Mallinckrodt announces the 2024 Winner of the Extracorporeal Immunomodulation Award

November 14, 2024

This year's award marks 30 years since clinicians first used ECP to successfully treat chronic graft versus host disease (cGvHD).1 In recognition of this important milestone, this year's $75,000 grant was dedicated to advancing research in this important area.

DUBLIN, Nov. 14, 2024 /PRNewswire/ -- Mallinckrodt plc, a global specialty pharmaceutical company, today announced the winner of the Extracorporeal Immunomodulation Award (EIA). The award recognizes a project aimed at identifying the optimal timing for extracorporeal photopheresis (ECP) initiation and assessing its effectiveness when combined with other graft versus host disease (GvHD) therapies. To recognize the occasion, Mallinckrodt, which provides immunomodulatory therapy via ECP, dedicated the $75,000 grant to this research. This year's award holds special significance as it marks 30 years since clinicians first used ECP to successfully treat chronic graft versus host disease (cGvHD).1,2

The EIA-winning project was submitted by Dr Andrea Varkonyi, of the South-Pest Central Hospital, National Institute of Hematology and Infectiology's Department of Hematology and Stem Cell Transplantation, in Budapest, Hungary. Her team will carry out a retrospective and prospective study, comparing ruxolitinib alone to ruxolitinib combined with ECP therapy in the treatment of acute and chronic GvHD. They will also evaluate the impact of ECP on the development of transplant-associated thrombotic microangiopathy (TA-TMA).

"Mallinckrodt is thrilled to recognize Dr. Andrea Varkonyi with this year's the Extracorporeal Immunomodulation Award and continuing the research in chronic GvHD. As the manufacturer of the THERAKOS™ CELLEX™ Photopheresis System we are committed to supporting research that seeks to improve patient outcomes and tackle unmet needs in this important area of medicine." **said Peter Richardson, MRCP (UK), Executive Vice President & Chief Scientific Officer.**

Dr. Varkonyi said, "Acute and chronic GvHD, along with TA-TMA, remain unresolved issues following allogeneic bone marrow transplantation. Despite the intent of the procedure, these complications often prevent patients from achieving complete recovery. We are grateful to be receiving this award to advance research in this area. Thank you, Mallinckrodt, for the opportunity to further our research."

The study's objective is to identify the optimal timing for introducing ECP and assess its effectiveness when combined with other therapies. It aims to address key areas of interest in allogeneic stem cell transplant-associated fundamental and clinical research.

Entries to the EIA award were invited from clinicians and scientists working on translational or outcomes-based research, as well as collaborative projects, in the field of GvHD-focused ECP. Submissions were assessed on a range of criteria, including scientific merit, originality, and feasibility.

The EIA award recognizes individuals and institutions whose research contributes to the continued advancement of knowledge in this area of medicine and is just one part of our ongoing commitment to the science of immunomodulation through ECP.

In June, the THERAKOS™ CELLEX™ System technology secured CE certification under the European Union Medical Device Regulation (EU MDR). It involved a robust quality management system audit, technical and microbiological reviews, and a thorough clinical assessment, demonstrating the organization's ongoing commitment to ECP evidence generation, post approval.

About THERAKOS™ CELLEX™ Photopheresis System

The THERAKOS CELLEX Photopheresis System is the world's only fully integrated and validated ECP system.3 THERAKOS performs ECP using patented technology that collects, separates and treats a small amount of white blood cells (immune cells) while the patient is connected to the instrument. The treated cells are then returned to the patient where they help to modify the immune response in a process called immunomodulation. It is used to treat a range of immune-mediated diseases. THERAKOS Systems are used by over 300 treatment centres in over 30 countries worldwide.4

About Extracorporeal Photopheresis (ECP)

Extracorporeal photopheresis (ECP) is an immunomodulatory therapy that has demonstrated efficacy in various T-cell and immune-mediated diseases.[3] ECP is recommended by international and national guidelines for a spectrum of diseases, including cutaneous T-cell lymphoma (CTCL), acute and chronic graft-versus-host disease (aGvHD and cGvHD), chronic lung allograft dysfunction-bronchiolitis obliterans syndrome (CLAD-BOS) and after cardiac transplantation. 5,6,7,8,9,10,11,12,13,14,15, 16,17

EU INDICATIONS AND IMPORTANT SAFETY INFORMATION FOR THE THERAKOS™ PHOTOPHERESIS PROCEDURE

Indications
The THERAKOS™ CELLEX™ Photopheresis System is indicated for patients older than 18 years of age for the administration of photopheresis in the following:

- Cutaneous T Cell Lymphoma (CTCL)
- Solid Organ Transplant Rejection (SOT) (heart, lung)

The THERAKOS™ CELLEX™ Photopheresis System is indicated in patients older than 3 years of age for the management of

- Acute and Chronic Graft versus Host Disease (aGvHD, cGvHD)

Contraindications
THERAKOS™ Photopheresis is contraindicated in:

- Patients possessing a specific history of a light sensitive disease
- Patients who cannot tolerate extracorporeal volume loss or who have white blood cell counts greater than 25,000 / mm3
- Patients who have coagulation disorders or who have previously had a splenectomy

Warnings and Precautions
THERAKOS™ Photopheresis treatments should always be performed in locations where standard medical emergency equipment is available. Volume replacement fluids and/or volume expanders should be readily available throughout the procedure.

