The present study aims to evaluate absolute bioavailability of Paclitaxel given over 2 days compared to IV paclitaxel 80 mg/m² infused over 1 hour. Aims: To determine the bioavailability (PK, AUC) and safety of escalating doses of Oraxol (oral paclitaxel) given over 2 days compared to IV paclitaxel 80 mg/m² infused over 1 hour. Open label, randomized cross-over pharmacokinetic study. Study design: Oraxol (Kinex, Buffalo, NY) is a combination of oral paclitaxel together with HM30181, a novel, orally administered, non-absorbed specific inhibitor of intestinal PGP. HM30181 is a potent inhibitor of intestinal PGP with effects in healthy volunteers lasting for up to 15 days. Paclitaxel has poor oral bioavailability due to the active drug efflux pump (PGP) present on intestinal epithelial cells. Oral paclitaxel would obviate the need for intravenous injections and related side effects, avoid severe anaaphylactic reactions and the side effects of steroid pre-medication and bioequivalence of orally administered paclitaxel (as Oraxol) in subjects being treated with IV paclitaxel.

### RESULTS

**Patients were treated in 3 cohorts as follows:**

<table>
<thead>
<tr>
<th>Cohort</th>
<th>n</th>
<th>Oraxol Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>270 mg (approximately 150 mg/m²)</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>274 mg/m²</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>315 mg/m²</td>
</tr>
</tbody>
</table>

**N is total (number of females). Oraxol doses refer to dose of oral paclitaxel. Oral paclitaxel was given with 15 mg HM30181. Oraxol was given on 2 consecutive days.**

**Plasma Levels of ORAXOL and IV Paclitaxel - Cohort 1 Subject Mean**

- **Oraxol (oral paclitaxel)** was well tolerated with no grade 3/4 toxicities at any of the dose levels. - **AUC∞ and Cmax increased with increasing Oraxol dose from 270 mg to 274 mg/m² but not with further dose escalation.** - **Oraxol (oral paclitaxel) 615 mg/m² over 2 days can achieve paclitaxel AUC comparable to IV paclitaxel 80 mg/m².** - **Cmax was slightly lower on day 2 than on day 1 for each of the dose levels.** - These findings suggest that Oraxol is an ideal drug candidate to replace IV paclitaxel.

### CONCLUSIONS & FUTURE DIRECTIONS

- **Oraxol has the potential to replace IV paclitaxel.**

**Oraxol Paclitaxel IV**

- **Paclitaxel 80 mg/m²**
- **Oraxol 270 mg (Kinex)**

**ACKNOWLEDGEMENTS**

We are indebted to the patients who gave their valuable time to advance scientific discovery and aid future patients. We also thank their families who supported them throughout this trial and their cancer journey. We are grateful to Louise Binmore and Zenetech staff, the Oncology Research Nurses & Admin staff at Southern DHB. Our thanks go to Health Research South for facilitating administrative aspects of this study. Dr. Jackson received partial travel support from Kinex to present this poster.

This study was sponsored and funded by Kinex Pharmaceuticals, Buffalo, NY.

**REFERENCES**

- [Ghersi D, Willson ML, Chan MM, Simes J, Donoghue E, Wilcken N.](#)
- [2000;6:3459-68.](#)
- [2015;20:896-7.](#)
- [Sorrentino BP.](#)
- [2003;14:197-204.](#)
- [2015;20:896-7.](#)
- [Dr. Jackson received partial travel support from Kinex to present this poster.](#)
- [We are the first to show bioequivalence for an oral formulation of paclitaxel.](#)
- [Oraxol has the potential to replace IV paclitaxel.](#)

**No treatment-related serious adverse events were reported**

Summary PK data for cohorts 2 and 3 is not shown

**CONCLUSIONS & FUTURE DIRECTIONS**

**ACKNOWLEDGEMENTS**

**REFERENCES**