



HIGHLAND  
THERAPEUTICS

[www.highlandtherapeutics.com](http://www.highlandtherapeutics.com)

For Immediate Release:

## **HIGHLAND THERAPEUTICS ANNOUNCES POSITIVE TOP-LINE DATA FROM PHASE III TRIAL**

- Study successfully meets primary endpoint
- Lack of sleep-related side effects supports flexible nighttime dosing platform to target control over symptoms during the morning routine
  - Efficacy seen from 8am to 8pm

TORONTO, Canada, November 11, 2014—Highland Therapeutics Inc. (“Highland”), a pharmaceutical company, today announced that its wholly owned subsidiary, Ironshore Pharmaceuticals & Development, Inc. (“Ironshore”) has reported positive top-line results from its recently completed Phase III study.

The study, “A Phase III Clinical Endpoint Evaluation Study (“CEES”) Examining the Safety and Efficacy of HLD-200 in Pediatric Subjects with Attention-Deficit Hyperactivity Disorder” (“ADHD”), was conducted at four centers in the US. The trial enrolled 43 pediatric patients between the ages of six and twelve. Following a six-week open label, treatment-optimization phase, subjects then entered into a double-blind, placebo-controlled, one-week randomized, parallel-group test period designed to assess the safety and efficacy of HLD-200 treatment.

The study successfully met its primary endpoint, which was to demonstrate that evening treatment with HLD-200 improves control of ADHD symptoms, compared to placebo, over the composite period from 8:00am to 4:00pm in pediatric ADHD subjects, as measured by the Swanson, Kotkin, Agler, M-Flynn and Pelham (“SKAMP”) scale. Patients on HLD-200 treatment showed a statistically significant improvement in ADHD symptoms ( $p < 0.0027$ ) compared to placebo over this period.

“The clinical results support the idea that it is possible to formulate a stimulant intended for nighttime dosing in order to achieve meaningful control over symptoms of ADHD upon waking and throughout the day,” said David Lickrish, Highland’s President and Chief Executive Officer. “This is a terrific accomplishment and a credit to all those who have worked so diligently on this

program. We are particularly pleased by the duration of effect and the lack of sleep-related side effects in the HLD-200 treatment arm, which could allow physicians flexibility in dosing. These results provide us with all the information required to appropriately conduct a pivotal trial, which we anticipate initiating in the first half of 2015.”

A key secondary endpoint of CEES was to demonstrate improvement in the control of ADHD symptoms, compared to placebo, at the individual time points of 6:00pm and 8:00pm, based on the SKAMP rating scale. Patients treated with HLD-200 showed a statistically significant improvement at 6:00pm ( $p=0.0022$ ) and a trend towards significance at 8:00pm ( $p=0.168$ ). Ironshore believes that a larger sample size would result in statistically significant improvement in the control of ADHD symptoms at all individual time points from 8:00am to 8:00pm.

Another key secondary endpoint was the Before School Functioning Questionnaire, or BSFQ. Patients in the HLD-200 group showed a 58.5% improvement relative to their baseline BSFQ scores. The magnitude of the improvement in BSFQ scores seen in the double-blind portion of CEES was consistent with that seen during the six-week, open-label optimization portion of the trial, implying a strong and persistent effect over symptoms. Despite this, the HLD-200 group did not separate from placebo on this measure. The lack of separation from placebo may be attributed to the study design which employed a washout period of less than one week between randomization and testing. These important findings will inform the design of the pivotal trial program for HLD-200.

In terms of safety, there were no serious adverse events throughout the study. During the double-blind portion of the study, seven patients in each of the HLD-200 and placebo groups experienced a treatment-emergent adverse event (TEAE). There were no sleep-related adverse events in the HLD-200 treatment group, which suggests considerable flexibility with respect to the timing of administration. This could allow parents and physicians to customize dosing times to coincide with a desired onset of action.

“We believe HLD-200 represents the next generation of stimulants for the treatment of ADHD, and CEES – which was designed as an exploratory study – corroborates that view,” said Dr. Randy Sallee, Ironshore’s Chief Medical Officer. “For many families, the morning routine is the most chaotic and stressful part of the day. I believe that a treatment that enables patients to awaken with their symptoms under control and have that effect maintained through the evening has the potential to become the standard-of-care in the treatment of ADHD.”

## **About Highland Therapeutics Inc.**

Highland Therapeutics Inc. is a specialty pharmaceutical company that, through its wholly owned subsidiary Ironshore Pharmaceuticals & Development, Inc., is leveraging its proprietary technology, DELEXIS™, to optimize the delivery of previously approved drug products. The Company's lead product candidates, HLD-200 and HLD-100, are novel formulations of the psychostimulants (methylphenidate and amphetamine, respectively) used to treat ADHD and are being developed to address a prevalent unmet medical need in the treatment of the disease – inadequate symptom control during the morning routine. Intended for nighttime dosing, DELEXIS™ is designed to provide a consistent delay in the initial release of the active drug, followed by a period of extended release; with the objective of providing control of ADHD symptoms immediately upon waking and throughout the day.

Highland Therapeutics Inc. is a client of MaRS Discovery District's Health Venture Services group, which provides advisory services, connections to talent, customer & capital networks, and market intelligence to high-impact, Ontario-based life sciences ventures, helping them commercialize their ideas and build globally competitive companies.

For further information, please visit the Company's website at [www.highlandtherapeutics.com](http://www.highlandtherapeutics.com), or contact:

Nelson F. Isabel  
Chief Financial Officer  
(647) 260-7875

## **Forward-Looking Statements**

This press release contains forward-looking information, which reflects Highland's current expectations regarding future events. Forward-looking information is based on a number of assumptions and is subject to a number of risks and uncertainties, many of which are beyond Highland's control that could cause actual results and events to differ materially from those that are disclosed in or implied by such forward-looking information. These forward-looking statements are made as of the date of this press release and, except as expressly required by applicable law, Highland assumes no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.