Ethics Approval for Phase 2 Clinical Trial of IRX-211 for Breakthrough Cancer Pain

Melbourne, Australia, 15 November 2024 – InhaleRx Ltd (ASX: IRX), ('**IRX** 'or '**the Company'**) an Australian healthcare company developing unique inhaled drug-device treatments to address unmet medical needs in the pain management and mental health sectors, is excited to announce that it has received approval from Human Research Ethics Committee ('**HREC**') to commence a Phase 2 clinical trial treating patients suffering from Breakthrough Cancer Pain ('**BTcP**') with IRX-211.

Highlights:

- **Bellberry Limited ('Bellberry') HREC has granted approval to IRX for the commencement of a Phase 2 clinical trial for IRX-211, IRX's novel therapy for the treatment of BTcP.**
- **This study represents an important step in the development of IRX-211 as a solution for addressing an unmet need in cancer patients for an effective, non-opioid, rapid-onset pain treatment.**
- **BTcP affects a significant population of cancer suffers globally, with the Total Addressable Market ('TAM') for BTcP currently estimated at over USD 1 billion, underscoring a substantial opportunity for IRX-211 to provide a safer alternative to existing treatments which are largely opioid (fentanyl) based.**

IRX is delighted to announce that it has achieved a key milestone in its development of IRX-211 as a treatment for BTcP with the Bellberry HREC granting approval to commence a Phase 2 clinical trial. This trial will focus on evaluating the safety, efficacy, and dosing of IRX-211 in patients experiencing BTcP, an acute, intense pain that disrupts the lives of cancer patients and is complex to manage via current conventional pain therapies.

Addressing an Urgent Need for Non-Opioid Solutions

BTcP is characterized by its sudden onset and severe intensity of pain, often requiring treatment which can deliver rapid relief. The TAM for BTcP is estimated to exceed USD 1 billion annually, with current treatment options relying heavily on opioids such as fentanyl. However, fentanyl-based treatments, while effective in delivering rapid pain relief, can cause severe side effects, including high risk of dependency, respiratory depression, cognitive impairment, and can have a limited therapeutic window, making them challenging to manage safely. Patients can also become opioid tolerant over time with higher doses required to address pain symptoms, leading to further complexity in the management of this form of treatment.

IRX's objective is for IRX-211 to present as a potentially safer, non-opioid alternative pain management treatment that seeks to deliver the rapid onset relief which BTcP patients require, without the side effects associated with opioids. As a cannabinoid-based therapy, IRX-211's unique formulation aims to offer rapid pain relief with a lower risk of dependency and adverse effects, an innovation that could transform the pain management landscape for BTcP suffers.

Rapid-onset fentanyl medications, specifically Transmucosal Immediate-Release Fentanyl (TIRF) products, have been discontinued by manufacturers in recent years, and are no longer available as FDA-approved treatments. These medications, including formulations like fentanyl lozenges (commonly known as "lollipops") and dissolvable tablets, were designed to manage breakthrough pain in cancer patients who are already opioid-tolerant, which is exactly the same patient population that IRX-211 is targeting.

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Challenges in Current Opioid Treatments for BTcP

The current prevalent use of fentanyl for managing BTcP presents a range of serious issues:

- **Dependency and Tolerance**: Patients frequently develop a tolerance to opioids, requiring increased doses to achieve the same level of pain relief, leading to heightened risks of dependency and potential misuse.
- **Adverse Side Effects**: Opioids like fentanyl can carry serious side effects, including respiratory depression, dizziness, and cognitive impairment, which can further impact the patient's quality of life and lead to serious medical complications.
- **Delayed Onset for Certain Formats**: While some fentanyl formulations can deliver rapid onset, others have variable absorption rates, creating delays in pain relief or inconsistent therapeutic outcomes.

IRX-211 aims to address these challenges by offering a rapid-onset treatment without the extensive adverse effects linked to opioids, positioning it as a breakthrough in BTcP management.

IRX's CEO, Darryl Davies commented:

> "Securing HREC approval to initiate this Phase 2 clinical trial of IRX-211 is a significant advancement in our mission to bring safer, effective break-through pain relief solutions to cancer patients. IRX-211 has the potential to redefine how breakthrough cancer pain is managed, addressing a critical gap in the market currently for safe, fast-acting, non-opioid treatments. We are committed to delivering a therapeutic solution that provides reliable relief to cancer patients without the severe side effects and dependency risks associated with current opioid-based therapies like fentanyl. This trial represents a major step in our journey toward realizing that vision, and we are grateful to our dedicated team for their hard work in reaching this milestone."

IRX is committed to delivering results that will benefit patients and which could redefine the BTcP treatment landscape.

Progress to date

The phase 1 clinical trial of IRX-211 was completed earlier in 2024 and covered the dosing of 24 healthy participants across three cohorts for the purpose of evaluating safety, tolerability, and pharmacokinetics. The trial was conducted at Nucleus Network in Melbourne and participants received varying doses of IRX-211 to identify the optimal dose for the proposed Phase 2 trial.

The results of the Phase 1 study were highly encouraging, indicating that IRX-211 is well-tolerated at all tested dose levels. No dose-limiting toxicities were observed, and the pharmacokinetic profile supported progression to the next phase of clinical development.

Based on these positive outcomes, IRX is ready to proceed with the Phase 2 trial, which has been designed to further assess the efficacy and safety of IRX-211 in a larger sample size of the targeted BTcP patient population. The Bellberry HREC approval now enables the Company to formally commence the phase 2 clinical trial, which is expected to occur in Q2 of 2025.

From a regulatory perspective, the Company is focused on an abbreviated pathway to a New Drug Approval ('**NDA'**), via a US Food & Drug Administration 505(b)(2) approval. This pathway allows the Company to streamline the approval process by referencing existing data on safety and efficacy, significantly reducing

time and cost compared to conventional new drug applications. This approach is beneficial for reformulating or repurposing existing drugs, as it avoids duplicating prior research while enabling faster market entry.

Authorised by the Board of Directors.

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About InhaleRx Limited (ASX: IRX) – www.inhalerx.com.au

InhaleRx Limited is an Australian healthcare company which is developing unique medicinal drug-device products to address unmet medical needs in pain management and mental health sectors.

The overarching goal is to pursue U.S. FDA approval and registration using rapid and cost-effective regulatory pathways, such as 505(b)(2).

There is a significant economic opportunity for IRX and the Company's shareholders, with the first medical indications under investigation and Breakthrough Cancer Pain (BTcP) and Panic Disorder (PD), both of which currently have limited safe and effective treatment options.

IRX holds an innovation patent and provisional patents for the nominated indications and the Company plans to continue to strengthen this position.