketing strategy. Most recently Ms. Dyer has held senior marketing positions Allstate Insurance Company, where she was responsible for marketing strategy and program management across multiple lines of business for the insurance firm's 13,000 agencies and call centers. Ms. Dyer holds a Bachelors and Masters of Science in Journalism and an MBA in Marketing and Finance.

## NEW PRODUCTS

- \* **AABB and GROUP SERVICES FOR AMERICA'S BLOOD CENTERS have launched a new quarterly publication called *Journal of Blood Services Management*.** This peer reviewed business journal is international in scope, and is devoted to addressing timely issues relating to the management of community-based blood centers. Issues will be distributed together with AABB's *Transfusion*. Original research, ideas and commentaries are solicited from members of the industry. For more information, visit [www.transfusion.org](http://www.transfusion.org).
- \* **AccuVein LLC** (Cold Springs Harbor, NY) **announced that its "AV300" non-contact vein illumination device has received a CE Mark, enabling the company to commence European sales of the product.** The "AV300" is designed to assist healthcare professionals in locating the vein quickly for blood draws, intravenous lines and delivery of medications.

Weighing just 10 ounces (283 grams), the "AV300" uses point-and-click technology: the user presses a button and positions the device above the patient's skin to display a map on the skin of underlying veins. AccuVein very recently launched the "AV300" in the U.S. (see the June 2009 issue of International Blood/Plasma News). For more information, call 1-816-997-9400 or visit [www.accuvein.com](http://www.accuvein.com).

**RECENT U. S. PATENTS**

- \* **Modulators of Coagulation Factors With Enhanced Stability. #7,531,524.** Assigned to **Regado Biosciences, Inc.** (Durham, NC). A composition comprising a nucleic acid sequence of one of SEQ ID NOs. 19, 39, and 55-59 linked to a polyethylene glycol molecule at a 5' terminus via a linker moiety, or a pharmaceutically acceptable salt thereof.
  
- \* **Method for Preparing Human Serum Albumin through Heat-Treatment in the Presence of Divalent Cation. #7,531,631.** Assigned to **Chemoserotherapeutic Research Institute** (Kumamoto, Japan). A method for purifying human serum albumin characterized in that it comprises the steps of heat-treating at a pH value ranging from 5.5 to 10.0 a human serum albumin-containing solution including impurities originated from a host cell in the presence of a divalent cation and a stabilizer to thus allow the impurities to undergo agglutination and then removing aggregates thus generated from the human serum albumin-containing solution.
  
- \* **Clarification of Transgenic Milk Using Depth Filtration. #7,531,632.** Assigned to **GTC Biotherapeutics, Inc.** (Framingham, MA). A method for separating a protein of interest from a feedstream, involving filtering said feedstream by a depth filtration process that separates a protein of interest on the basis of particulate size, wherein said feedstream is composed of milk from a transgenic mammal, wherein milk casein micelles are aggregated by dilution with an ammonium sulfate solution, and wherein the feedstream and the ammonium sulfate solution are blended prior to filtration by an in-line static mixer in fluid communication with a filtration element of said depth filtration process.
  
- \* **Staphylococcus Antibodies. #7,531,633.** Assigned to **Nabi Biopharmaceuticals** (Rockville, MD). An isolated hyperimmune globulin containing antibodies directed against a *Staphylococcus epidermidis* antigen that (a) comprises amino acids and a N-acetylated hexosamine in an  $\alpha$  configuration, (b) contains no O-acetyl groups detectable by nuclear magnetic resonance spectroscopy, and (c) specifically binds with antibodies to a *Staphylococcus epidermidis* strain deposited under ATCC 202176.
  
- \* **Method of Producing Cardiomyocytes from Mesenchymal Stem Cells. #7,534,607.** Assigned to Industrial Technology Research Institute (Hsinchu Hsien, Taiwan). A method of producing cardiomyocytes comprising selecting mammalian mesenchymal stem cell clones that have a doubling time of less than 25 hours and administering ascorbic acid as a sole differentiating agent to induce differentiation of the mesenchymal stem cells into cardiomyocytes.

