



HIGHLAND  
THERAPEUTICS

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For Immediate Release:

## **HIGHLAND THERAPEUTICS ANNOUNCES POSITIVE DATA FROM SECOND PIVOTAL ADHD TRIAL FOR HLD-200**

- HLD-200 met the primary endpoint – ADHD-RS-IV
- HLD-200 met all three key secondary endpoints – the BSFQ, PREMB-R AM subscale and PREMB-R PM subscale
- HLD-200 was well tolerated; the majority of side effects were mild and resolved during the course of treatment

TORONTO, Canada, June 6, 2016—Highland Therapeutics Inc.'s wholly owned subsidiary, Ironshore Pharmaceuticals & Development, Inc. (“Ironshore”), today announced positive clinical data from the second Phase 3 pivotal trial of its investigational drug product, HLD-200 (delayed-release and extended-release methylphenidate capsules). HLD-200, whose brand name has been provisionally accepted as Benjorna™, is under development as a potential new option for physicians treating patients with Attention Deficit Hyperactivity Disorder (ADHD). In the clinical study (HLD200-108), which included 161 pediatric patients (ages 6-12), the group randomized to receive HLD-200 achieved a 44% improvement in ADHD symptom scores, a highly statistically significant positive difference compared to the placebo group ( $p=0.002$ ), based on the ADHD-RS-IV Rating Scale, the study's primary endpoint.

Commenting on the HLD200-108 results, Dr. Steven R. Pliszka MD, Professor and Chair of the Department of Psychiatry of the University of Texas Health Science Center at San Antonio, and an investigator in the study said, “These data support our long-standing clinical hypothesis that HLD-200 may, if approved, become a particularly helpful new option for the many families that are struggling with uncontrolled symptoms of ADHD during the chaotic early morning routine. The novelty of Ironshore's approach – having a stimulant administered in the evening intended to treat ADHD symptoms the following morning and into the evening – would represent a new way for physicians to provide comprehensive therapeutic coverage for ADHD patients.”

In the HLD200-108 trial, the group randomized to the treatment arm also achieved improved functioning scores during the morning routine as measured by two separate scales – each of which was designated as a key secondary endpoint. On the Before School Functioning Questionnaire (BSFQ), the treatment group achieved a 59% improvement in functioning compared with the average baseline score, a highly statistically significant difference relative to the placebo group ( $p < 0.001$ ). The BSFQ is a rating scale developed by clinicians at Massachusetts General Hospital's Division of Child and Adolescent Psychiatry that measures both behaviors and functions associated with the post-waking, early morning period in children and adolescents with ADHD. These include getting out of bed, getting dressed, hygiene and getting to school.

With respect to the PREMB-R (Parent Rating of Evening and Morning Behavior-Revised) morning (AM) subscale, another key secondary endpoint, the treatment group showed a 66% improvement, compared with baseline; also a highly statistically significant result compared with the placebo group ( $p < 0.001$ ).

The treatment group also achieved a 44% improvement in functioning in the evening as measured by the PREMB-R evening (PM) subscale ( $p = 0.002$ , relative to the placebo group). These positive results, from the early morning through to the evening time period, have now been observed in three separate Phase 3 trials – two of which were pivotal studies.

“The technical challenges associated with dosing a stimulant medication at bedtime to target an onset of meaningful clinical effect upon awakening were significant,” said David Lickrish, President & Chief Executive Officer. “Given what we now know about the critically important role that pharmacokinetics play in this therapeutic category, the results from this study, and the two Phase 3 studies previously completed, give us increasing confidence that, if approved, HLD-200 will have the potential to displace older medications that rely on simple controlled-release technologies.”

Dr. Randy Sallee, Ironshore's Chief Medical Officer stated, “It is gratifying to see consistent positive results in three separate clinical studies, which reflects the output of Ironshore's science-driven approach to drug development, a philosophy we have followed since the Company was founded. As a practicing clinician for over 25 years, I believe HLD-200 will, if approved, provide a unique treatment option for patients, caregivers and health care providers.”

## **About the HLD200-108 Study**

Initiated in 2015, the HLD200-108 trial was a Phase III, multicenter, double-blind, randomized, placebo-controlled, parallel group study to evaluate the safety and efficacy of evening-dosed Benjorna™ on post-waking, early morning function in children aged 6-12 with ADHD. The study randomized 161 patients at 22 centers across the US.

## **About Highland Therapeutics Inc.**

Highland Therapeutics Inc. is a 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. The Company is also leveraging DELEXIS® in investigational drug products targeting Binge Eating Disorder (HLD-900) and Inflammatory Bowel Disease (HLD-400).

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:

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## **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.