Media Release
Planegg/Munich, Germany, June 15, 2018

MorphoSys Presents Clinical Data with Blood Cancer Candidate MOR208 in Chronic Lymphocytic Leukemia at EHA 2018 Conference

MorphoSys AG (FSE: MOR; Prime Standard Segment; TecDAX; Nasdaq: MOR) today announced the presentation of clinical data from the exploratory phase 2 COSMOS trial. The trial evaluates MorphoSys's proprietary hemato-oncological drug candidate MOR208 in combination with the cancer drug idelalisib in patients with relapsed or refractory chronic lymphocytic leukemia (CLL) and small lymphocytic lymphoma (SLL), who progressed on or were intolerant to ibrutinib therapy. Data will be presented in a poster presentation on June 15, 2018, at the 23rd European Hematology Association (EHA) Annual Meeting in Stockholm/Sweden. MOR208 is an investigational Fc-enhanced humanized monoclonal antibody directed against CD19 in clinical development for the treatment of B cell malignancies.

"Patients with CLL after failure of ibrutinib therapy are in need of more therapeutic options. We are encouraged by the initial and, for the most part, still ongoing responses observed in this heavily pretreated patient population in our exploratory trial with MOR208 plus idelalisib," commented Dr. Malte Peters, Chief Development Officer of MorphoSys AG. "Overall, this shows the potential medical application of MOR208 in additional B cell malignancies. The data shows that MOR208 may be combined with other cancer drugs used in hematological malignancies, including PI3K inhibitors. We look forward to the upcoming results from the second cohort of MOR208 plus venetoclax of our ongoing COSMOS study which we expect later this year."

COSMOS is a phase 2, two-cohort, open-label, multicenter study evaluating the preliminary safety and efficacy of MOR208 combined with idelalisib (cohort A) or venetoclax (cohort B) in patients with r/r CLL/SLL previously treated with Bruton's Tyrosine Kinase inhibitor (BTKi) ibrutinib.

Data presented at EHA 2018 comprise preliminary safety and efficacy data on all 11 patients enrolled into cohort A (cut-off date: January 29, 2018). Patients enrolled had received a median of five prior treatment lines (range: 2-9 prior lines). Nine out of the eleven patients enrolled (82%) had discontinued prior ibrutinib treatment due to progressive disease and two patients (18%) due to toxicity.

The most common treatment-emerging adverse events (TEAEs) of grade 3 or higher were hematologic, with neutropenia observed for four patients (36%) and anemia for three patients (27%) being the most common reported events. Ten treatment-emergent serious adverse events (SAEs) were reported in five patients (45%) none of them being fatal. All except one of the six treatment-related SAEs reported for three patients (27%) were suspected to idelalisib.

According to the preliminary efficacy analysis conducted by the investigators, overall response rate (ORR) was 82%, including one complete response (CR, 9%) confirmed by bone marrow biopsy and eight partial responses (PR, 73%). In addition, two patients (18%) showed stable disease. The median observation time was 4.2 months. At the time of data-cut off, six patients continued treatment. One patient with a very good partial response according to response criteria was taken off the study to receive stem cell transplantation. Two previously responding patients

had to discontinue the study due to progressive disease. Two patients (one PR, one stable disease SD) discontinued due to adverse events.

Details about the poster presentation on MOR208 at EHA 2018:

Abstract Code: PF350

Two-cohort, phase II study in R/R CLL (COSMOS): First preliminary safety and efficacy results of MOR208 treatment in combination with idelalisib in patients who discontinued prior ibrutinib therapy

The poster will be presented during the session "Chronic lymphocytic leukemia and related disorders - Clinical" on Friday, June 15, 2018 5:30-7:00 pm CEST (11:30am-1:00pm EDT), in the poster area at the Stockholmsmässan in Stockholm.

In addition, the corresponding abstract will be on display on the E-poster screens at the conference from Friday, June 15, 2018, 9:30 am CEST (3:30 am EDT) to Sunday, June 17, 2018, 1:00 pm CEST (7:00 am EDT).

Additional information can be found at www.ehaweb.org, including the abstract.