- \* **Method of Expanding Undifferentiated Hemopoietic Stem Cells. #7,534,609.** Assigned to **Pluristem Life Systems Inc.** (Haifa, Israel). A method of expanding an undifferentiated hemopoietic stem cell population to increase the number of the hemopoietic stem cells undergoing differentiation, involving (a) culturing stromal cells to confluence in a stationary phase plug-flow bioreactor under continuous flow of medium on a substrate in the form of a sheet, said substrate including a non-woven fibrous matrix forming a physiologically acceptable three-dimensional network of fibers; (b) separating a stromal cell conditioned medium from said stationary phase three-dimensional confluent stromal cell culture; (c) collecting said stromal cell conditioned medium; and (d) obtaining and culturing an undifferentiated hemopoietic stem cell population in a medium containing said stromal cell conditioned medium.
  
- \* **Method and Device for Monitoring Platelet Function. #7,534,620.** A method for monitoring the flow or composition of blood, comprising passing whole blood removed from a mammal through a passageway comprising an obstruction in the passageway and a narrowing of the passageway; contacting the blood with the obstruction and the narrowing; and monitoring the flow or composition of the blood in the passageway; wherein the blood passes bidirectionally through the passageway; and wherein less than 2 ml of blood is removed from the mammal's body.
  
- \* **Stable Pharmaceutical Composition Comprising Erythropoietin. #7,534,870.** Assigned to **Lek Pharmaceuticals d.d.** (Ljubljana, Slovenia). A stable pharmaceutical composition of erythropoietin (EPO), wherein the composition consists of (a) a therapeutically effective amount of EPO, (b) a pharmaceutically acceptable pH buffering system, (c) a poloxamer polyol, (d) a polyhydric alcohol and, optionally (e) an isotonic agent.
  
- \* **NO-Modified Hemoglobins and Uses Therefor. ##7,538,193.** Assigned to Duke University (Durham, NC). A method for increasing delivery of oxygen and increasing delivery of NO in a mammal, the method comprising administering a composition comprising a low molecular weight thiol and isolated S-nitrosohemoglobin.
  
- \* **Anti-Rhesus D Monoclonal Antibodies. #7,541,029.** Assigned to **Laboratoire Francais du Fractionnement et des Biotechnologies (LFB)** (Les Ulis, France). A method of treating or preventing Rhesus allimmunization of Rh-negative individuals comprising administering to an Rh-negative individual in need thereof an anti-Rh(D) monoclonal antibody, wherein said monoclonal antibody exhibits a Fc $\gamma$ RTIII-type ADCC level greater than 80% relative to a reference polyclonal anti-Rh(D) human antibody, and wherein the monoclonal antibody has on Fc $\gamma$  glycosylation site a short chain bi-antennary glycan structure, which is further characterized in the patent.

- \* **Methods for Treating Rheumatoid Arthritis Using Human Antibodies That Bind Human TNFA. #7,541,031.** Assigned to **Abbott Biotechnology Ltd.** (Bermuda). A method for treating a subject suffering from rheumatoid arthritis, involving administering both an antibody and methotrexate, such that the rheumatoid arthritis is treated, wherein the antibody is an isolated human antibody, or an antigen-binding portion thereof, that dissociates from human TNF $\alpha$  with a  $K_d$  of  $1 \times 10^{-8}$  M or less and a Koff rate constant of  $1 \times 10^{-3}$  s $^{-1}$  or less, neutralizes human TNF $\alpha$  cytotoxicity in a standard in vitro L929 assay with an IC50 of  $1 \times 10^{-7}$  M or less, and neutralizes TNF $\alpha$ -induced cellular activation in a standard in vitro assay for TNF $\alpha$ -induced ELAM-1 expression on human umbilical vein endothelial cells. (HUVEC).
  
