Neumedicines

Neumedicines Presents at the 58th Annual Radiation Research Society Meeting

PASADENA, Calif. (October 1, 2012) – Neumedicines Inc., a privately held company developing therapies based on Interleukin-12 (IL-12) as a radiation medical countermeasure and for the treatment of chemotherapy-induced thrombocytopenia, announces the presentation today of favorable animal studies with HemaMax™ (rHuIL-12) as a post-exposure countermeasure against hematopoietic syndrome acute radiation syndrome (HSRAS).

Two posters were presented at the 58th Annual Radiation Research Society meeting in San Juan, Puerto Rico: "Mitigation of Acute Radiation Injury in Non-Human Primates and Mice by HemaMax™, Recombinant Human Interleukin-12," by Neumedicines' Chief Analytics Officer Dr. Timothy K. Gallaher and "HemaMax™ (rHuIL-12): Pharmacokinetics and Pharmacodynamics" by Neumedicines' Bioanalytics Director Dr. Chris E. Lawrence.

Studies in both non-human primates (NHP) and mice showed that HemaMax™ and recombinant murine IL-12 (rMuIL-12), respectively, produced significantly increased survival and survival times when subcutaneously administered 24 hours after total body irradiation (TBI) in the absence of supportive care –no antibiotics, fluids or blood products. The survival benefit in NHP after TBI was accompanied by significantly higher leukocyte, thrombocyte and reticulocyte counts during nadir and significantly less weight loss compared with vehicle treated NHP. HemaMax™ treatment also correlated with decreased mean hemorrhage scores in NHP following TBI. In additional murine studies showed that rMuIL-12, subcutaneously administered 24 hours after TBI induced recovery of femoral bone hematopoiesis following TBI of the mice. This was evidenced by the increased presence of IL-12 receptor beta 2 subunit-expressing myeloid progenitors, megakaryocytes and osteoblasts. In addition to bone marrow regeneration, rMuIL-12 was shown to mediate protection in the skin and gastrointestinal crypts of mice following TBI.

The second presentation discussed pharmacokinetic (PK) and pharmacodynamics (PD) characteristics following administration of a single dose of HemaMax™ 24 hours after TBI to irradiated and non-irradiated NHP. HemaMax™ exposure in both healthy and irradiated NHP increased with increasing dose (0 – 500ng/kg) following subcutaneous administration. Cytokine markers associated with the potential mechanism of action of HemaMax™ were measured in the peripheral blood of the treated NHP. The mean T_{max} values for IFNγ in healthy NHP were 42 to 160 hours, compared with 15 to 21 hours for irradiated NHP. In the latter the IFNγ T_{max} values were delayed relative to the mean HemaMax™ T_{max} values (5 to 9 hours). Administration of HemaMax™ in increasing doses also resulted in increasing plasma concentrations of IL-18. Survival of NHPs following TBI was not examined in these PK/PD studies.

Conclusions from both posters were discussed in the context of a Phase 1 dose-escalation trial in healthy human subjects with HemaMax™, whichwere recently successfully completed by Neumedicines. A single subcutaneous administration of HemaMax™ was safe and well-tolerated when administered to subjects within the therapeutic range required for mitigation of hematopoietic syndrome as predicted from the reported animal studies. A Phase 1b clinical trial

in 60 healthy human subjects with HemaMax™ has also been initiated. Neumedicines is thus continuing to develop HemaMax™ to be the first medical countermeasure against radiation to be approved under the FDA Animal Rule (21 CFR 601.90-95).

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About HemaMax™ (rHuIL-12)
HemaMax™ (NMIL12-1) is based on rHuIL-12 (recombinant human interleukin–12). Scientists from Neumedicines discovered the previously unexplored hematological properties of IL-12 by demonstrating the potent survival effects of single, low-dose IL-12 on hematopoietic recovery following lethal radiation. HemaMax™ is a new therapeutic that is predicted to be administered to humans in very low, nanogram per kilogram doses to achieve potent radiomitigation effects. To date, Neumedicines has demonstrated that HemaMax™ can increase survival in mice and non-human primates who receive the therapeutic in single, low doses 24 hours after lethal radiation exposure.

About Neumedicines Inc.
Neumedicines Inc. is developing protein therapeutics that address unmet clinical and societal needs in the fields of oncology, hematology and immunology. The company's lead product candidate is HemaMax™ (recombinant human interleukin-12, or rHuIL-12), which functions by targeting multiple pathways of hematopoiesis and innate immunity. HemaMax™ is being development as a biodefense radiation medical countermeasure and for indications in oncology, initially for chemotherapy-induced thrombocytopenia. Neumedicines is committed to developing and maximizing the scientific, clinical and commercial potential of its product pipeline. For more information, please visit www.neumedicines.com or follow the Company on Twitter @Neumedicines.

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