

Celyad publishes additional pre-clinical data in support of THINK trial

- Review of NKR-2 preclinical work published in Future Oncology
- *In vitro* efficacy on various cancer models
- *In vivo* evidence of efficacy in a human pancreatic model

Mont-Saint-Guibert, Belgium – Celyad SA (EURONEXT Brussels and Paris: CYAD – NASDAQ Global Market: CYAD), a leader in the discovery and development of CAR-T cell therapies, today announces it has published a special report in the peer-reviewed journal “Future Oncology” summarizing pre-clinical work undertaken on NKR-2, the CAR-T cell therapy currently tested in the company’s THINK trial.

Celyad’s special report entitled *Exploiting Natural Killer Group 2D Receptors for CAR-T cell therapy* discloses new results confirming the potency of CAR-T NKR-2 cells against various human cancer cell lines *in vitro* including leukemia, colorectal and pancreatic cancer. Furthermore, new data show the ability of CAR-T NKR-2 cells to effectively challenge established pancreatic cancer xenografts in humanized mouse models.

These pre-clinical studies were performed with Celyad’s long-term collaborator Professor Charles Sentman and further confirm the choice of indications being investigated in the ongoing THINK trial.

Dr. David Gilham, VP of Research & Development at Celyad: *“This publication provides important additional pre-clinical evidence supporting the range of cancer indications being explored in the THINK trial. This is an example of our on-going work to further define and understand the mechanisms of action of CAR-T NKR2 cells that will provide greater insight to support our developing clinical program.”*

Dr. Christian Homsy, CEO of Celyad: *“We are pleased to provide further pre-clinical evidence validating our approach in the THINK trial, in which we aim to demonstrate the potential of CAR-T NKR-2 cells as a disruptive technology in the treatment of cancer.”*

Celyad’s special report is available on Future Oncology’s website:
<http://www.futuremedicine.com/doi/abs/10.2217/fon-2017-0102>

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Press Release
21 June 2017
10:00 am CEST

About Celyad

Celyad is a clinical-stage biopharmaceutical company focused on the development of specialized CAR-T cell based therapies. The company utilizes its expertise in cell engineering to target cancer. Celyad's Natural Killer Receptor based T-Cell (NKR-T) platform has the potential to treat a broad range of solid and hematologic tumors. Its lead oncology candidate, the CAR-T NKR-2, has been evaluated in a single dose escalation Phase I clinical trial to assess the safety and feasibility of CAR-T NKR-2 cells in patients suffering from AML or MM. This Phase I study was successfully completed in September 2016. Celyad was founded in 2007 and is based in Mont-Saint-Guibert, Belgium, and Boston, Massachusetts. Celyad's ordinary shares are listed on the Euronext Brussels and Euronext Paris exchanges, and its American Depository Shares are listed on NASDAQ Global Market, all under the ticker symbol CYAD.

For more information about Celyad, please visit: www.celyad.com

About the THINK trial

THINK (Therapeutic Immunotherapy with NKR-2) is a multinational (EU/US) open-label Phase Ib study to assess the safety and clinical activity of multiple administrations of autologous CAR-T NKR-2 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 will test three dose levels adjusted to body weight: up to 3×10^8 , 1×10^9 and 3×10^9 CAR-T NKR-2 cells. At each dose, the patients will receive three successive administrations, two weeks apart, of CAR-T NKR-2 cells. The dose escalation part of the study will enroll up to 24 patients while the extension phase would enroll 86 additional patients.

About Celyad's NKR-T Cell Platform

Celyad is developing a unique CAR-T cell platform, using Natural Killer Receptor (NKR) transduced on to T lymphocytes. The platform targets a wide range of solid and hematological tumors. Unlike traditional CAR-T cell therapy, which target only one tumor antigen, Natural Killer (NK) cell receptors enable a single receptor to recognize multiple tumor antigens. Celyad's lead candidate, CAR-T NKR-2, is a CAR-T-Cell engineered to express the human NK receptor, NKG2D, which is an activating receptor. CAR-T NKR-2 triggers cell killing through the binding of NKG2D to any of eight naturally occurring ligands that are known to be overexpressed on more than 80% of tumors.

Preclinical results indicate that CAR-T NKR-2 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, meaning the development of a long-term immune memory against specific tumor antigens of the targeted tumor.

In contrast to traditional CAR-T therapeutic approaches, and based on strong preclinical evidence, Celyad's current CAR-T NKR-2 program does not use patient lymphodepleting pre-conditioning, thereby avoiding the toxicities associated with chemotherapy and allowing the immune system to remain intact.

Celyad is developing both autologous and allogeneic CAR-T NKR-2 approaches. For autologous CAR-T NKR-2, 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 engineers the T-Cells of healthy donors, to also express TCR Inhibitory Molecules (TIMs), to avoid having the donor cells rejected by the patient's normal tissues (also called Graft vs. Host Disease).

The preclinical research underlying this technology was originally conducted at Dartmouth College by Dr. Charles Sentman and has been published extensively in peer-reviewed publications.



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For more information, please contact:

For Europe: Consilium Strategic Communications

Chris Gardner and Chris Welsh - T: +44 (0)20 3709 5700 – celyad@consilium-comms.com

For France: NewCap

Pierre Laurent and Nicolas Mérigeau - T: + 33(0)1 44 71 94 94 - celyad@newcap.eu

For Belgium: Comfi

Gunther De Backer and Sabine Leclercq - T.: +32 (0)2 290 90 90 – celyad@comfi.be

For the U.S.: Stern Investor Relations

Will O'Connor and Michael Schaffzin – T.: +1 212.362.1200 – celyad@sternir.com

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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 and feasibility of CAR-T NKR-2 cell therapy, 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. 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 I clinical trial for CAR-T NKR-2; 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 Annual Report on Form 20-F filed with the SEC on April 8, 2016 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.