Media Release
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MorphoSys Reports Updated Data from L-MIND Study of MOR208 plus Lenalidomide in Aggressive Lymphoma (r/r DLBCL)

- New data from the ongoing L-MIND trial of MOR208 plus lenalidomide in relapsed/refractory DLBCL patients ineligible for high-dose chemotherapy and autologous stem cell transplantation confirm earlier data reported from this trial
- 81 patients enrolled, 68 available for efficacy assessment at cut-off date
- Preliminary median progression-free survival (PFS) not reached, preliminary PFS rate at 12 months of 50.4%
- Overall response rate (ORR) of 49% with 29 out of 33 responses ongoing, complete response (CR) rate of 31%
- Data show that MOR208 in combination with lenalidomide has been well tolerated in the study: no unexpected toxicities were observed for the treatment combination and no infusion-related reactions were reported for MOR208
- MorphoSys continues to have productive discussions with the FDA under the current breakthrough therapy designation on the path to market for MOR208, including the possibility of an expedited regulatory submission and approval for MOR208 based primarily on the L-MIND study.

MorphoSys AG (FSE: MOR; Prime Standard Segment, TecDAX; OTC: MPSYY) today reported updated data from the ongoing single-arm phase 2 clinical trial known as L-MIND. L-MIND is designed to investigate the antibody MOR208 plus lenalidomide in patients with relapsed or refractory diffuse large B cell lymphoma (r/r DLBCL) who are not eligible for high-dose chemotherapy (HDC) and autologous stem cell transplantation (ASCT). MOR208 is an investigational Fc-engineered monoclonal antibody directed against CD19 and is currently in clinical development in blood cancer indications.

The L-MIND study enrolled patients with r/r DLBCL, who are ineligible for HDC and ASCT, after up to three prior lines of therapy, with at least one prior therapy including an anti-CD20 targeting therapy (such as rituximab). In November 2017, the trial completed patient enrollment with 81 patients. The updated interim data reported today (cut-off date December 12, 2017) included all 81 patients enrolled in the L-MIND trial, 68 of whom were available for efficacy assessment by the investigators at the time of data cut-off. Patients enrolled had a median age of 72 years and had received a median of two prior treatment lines.

Data reported today, with a median observation time of 8.3 months, showed a response in 33 out of 68 patients (overall response rate (ORR) 49%) and a complete response (CR) in 31% of the patients. The preliminary progression-free survival (PFS) rate at 12 months was 50.4% (95% confidence interval 40 – 67%) and the preliminary median PFS had not been reached (95% confidence interval: 4.3 months—not reached). 29 out of 33 responses (88%) were

ongoing at the time of data-cut off. Median time to response was 1.8 months, median time to complete response was 3.6 months.

No unexpected toxicities were observed for the treatment combination and no infusion-related reactions (IRRs) were reported for MOR208. The most frequent adverse events with a toxicity grading of 3 or higher were neutropenia, thrombocytopenia, febrile neutropenia and pneumonia, observed in 36%, 12%, 7% and 7% of patients, respectively.

The results reported today confirm and corroborate earlier interim data reported from this trial (Salles et al, ASH 2017), which had been based on 51 patients enrolled, 44 of whom had been eligible for investigators' efficacy assessment at the June 13, 2017 cut-off date.

"We are truly excited about this data and our productive discussions with FDA under the current breakthrough therapy designation on the path to market for MOR208, including the possibility of an expedited regulatory submission and approval for MOR208 based primarily on the L-MIND study. We look forward to continuing the analysis of maturing data from the L-MIND trial and to maintaining our interactions with the FDA," commented Dr. Malte Peters, Chief Development Officer of MorphoSys AG.

"There is a very high unmet medical need for patients with r/r DLBCL who, after having failed initial therapies, are ineligible for high-dose chemotherapy and autologous stem cell transplantation," said Dr. Simon Moroney, Chief Executive Officer of MorphoSys AG. "We are very encouraged by our most recent clinical data from the ongoing L-MIND trial, which support our plan to develop MOR208 in combination with lenalidomide as a chemo-free treatment option for this patient population."

About DLBCL

Diffuse large B-cell lymphoma (DLBCL) is the most frequent type of malignant lymphoma worldwide and accounts for approximately 30% of all non-Hodgkin lymphomas. Between 30% and 40% of all patients with DLBCL either fail to respond to or show a relapse to initial therapy. Patients who failed frontline therapy and are not eligible to high dose chemotherapy and autologous transplantation have a very poor outcome and require more therapeutic options.

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 AG 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 our 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 under the symbol MOR. For regular updates about MorphoSys, visit http://www.morphosys.com.

This communication contains certain forward-looking statements concerning the MorphoSys group of companies. The forward-looking statements contained herein represent the judgment of MorphoSys as of the date of this release and involve risks and uncertainties. Should actual conditions differ from the Company's assumptions, actual results and actions may differ from those anticipated, MorphoSys does not intend to update any of these forward-looking statements as far as the wording of the relevant press release is concerned.

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