

Celyad treats first patient of second cohort in NKG2D CAR T-Cell Phase I Trial

Mont-Saint-Guibert, Belgium - Celyad (Euronext Brussels and Paris, and NASDAQ: CYAD), a leader in the discovery and development of engineered cell therapies, with clinical programs in cardiovascular disease and immuno-oncology, today announced the infusion of the first patient of the second cohort of its Phase I clinical trial evaluating the Company's NKG2D CAR T-Cell therapy in acute myeloid leukaemia (AML) and multiple myeloma (MM) indications.

Dr. Christian Homsy, CEO of Celyad, said: *"The treatment of the first patient enrolled in the second cohort of our first-in-man Phase I trial evaluating NKG2D CAR T-Cells demonstrates continued progress in developing our lead immune-oncology program. Once the safety evaluation is complete, we expect to continue enrolment in the study to further evaluate the therapy's safety and to determine an appropriate dose. Due to its unique ability to target ligands present on most cancers, we believe our NKG2D CAR T-Cells have potential as a new treatment option for patients with a broad range of cancer types, including haematological malignancies and various solid tumours."*

Dr. Frédéric Lehmann, Vice President of Immuno-Oncology at Celyad, added: *"We are proud to have advanced our first NKG2D CAR T-Cell Phase I study so rapidly. I am grateful to our dedicated investigators at Dana Farber Cancer Institute and look forward to completing enrolment in this important trial. Celyad continues to be committed to developing immune-oncology CAR-T programs that should provide clinically meaningful benefit for patients."*

The Phase I/IIa trial is designed to assess the safety and feasibility of NKG2D CAR T-Cells, with secondary endpoints including clinical activity. Data readouts from the first 12 patients treated in the Phase I portion are expected in mid-2016. Once the recommended dose is determined, the IIa phase of the trial will commence, with 12 additional patients treated at the recommended dose.

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About CAR-NKG2D

Celyad's lead immuno-oncology product candidate, CAR-NKG2D, is a chimeric antigen receptor (CAR) T-Cell autologous therapy to treat cancer. The CAR technology developed by Celyad uses human natural killer cell (NK cell) receptor which, unlike traditional CAR technologies such as those targeting the CD19 antigen, has the potential to target ligands present on a broad range of solid tumors and blood cancers.

The research underlying this technology was originally conducted by Dartmouth College Professor Charles Sentman, and has been published in numerous peer-reviewed publications such as Journal of Immunology in 2009, Cancer Research in 2006, and Blood in 2005. CAR-NKG2D has an active Investigational New Drug (IND) application with the FDA for a Phase I clinical trial in certain hematologic cancers.

CAR-NKG2D entered a Phase I clinical trial in April 2015. The full data readout from the Phase I dose escalation trial is expected in mid-2016. The trial is designed to assess the safety and feasibility of NKG2D CAR T-cell in certain acute myeloid leukemia and multiple myeloma patients as primary endpoints, with secondary endpoints including clinical efficacy.

About Celyad

Founded in 2007, and based in Belgium, Celyad is a leader in engineered cell therapy with clinical programs initially targeting indications in cardiology and oncology. Celyad is developing its lead cardiovascular disease product candidate, C-Cure®, for the treatment of ischemic heart failure, and has completed enrollment of a Phase III trial in Europe and Israel. In addition, the Company is developing a novel portfolio of CAR T-cell therapies that utilize human Natural Killer cell receptors for the treatment of numerous blood and solid cancers. Its lead oncology product candidate, NKG2D CAR T-cell, entered a Phase I clinical trial in April 2015.

Celyad's ordinary shares are listed on Euronext Brussels and Euronext Paris under the ticker symbol CYAD and Celyad's American Depositary Shares are listed on the NASDAQ Global Market under the ticker symbol CYAD.

To learn more about Celyad, please visit www.celyad.com

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 and feasibility of NKG2D CAR T-cell therapy and C-Cure and the clinical potential of the Company's technology platform generally and the timing of future clinical trials, which reflect our current expectations and projections about future events, 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.

In particular it should be noted that the 30-day safety data described in the release are preliminary in nature and the Phase 1 trial is not completed. There is limited data concerning safety and feasibility of NKG2D CAR T-cell therapy. These data may not continue

for these subjects or be repeated or observed in ongoing or future studies involving our NKG2D CAR T-cell therapy, C-Cure or other product candidates. It is possible that safety issues or adverse events may arise in the future.

These forward-looking statements are further qualified by important factors, 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 or pre-clinical studies may not be replicated in subsequent studies; risk associated with the timely submission and approval of anticipated regulatory filings; the successful initiation and completion of clinical trials, including Phase III clinical trials for C-Cure® and Phase I clinical trial for NKG2D CAR T-cell; 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, our ability to enforce our patents against infringers and defend our patent portfolio against challenges from third parties; risks associated with competition from others developing products for similar uses; risks associated with our ability to manage operating expenses; and risks associated with our ability to obtain additional funding to support our 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 the Company's Securities and Exchange Commission filings and reports, including in the Company's prospectus filed with the SEC on June 19, 2015 and future filings and reports by the Company. 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. The Company 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.

C3BS-CQR-1, C-Cure, NKG2D CAR T-cell, C-Cath_{ez}[™], OnCyte, Celyad, Cardio3 BioSciences and the Cardio3 BioSciences, Celyad, C-Cath_{ez}[™], CHART-1, CHART-2 and OnCyte logos are signs internationally protected under applicable Intellectual Property Laws. Mayo Clinic holds equity in Celyad as a result of intellectual property licensed to the Company.