- Do not expose the device to a magnetic resonance (MR) environment. The device may present a risk of projectile injury, and thermal injury and burns may occur. The device may generate artifacts in the MR image, or may not function properly.
- Thromboembolic events, including pulmonary embolism and deep vein thrombosis, have been reported in the treatment of Graft versus Host Disease (GvHD). Special attention to adequate anticoagulation is advised when treating patients with GvHD.
- When prescribing and administering THERAKOS Photopheresis for patients receiving concomitant therapy, exercise caution when changing treatment schedules to avoid increased disease activity that may be caused by abrupt withdrawal of previous therapy.

Adverse Events

- Hypotension may occur during any treatment involving extracorporeal circulation. Closely monitor the patient during the entire treatment for hypotension.
- Transient pyretic reactions, 37.7–38.9°C (100–102°F), have been observed in some patients within six to eight hours of reinfusion of the photoactivated leukocyte-enriched blood. A temporary increase in erythroderma may accompany the pyretic reaction.
- Treatment frequency exceeding labelling recommendations may result in anaemia.
- Venous access carries a small risk of infection and pain.

Please refer to the THERAKOS™ CELLEX™ Photopheresis System Operator's Manual for a complete list of warnings and precautions.

IMPORTANT SAFETY INFORMATION FOR METHOXSALEN USED IN CONJUNCTION WITH THERAKOS™PHOTOPHERESIS

Consult the 8-methoxypsoralen (Methoxsalen (20 micrograms / mL)) professional leaflet or the oral 8-methoxypsoralen formulation package insert before prescribing or dispensing any medication.

Warnings and Precautions

- Patients exhibiting multiple basal cell carcinomas or having a history of basal cell carcinoma should be diligently observed and treated.
- Methoxsalen may cause fetal harm when given to a pregnant woman. Women undergoing photopheresis should be advised to avoid becoming pregnant.
- Special care should be exercised in treating patients who are receiving concomitant therapy (either topically or systemically) with known photosensitizing agents.
- Oral administration of methoxsalen followed by cutaneous UVA exposure (PUVA therapy) is carcinogenic.
- Patients should be told emphatically to wear UVA absorbing, wrap-around sunglasses for twenty-four (24) hours after methoxsalen treatment. They should wear these glasses any time they are exposed to direct or indirect sunlight, whether they are outdoors or exposed through a window.

Refer to the package insert for methoxsalen sterile solution (20 micrograms / mL) or the oral 8-methoxypsoralen dosage formulation for a list of all warnings and precautions.

ABOUT MALLINCKRODT
Mallinckrodt is a global business consisting of multiple wholly owned subsidiaries that develop, manufacture, market and distribute specialty pharmaceutical products and therapies. The company's Specialty Brands reportable segment's areas of focus include autoimmune and rare diseases in specialty areas like neurology, rheumatology, hepatology, nephrology, pulmonology, ophthalmology, and oncology; immunotherapy and neonatal respiratory critical care therapies; analgesics; and gastrointestinal products. Its Specialty Generics reportable segment includes specialty generic drugs and active pharmaceutical ingredients. To learn more about Mallinckrodt, visit www.mallinckrodt.com.

CAUTIONARY STATEMENTS RELATED TO FORWARD-LOOKING STATEMENTS
This release contains forward-looking statements, including with regard to Therakos, its potential to improve health and treatment outcomes, and its potential impact on patients. The statements are based on assumptions about many important factors, including the following, which could cause actual results to differ materially from those in the forward-looking statements: the effects of Mallinckrodt's recent emergence from bankruptcy; satisfaction of, and compliance with, regulatory and other requirements; actions of regulatory bodies and other governmental authorities; changes in laws and regulations; issues with product quality, manufacturing or supply, or patient safety issues or adverse side effects or adverse reactions associated with THERAKOS; and other risks identified and described in more detail in the "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of Mallinckrodt's most recent Annual Report on Form 10-K, Quarterly Reports on Form

10-Q, and other filings with the SEC, all of which are available on its website. The forward-looking statements made herein speak only as of the date hereof and Mallinckrodt does not assume any obligation to update or revise any forward-looking statement, whether as a result of new information, future events and developments or otherwise, except as required by law.

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