Press Release
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Haematologica publishes Celyad THINK Study Case Report of CYAD-01 Induced Complete Remission in Relapsed/Refractory AML Patient

Case report details first ever reported complete morphologic remission with gene engineered T-cells in a relapsed/refractory AML patient without preconditioning

Mont-Saint-Guibert, Belgium - Celyad (Euronext Brussels and Paris, and NASDAQ: CYAD) a clinical-stage biopharmaceutical company focused on the development of CART-cell therapies, announces the publication later today of a patient case study from the hematological arm of its THINK Phase I trial in the journal *Haematologica*. The publication, entitled "*NKG2D-based Chimeric Antigen Receptor Therapy Induced Remission in a Relapsed/Refractory Acute Myeloid Leukemia Patient*" is authored by the trial investigators at the Moffitt Cancer Center and Research Institute in Tampa, Fla. and by Celyad's scientific team.

The publication details the first objective response to CAR-T in relapsed/refractory AML using CYAD-01, Celyad's Natural Killer Group 2D (NKG2D) chimeric antigen receptor T-cell therapy, without pre-conditioning lymphodepletion. The patient received CYAD-01 infusions at the initial dose level of $3x10^8$ cells every 2 weeks for 3 administrations, achieving a morphologic leukemia-free state (MLFS) at 3-months which enabled the patient to benefit from an allo-hematopoietic stem cell transplant (allo-HSCT). The patient achieved a complete molecular remission and remains in remission 9 months post study enrollment. CYAD-01 was well tolerated with no significant toxicities. The demonstrated first objective response to any CAR-T in relapsed/refractory AML without preconditioning chemotherapy highlights the potential of CYAD-01 as a treatment for AML.

"Our results demonstrate the validity of NKG2D as a target, in particular in the context of refractory AML and without other intervening treatments nor preconditioning", commented **Frédéric Lehmann, VP Clinical Development and Medical Affairs at Celyad**. *"We look forward to continue our clinical development plan for our NKG2D CAR based platform and explore the various conditions within which this therapy could provide benefits to patients with end stage cancers."*

Dr. David Sallman, Assistant Member in the Malignant Hematology Department of Moffitt Cancer Center, added: *"The THINK study case report provides the first clinical validity of CYAD-01 as a tumor-specific antigen-receptor and AML as a disease sensitive to gene-engineered cell therapies. As antigen targeting offers significant challenges in AML, this outcome brings hope for the further use of gene-engineered T-cells for patients with AML*

that have run out of therapeutic options. It's all the more striking that this outcome was observed without any prior lymphodepletion highlighting the potential of using a physiologic antigen-receptor."

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About Celyad

Celyad is a clinical-stage biopharmaceutical company focused on the development of specialized CAR-T cell-based therapies. Celyad utilizes its expertise in cell engineering to target cancer. Celyad's CAR-T cell platform has the potential to treat a broad range of solid and hematologic tumors. Its lead oncology candidate, CYAD-01 (CAR-T NKG2D), has been evaluated in a single dose escalation Phase I clinical trial to assess the safety and clinical activity of multiple administrations of autologous CYAD-01 cells in seven refractory cancers including five solid tumors (colorectal, ovarian, bladder, triple-negative breast and pancreatic cancers) and two hematological tumors (acute myeloid leukemia and multiple myeloma). Celyad was founded in 2007 and is based in Mont-Saint-Guibert, Belgium, and New York, NY. Celyad's ordinary shares are listed on the Euronext Brussels and Euronext Paris exchanges, and its American Depository Shares are listed on the NASDAQ Global Market, all under the ticker symbol CYAD.

About the THINK Trial

THINK (**TH**erapeutic **I**mmunotherapy with **NK**G2D) is a multinational (EU/US) open-label Phase I study to assess the safety and clinical activity of multiple administrations of autologous CYAD-01 cells in seven refractory cancers, including five solid tumors (colorectal, ovarian, bladder, triple-negative breast, and pancreatic cancers) and two hematological tumors (acute myeloid leukemia and multiple myeloma). The trial test three dose levels: up to $3x10^8$, $1x10^9$, and $3x10^9$ CYAD-01 cells per injection. At each dose-level, the patients will receive three successive adminitrations of CYAD-01 cells, two weeks apart. The dose-escalation part of the study will enroll up to 24 patients while the extension phase would enroll up to 86 additional patients.

