



57th Annual General Meeting of the American Society of Hematology
Presentation of clinical trial results from China on tamibarotene as a
treatment for acute promyelocytic leukemia

Subject: Efficacy and safety of a tamibarotene/arsenic trioxide combination therapy for patients with relapsed acute promyelocytic leukemia

Joint development between Toko Pharmaceutical Industries and GNI-EPS, a GNI Group subsidiary company based in Hong Kong

Currently requesting registration of a novel drug imported from Japan with the China Food and Drug Administration

In an oral presentation at the 57th Annual General Meeting of the American Society of Hematology (ASH: American Society of Hematology; December 6, 2015), the Asia-based global drug development company GNI Group (Headquarters: Chuo Ward, Tokyo, Japan; Chief Executive Officer and Director: Ying Luo) disclosed a series of clinical trial results on tamibarotene from a study conducted by the principal clinical trial investigator Prof. Jianxiang Wang, MD, PhD (Institute of Hematology, Hospital of Blood Diseases, CAMS, Tianjin, China) in China.

In this comparative clinical trial conducted in China, a tamibarotene and arsenic trioxide (ATO) combination therapy was compared with an all-trans retinoic acid (ATRA) and ATO combination therapy, which is the standard therapy in China for cases of relapsed acute promyelocytic leukemia (APL). The tamibarotene and ATO combination therapy was found to have equivalent or greater efficacy and safety over the standard combination therapy.

Prof. Jianxiang Wang states that “Our comparative clinical trial demonstrated the efficacy and safety of a tamibarotene and ATO combination therapy as a treatment for patients with relapsed APL. This combination therapy was not inferior in efficacy and safety to the standard combination therapy (involving ATRA and ATO) and may serve as a novel, useful treatment option for patients with relapsed APL.”

Currently, an application for the registration of tamibarotene (brand name: Amnolake[®] Tablets 2 mg) as an imported drug has been submitted to the China Food and Drug Administration through a collaboration between the GNI Group subsidiary GNI-EPS (Hong Kong) Holding, Ltd. (Headquarters: Hong Kong; Representative: Ying Luo, under GEP-HK) and Toko Pharmaceutical Industries (Headquarters: Adachi Ward, Tokyo, Japan; Representative Director: Yoichi Kobayashi, under Toko Pharmaceutical Industries).

The 57th Annual General Meeting of ASH (HP: <http://www.hematology.org/Annual-Meeting/>) is being held from December 5–8, 2015 at Orlando, Florida, USA.

Summary of Abstract

Subject: Efficacy and safety of a tamibarotene/arsenic trioxide combination therapy for patients with relapsed acute promyelocytic leukemia

(Session number: 615, Sunday, December 6th, 2015, from 10:15 a.m. (US Pacific Time), Orange County Convention Center, Oral Session)

Purpose	Confirmation of the efficacy and safety of a tamibarotene/arsenic trioxide combination therapy for patients with relapsed APL
Number of Patients	71 patients
Trial Methods	Multicenter, open-label, randomized, parallel-group controlled clinical study
Dosing Methods	Control Group [ATRA/ATO combination regimen] <ul style="list-style-type: none">• ATRA 25 mg/m²/day oral dose for a maximum of 56 days• ATO 0.15 mg/kg/day (highest dosage per day: 10 mg) intravenous administration for a maximum of 42 days Study Group [tamibarotene/ATO combination regimen] <ul style="list-style-type: none">• Tamibarotene 6 mg/m²/day oral dose for a maximum of 56 days• ATO 0.15 mg/kg/day (highest dosage per day: 10 mg) intravenous administration for a maximum of 42 days
Primary outcome	Rate of complete remission
Trial Results	<ul style="list-style-type: none">• The number of patients constituting a full analysis set (FAS) of all subjects administered study drugs (including the dropouts) was 35 in each of the control and study groups. The rates of complete remission in the FAS were 80% and 54.29% for the study and control groups, respectively. The rate of complete remission in the study group was significantly higher than that in the control group ($P = 0.022$).• The number of subjects per protocol set (PPS) (excluding the dropouts) was 27 and 33 in the control and study groups, respectively. The rates of complete remission in the PPS were 84.85% and 70.37% in the study and control groups, respectively, with an intergroup difference of 14.48%. The 97.1% confidence interval ranged from -9.06% to 38.01%, satisfying the requirements for non-inferiority ($\Delta = 0.10$). Based on these results, the non-inferiority of the study group was confirmed relative to the control group.• Among the patients who achieved complete remission, the number of cases in which complete remission was confirmed at the molecular level was higher in the study group than in the control group.• Although serious adverse events were observed in three patients in the control group (two developed cerebral hemorrhage and one developed retinoic acid syndrome) and in one patient in the study group, who developed type I respiratory failure, no significant differences were observed between the groups in the incidences of the serious adverse events.• The majority of the reported adverse reactions included hypertriglyceridemia, hypercholesterolemia, cutaneous symptoms, and increased alanine transaminase and aspartate transaminase levels. No significant differences were found between the groups in the incidences of these adverse events.• In comparison with the control group, the incidence of leukocytosis, which is considered to be associated with retinoic acid syndrome, was significantly lower in the study group.
Finding	<ul style="list-style-type: none">• Tamibarotene and ATO combination treatment was not inferior in efficacy and safety to the standard ATRA and ATO combination treatment and may serve as a novel, useful treatment option for patients with relapsed APL.

* To view the original document, please see the official homepage of the 57th Annual General Meeting of ASH: <https://ash.confex.com/ash/2015/webprogram/Paper80431.html>.