- \* **Method of Measurement of Cellular Hemoglobin. #7,541,190.** Assigned to **Beckman Coulter, Inc.** (Fullerton, CA). A method of measurement of cellular hemoglobin of a blood sample, involving mixing an aliquot of a whole blood sample with a permeation reagent, incubating the resulting sample mixture for a period of time sufficient to permeate the cellular membrane and cause hemoglobin aggregation, followed by addition of a neutralization reagent to form a second sample mixture and by cell-by-cell measurement of side scatter signals on a flow cytometer to obtain cellular hemoglobin (Hgb<sub>cell</sub>) of said red blood cells.
  
- \* **Thrombopoietin Proteins With Improved Properties. #7,541,439.** Assigned to **Merck Patent GmbH** (Darmstadt, Germany). An isolated polypeptide comprising the amino acid residue sequence of SEQ ID NO:6.
  
- \* **Method and System for Determining Platelet-Mediated Clot Formation. #7,544,514.** Assigned to Tel-Aviv University Ltd. (Tel Aviv, Israel). A method for determining platelet-mediated clot formation in a blood sample, comprising (a) obtaining a blood sample and optionally mixing it with an anti-coagulant in an amount effective to inhibit clot formation, (b) mixing the blood sample in a vessel with a minute amount of an initiator to obtain a mixed sample, the amount being effective to initiate coagulation, (c) rotating the mixed sample inside the vessel such that shear forces are developed at the surface of the vessel in a manner and for a time sufficient to allow adhesion of platelets at the surface of the vessel, and (d) determining fibrin clot formation at the surface of the adherent platelets.
  
- \* **Factor VIII Polypeptide Having Factor VIII:C Activity. #7,544,660.** Assigned to **Stichting Sanquin Bloedvoorziening** (Amsterdam, Netherlands). A pharmaceutical composition comprising a modified human factor VIII polypeptide that has factor VIII activity, wherein the modified human factor polypeptide differs from the human factor VIII by at least one specified modification in at least one A3 domain portion, and at least one modification in at least one C1 domain portion.

**MEETINGS**

September 24-25, 2009

**WFH Global Forum 2009**

Delta Montreal

Montreal, Canada

Tel: 514-875-7944

Email: mbrooker@wfh.org

Website: www.wfh.org

October 1-2, 2009

**Advisory Committee on Blood, Safety and Availability**

Hilton Rockville Hotel

1750 Rockville Pike

Rockville, MD

Tel: 301-468-1100

Website: www.hhs.gov/ophs/bloodsafety

October 24-27, 2009

**AABB Annual Meeting**

The Convention and Visitors Bureau

New Orleans, LA

Tel: 301-907-6977

Email: aabb@aabb.org

Website: www.aabb.org

October 25, 2009

**PPTA Business Forum**

Marriott New Orleans

555 Canal Street

New Orleans, LA

Tel: 202-789-3100

Email: ppta@pptaglobal.org

Website: www.plasmaproteinforum.com

October 29-31, 2009

**NHF 2009 Meeting**

San Francisco Convention Center

San Francisco, CA

Tel: 212-328-3700

Email: handi@hemophilia.org

Website: www.hemophilia.org

December 5-8, 2009

**2009 ASH Annual Meeting**

Ernest N. Morial Convention Center

New Orleans, LA

Tel: 703-449-6418

Email: ash@hematology.org

Website: www.hematology.org

**SUBSCRIPTION FORM**Please enter my subscription to **International Blood/Plasma News** for the next 12 issues: **North America \$425** **Payment Enclosed** **Please bill me** **Other Countries \$450 (airmail)** **Payment follows (check or wire transfer)** **Mastercard or Eurocard** **American Express** **Visa**

Card Number: \_\_\_\_\_ Exp. Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Company/Organization: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Country: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Subscription Rates: (1<sup>st</sup> class/airmail) North America: \$425; Elsewhere \$450. Back issues: \$45 per copy. Checks must be paid in U.S. \$ and issued on a U.S. correspondent bank. Wire transfers are sent to Bank of America, Orange, Connecticut 06477, account number 003850938248. The routing number and swift code will be provided upon request. Tax ID Number: 06-142-3668 Tel: +1-203-799-0298 Fax: +1-203-891-8855 or mail to: The Marketing Research Bureau, Inc., 284 Racebrook Road, Orange, CT 06477 USA