About Celyad's CAR-T cell Platform

Celyad is developing a unique CAR T-cell platform, transducing Natural Killer Receptors (NKR) onto T lymphocytes. Unlike traditional CAR T-cell therapy, which targets only one tumor antigen, each natural killer (NK) cell receptor recognizes multiple antigens.

Celyad's lead candidate, CYAD-01, is a CAR T-cell engineered to express the human NK receptor, NKG2D, which is an activating receptor. CYAD-01 triggers cell killing through the binding of NKG2D to any of its eight naturally occurring ligands, which are known to be overexpressed on more than 80% of tumors. Preclinical results indicate that CYAD-01 has multiple mechanisms of actions and goes beyond direct cancer cell killing. It inhibits the mechanisms that enable tumors to evade the immune system, activates and recruit anti-tumor immune cells, and disrupts the blood supply to the tumor. These mechanisms promote the induction of adaptive immunity, enabling the development of long-term immune memory against specific tumor antigens.

Celyad is developing both autologous and allogeneic CAR T-cell NKG2D approaches. CYAD-01 is an autologous therapy where Celyad collects the patient's own T cells and engineers them to express NKG2D in order to target cancer cells effectively. Celyad's allogeneic platform (CYAD-101) engineers the T cells of healthy donors, to express NKG2D as well as TCR Inhibitory Molecules (TIMs), to avoid having the donor cells rejected by the patient's immune system (Graft vs. Host Disease). The preclinical research underlying this technology was originally conducted at Dartmouth College by Dr. Charles Sentman and has been described extensively in peer-reviewed publications.

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Forward-looking statements

In addition to historical facts or statements of current condition, this press release contains forward-looking statements, including statements about the potential safety, activity, efficacy and feasibility of CYAD-01 cell therapy and other product candidates, including current and planned preclinical studies and clinical trials and regulatory filings for Celyad's product candidates; the clinical and commercial potential of these product candidates and the adequacy of Celyad's financial resources; the strength of Celyad's intellectual property portfolio and plans related thereto; Celyad's expectations regarding its strategic collaborations and license agreements with third parties, including Novartis, Celdara Medical, and Dartmouth College, and the potential impact of such collaborations on Celyad's future financial condition, including anticipated milestones and royalties and the timing thereof; Celyad's expected cash burn, which reflect Celyad's current expectations and projections about future events; and the anticipating timing of Celyad's 2017 annual report, and involve certain known and unknown risks, uncertainties and assumptions that could cause actual results or events to differ materially from those expressed or implied by the forward-looking statements. These forward-looking statements are further qualified by important factors and risks, which could cause actual results to differ materially from those in the forward-looking statements, including risks associated with conducting clinical trials; the risk that safety, bioactivity, feasibility and/or efficacy demonstrated in earlier clinical trials or preclinical studies may not be replicated in subsequent trials or studies; risks associated with the timely submission and approval of anticipated regulatory filings; the successful initiation and completion of clinical trials, including its clinical trials for CYAD-01; risks associated with the successful manufacture of drug product for its clinical trials; risks associated with the satisfaction of regulatory and other requirements; risks associated with the actions of regulatory bodies and other governmental authorities; risks associated with obtaining, maintaining and protecting intellectual property, Celyad's ability to enforce its patents against infringers and defend its patent portfolio against challenges from third parties; risks associated with competition from others developing products for similar uses; risks associated with Celyad's ability to manage operating expenses; and risks associated with Celyad's ability to obtain additional funding to support its business activities and establish and maintain strategic business alliances and business initiatives. A further list and description of these risks, uncertainties and other risks can be found in Celyad's U.S. Securities and Exchange Commission (SEC) filings and reports, including in its Annual Report on Form 20-F filed with the SEC on April 4, 2017 and

subsequent filings and reports by Celyad. Given these uncertainties, the reader is advised not to place any undue reliance on such forward-looking statements. These forward-looking statements speak only as of the date of publication of this document. Celyad expressly disclaims any obligation to update any such forward-looking statements in this document to reflect any change in its expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based, unless required by law or regulation.