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# FIRST PRION REDUCTION PRODUCT PRESENTED AT THE EUROPEAN PLASMA

**Monday 1st of April 2002 8:00**

## FIRST PRION REDUCTION PRODUCT PRESENTED AT THE EUROPEAN PLASMA FRACTIONATION ASSOCIATION CONFERENCE

**EDINGBURGH, Scotland, November 19th, 2003** – Pathogen Removal and Diagnostic Technologies Inc. (PRDT), a joint venture of Prometic Life Sciences Inc (Canada and UK) (TSX: PLI) and the American National Red Cross, presented today the details of the first product designed to selectively reduce the infectivity of the Transmissible Spongiform Encephalopathy (TSE) agents responsible for the transmission of classical Creutzfeldt-Jakob Disease (CJD) and variant forms of CJD (vCJD) – from plasma derived products at the 2nd European Plasma Fractionation Association (EPFA) Conference in Edinburgh, Scotland. This product is a world first.

The successfully developed product, a proprietary immobilised “ligand” molecule binds to abnormal prion proteins and prion infectivity and filters them out of plasma-derived protein solutions thereby greatly reducing any potential risk of TSE disease transmission from plasma-derived products.

The Product will be initially employed in industrial preparation of plasma and plasma products, adding an extra removal step to the bio processing procedure and providing an increased margin of safety from TSE infectivity to recipients of plasma-derived products and additional reassurance to recipients of their safety and integrity.

Development of a prion reduction device to filter donor blood supplies on site at blood transfusion centres is underway. This second product will assist blood transfusion services around the world in maintaining the safety of blood and blood products from exposures to TSEs from donors incubating these diseases.

Dr R. Rohwer, Director of Molecular Neurovirology, VA Medical Research Service, University of Maryland, who presented data on the product at the Edinburgh conference said: “In tests, PRDT’s top ligands have proved remarkable in their ability to reduce abnormal prion protein levels in blood and highly concentrated plasma protein samples, even when the blood or protein concentrates were artificially contaminated with high concentrations of the infectious agent. Our expectation is that wide application of this technology would greatly reduce the risk from TSE contamination of plasma derived proteins used in biopharmaceutical products and ultimately in blood and blood products like red blood cell concentrates.”

## **About PRDT's Platform Technology, ligands:**

PRDT has evaluated millions of different chemical structures, through a combinatorial chemistry approach, for their ability to bind and selectively remove prion protein and has identified 3 lead compounds each of which binds abnormal prion proteins (PrPres) from several species and strains of TSE diseases, e.g., variant CJD and sporadic CJD from humans, Hamster scrapie, and Mouse adapted variant CJD. Binding is remarkably specific and efficient even in the presence of high levels of contaminating protein, e.g., brain homogenates, blood cells and 25% human serum albumin. Ongoing characterizations of the binding have shown that the predominant mechanism for removal is specific adsorption and not filtration of the infectious material. One of the lead compounds is currently undergoing manufacturing scale up for a 2004 launch targeting removal of TSE infectivity from plasma derivatives. It is anticipated that the product will function equally well in reduction of PrPres from other products, e.g., human or bovine derived raw materials for biopharmaceutical development and plasma itself. The lead structures (ligands) were selected first for their specificity and affinity to human prion protein (HuPrPres) and second for their ability to also bind hamster and mouse PrPres as an aid to development. Studies to demonstrate reduction of infectivity are well advanced. PRDT has previously demonstrated removal of PrPres from red blood cell concentrates spiked with high levels of infectious prion, to the limit of detection by Western Blot. In the process of removing abnormal prion proteins from process streams or blood and blood products, PRDT devices are also concentrating the protein from dilute solution, thereby improving the opportunities for detection of the protein and diagnosis of the underlying disease. PRDT further anticipates that some ligands, selective for the binding of PrPres over normal prion protein will also provide a solid platform from which highly sensitive diagnostic applications will be derived.

## **About TSE's (also called prion disease)**

TSEs, or transmissible spongiform encephalopathies, are fatal brain diseases that include Creutzfeldt-Jakob Disease (in variant and sporadic and familial forms) of humans, scrapie in sheep, and BSE or "mad cow disease" of cattle. Millions of people may have been exposed to BSE in the United Kingdom and Europe. After initial infection the disease can take decades to develop during which time the infected human or animal appears completely normal. Infectivity is closely associated with abnormal prion proteins that are essential for the propagation of the infectivity and may also be sufficient to transmit TSE diseases. Normal prion protein is found throughout the body but during TSE infections changes shape and accumulate in large deposits in the brain and nervous system. Damage from the infection causes sponge-like holes to appear in the brain during the late clinical stages of these fatal degenerative central nervous system disorders. Currently there is neither treatment for these diseases, nor a sensitive method enough to detect infection from blood or during the early preclinical stage of infection. Although it is not known if vCJD is transmitted by blood transfusion in humans, it is unlikely that sufficient time has elapsed to detect such transmissions should they be occurring. Blood-borne TSE infectivity has been transmitted by transfusion in laboratory rodents infected with TSEs and in sheep experimentally infected with BSE or naturally infected with scrapie.

## **About PRDT**

In April 2002 the American Red Cross (ARC) and ProMetic Life Sciences Inc. (ProMetic) established a joint venture, Pathogen Removal and Diagnostic Technologies Inc. (PRDT) to develop and commercialise products to remove and diagnose pathogens in a variety of biological products. ProMetic and the ARC each contribute intellectual property and technical expertise; specifically, PRDT utilises ProMetic's proprietary Mimetic Ligand™ technology in combination with ARC's expertise in blood and blood-derived products. PRDT is initially developing products for detecting and reducing levels of Transmissible Spongiform Encephalopathies (TSEs) and viruses potentially present in biopharmaceuticals, food, cosmetics and personal care products. PRDT is a "virtual" company which is funded and owned by the ARC and ProMetic, and draws on the world's leading experts in the fields of TSE, combinatorial chemistry, blood collection, virology, affinity chromatography and adsorbent manufacture

This press release contains forward-looking statements that involve risks and uncertainties, including, but not limited to PRDT's ability to develop, manufacture, and successfully commercialize value-added products and

to obtain contracts for its products and services and commercial acceptance of its products. Shareholders are cautioned that these statements are predictions and these actual events or results may differ materially from those anticipated in these forward-looking statements.

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