BACKGROUND: 22q11.2 DELETION SYNDROME

22q11.2 deletion syndrome (22q) is the second most common chromosome disorder after Down syndrome. 22q occurs in 1 in 5,000 to 1 in 6,000 live births.

The deletion of genes such as TBI1 may be responsible for characteristic signs (such as heart defects, a cleft palate, distinctive facial features, hearing loss, and low calcium levels) and behavioral problems.

Children with 22q are at increased risk for several psychiatric disorders, including anxiety, social withdrawal, attention-deficit hyperactivity disorder (ADHD), oppositional defiant disorder, autism spectrum disorder (ASD), and mood disorders, as well as psychiatric disorders and schizophrenia (adolescence/adulthood)1,2

ZYN002 does not contain delta-9-tetrahydrocannabinol (THC) and gamma-aminobutyric acid A,12 and dopamine D2 and D313,14

METHODS

The open-label INSPIRE trial (NCT03804720) enrolled 20 patients with 22q11.2 deletion syndrome (22q). Patients received ZYN002 250 mg (weight ≤35 kg) or 500 mg (weight >35 kg). Patients who weighed ≤35 kg receiving a total daily dose of 250 mg were allowed to increase the dose to 500 mg at week 14. Patients who weighed >35 kg were allowed to continue treatment for an additional 24 weeks (Period 2). Patients who had a clinically meaningful improvement during Period 1 were eligible to receive ZYN002 750 mg/day in Period 2. Patients were rated by caregivers and investigators at baseline and every 2 weeks for 14 weeks (Period 1) and every 4 weeks for 12 weeks (Period 2).

The primary outcome measure was safety and tolerability.

The efficacy analysis for Period 1 included 16 patients for ADAMS (1 patient did not have a valid assessment at Week 14). The efficacy analysis for Period 2 included 12 patients for ADAMS. The efficacy analysis for Period 1 included 14 patients for the Qualitative Caregiver Reported Behavioral Problems Survey (Q-CBPS). The efficacy analysis for Period 2 included 12 patients for the Q-CBPS.

Table 1. Adverse Events and Safety Over 38 Weeks

<table>
<thead>
<tr>
<th>Event</th>
<th>Period 1</th>
<th>Period 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total patients (n=20)</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>All adverse events</td>
<td>238</td>
<td>156</td>
</tr>
<tr>
<td>Treatment-emergent adverse events (TEAEs)</td>
<td>122</td>
<td>86</td>
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</table>

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ACKNOWLEDGMENTS/DISCLOSURES

Conflict of Interest

The authors have disclosed no potential conflicts of interest.

REFERENCES