About CD19 and MOR208

CD19 is broadly and homogeneously expressed across different B cell malignancies including DLBCL and CLL. CD19 has been reported to enhance B cell receptor (BCR) signaling, which is assumed important for B cell survival, making CD19 a potential target in B cell malignancies.

MOR208 (previously Xmab®5574) is an investigational humanized Fc-engineered monoclonal antibody directed against CD19. Fc-modification of MOR208 is intended to lead to a significant potentiation of antibody-dependent cell-mediated cytotoxicity (ADCC) and antibody-dependent cellular phagocytosis (ADCP), thus aiming to improve a key mechanism of tumor cell killing. MOR208 has been observed in preclinical models to induce direct apoptosis by binding to CD19, which is assumed to be a crucial component for B cell receptor (BCR) signaling.

MorphoSys is clinically investigating MOR208 as a therapeutic option in B cell malignancies in a number of ongoing combination trials. An open-label phase 2 combination trial (L-MIND study) is investigating the safety and efficacy of MOR208 in combination with lenalidomide in patients with relapsed/refractory DLBCL who are not eligible for high-dose chemotherapy (HDC) and autologous stem cell transplantation (ASCT). Based on interim data from L-MIND, in October 2017 the FDA granted Breakthrough Therapy Designation for MOR208 plus lenalidomide in this patient population. The pivotal phase 2/3 B-MIND study is designed to investigate MOR208 in combination with the chemotherapeutic agent bendamustine in patients with relapsed/refractory DLBCL who are not eligible for high-dose chemotherapy (HDC) and autologous stem cell transplantation (ASCT) in comparison to the combination of the anti-CD20 antibody rituximab plus bendamustine. In addition, MOR208 is currently being investigated in patients with relapsed/refractory CLL/SLL after discontinuation of a prior Bruton tyrosine kinase (BTK) inhibitor therapy (e.g. ibrutinib) in combination with idelalisib or venetoclax.

About MorphoSys

MorphoSys is a late-stage, biopharmaceutical company devoted to the development of innovative and differentiated therapies for patients suffering from serious diseases. Based on its technological leadership in generating antibodies, MorphoSys, together with its partners, has developed and contributed to the development of more than 100 product candidates, of which 28 are currently in clinical development. This broad pipeline spans MorphoSys's two business segments: Proprietary Development, in which the Company invests in product candidates for its own account, and Partnered Discovery, in which product candidates are developed exclusively for a variety of Pharma and Biotech partners. In 2017, Tremfya® (guselkumab), marketed by Janssen, became the first therapeutic antibody based on MorphoSys's proprietary technology to receive marketing approval for the treatment of moderate to severe plaque psoriasis in the United States, the European Union and Canada. MorphoSys is listed on the Frankfurt Stock Exchange

and on the U.S. stock exchange Nasdaq, under the symbol MOR. For regular updates about MorphoSys, visit http://www.morphosys.com.

MorphoSys forward looking statements

This communication contains certain forward-looking statements concerning the MorphoSys group of companies, including the progression of and upcoming data presentations from the COSMOS trial in connection with MOR208 and idelalisib and expectations regarding the development of MOR208 plus idelalisib in CLL. The forward-looking statements contained herein represent the judgment of MorphoSys as of the date of this release and involve known and unknown risks and uncertainties, which might cause the actual results, financial condition and liquidity, performance or achievements of MorphoSys, or industry results, to be materially different from any historic or future results, financial conditions and liquidity, performance or achievements expressed or implied by such forward-looking statements. In addition, even if MorphoSys' results, performance, financial condition and liquidity, and the development of the industry in which it operates are consistent with such forward-looking statements, they may not be predictive of results or developments in future periods. Among the factors that may result in differences are the inherent uncertainties associated with competitive developments, clinical trial and product development activities and regulatory approval requirements, MorphoSys' reliance on collaborations with third parties and other risks indicated in the risk factors included in MorphoSys's Registration Statement on Form F-1 and other filings with the US Securities and Exchange Commission. 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. MorphoSys 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 or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements, unless specifically required by law or regulation.

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