FOR IMMEDIATE RELEASE

TransMolecular Initiates Phase 1 Clinical Trial for Unlabeled TM601 in Recurrent Malignant Glioma

-Initiation follows announcement of anti-angiogenic activity of the peptide-

CAMBRIDGE, MA – May 30, 2008 – TransMolecular, Inc., a biotechnology company focused on targeted therapies for cancer, today announced the initiation of a Phase 1 trial to test the safety, tolerability, dosing and pharmacokinetics of non-radiolabeled TM601 for the treatment of malignant glioma. The target population for the study is adult patients with progressive and/or recurrent malignant glioma who have failed first-line, standard therapy. Radiolabeled ^{131}Iodine-TM601 is being investigated in multiple cancer types through both local and intravenous delivery, including Phase 2 studies in malignant glioma and metastatic melanoma utilizing intravenous delivery. The current study utilizes an intravenous, unlabeled version of TM601.

"Our discovery of the anti-angiogenic activity of TM601 has supported our decision to test its anti-cancer effects on its own, without linking it to radiation," said Alison O'Neill, M.D., Vice President of Medical Affairs at TransMolecular. "Recent studies with ^{131}I-TM601 have been positive so far, demonstrating the very specific binding of the peptide to tumor cell receptors and its active uptake into cancer cells. Furthermore, ^{131}I-TM601 has been shown to cross the blood-brain barrier, so we are encouraged that we may see similar strong binding and uptake with unlabeled TM601."

About the Phase 1 Trial

Up to 36 patients will be enrolled in the Phase 1 dose-escalation trial. The study will be conducted at up to six clinical sites in the United States. The primary study objectives are to determine the safety and tolerability of TM601, the target recommended Phase 2 dose, the biologically active dose of TM601 when administered intravenously, and the pharmacokinetics of TM601 at each dose level. The secondary objectives are to evaluate the anti-tumor effects of TM601 by analysis of imaging response, to assess time to progression, progression-free survival, and overall survival.

Patients will initially receive radiolabeled ^{131}I-TM601 by intravenous (IV) infusion as an imaging agent to determine which patients demonstrate tumor-specific localization and uptake of the drug. Patients demonstrating tumor-specific uptake of ^{131}I-TM601 on a brain SPECT scan will then receive treatment with non-labeled TM601 in this trial. One week following the imaging dose, study patients will receive non-labeled TM601 by IV infusion at various dosing levels once a week for three weeks, and during additional cycles until disease progression is observed.

Michael Egan, President and Chief Executive Officer of TransMolecular, commented, "This trial highlights the potential for the use of TM601 in personalized medicine, because only patients demonstrating tumor-specific uptake will receive subsequent therapeutic doses of the unlabeled drug. We believe using ^{131}I-TM601 as a predictor of potential treatment responders further validates the broad potential of this platform for cancer treatment. We have observed the potential efficacy of TM601 in several cancer types, its utility in being delivered both intravenously and locally, and its potential for being used in combination with other therapeutic molecules, such as radiation and chemotherapy, as a targeted delivery mechanism."

About TM601

TM601 is a novel synthetic peptide derived from scorpion venom, which is highly specific and selective in targeting both primary tumors and metastases. TM601 targets and binds to receptors expressed on tumor cells, but not on normal, healthy cells. When ^{131}Iodine radiolabeled TM601 is administered, it is actively taken up into these tumor cells, delivering a highly concentrated dose of radiation to kill the tumor cells without affecting nearby healthy cells. TransMolecular is also exploring the potential for TM601 to deliver additional therapeutic agents to tumor cells. The data obtained from preclinical and clinical studies also suggest that native TM601 may affect a tumor's ability to grow and spread without added radiation through an anti-angiogenic mode-of-action. The Company's robust development plan for TM601 reflects its broad platform potential for multiple applications in cancer. The FDA has granted the radiolabeled drug, ^{131}I-TM601, orphan drug status for patients with high-grade and malignant glioma, as well as a Fast Track designation. Unlabeled TM601 has orphan status in the US for malignant glioma.

About Glioma

Glioma is a highly invasive, rapidly spreading form of brain cancer that is currently resistant to surgical or medical treatment. Among the 36,000 primary brain tumors reported in the U.S. each year, more than 17,000 are diagnosed as high-grade gliomas. Gliomas can occur at any time in life, from childhood to old age. About half of patients with high-grade glioma die within the first year of diagnosis.

About TransMolecular, Inc.

TransMolecular, Inc. is a privately held, venture capital backed biotechnology company committed to discovering, developing and commercializing novel and proprietary products to diagnose and treat cancers that have inadequate treatment alternatives. TransMolecular's product pipeline is based on a protein platform that employs a therapeutically active polypeptide derived from scorpion venom. The company is currently exploring the use of this platform for broad applications to diagnose and treat cancers and other human diseases. More information can be found at www.transmolecular.com.

This press release contains forward-looking statements. The Company wishes to caution the reader of this press release that actual results may differ from those discussed in the forward-looking statements and may be adversely affected by, among other things, risks associated with litigation, clinical trials, the regulatory approval process, reimbursement policies, commercialization of new technologies, intellectual property, and other factors.

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