IOP-lowering effects of NCX 667 in combination with travoprost in ocular normotensive and transient hypertensive rabbits

E. Bastia1, E. Masini2, M. Durante2, M.V.W. Bergamini3, E. Ongini1, F. Impagnatiello1
1Nicox Research Institute, Milan, Italy; 2NEUROFARBA, Section of Pharmacology and Toxicology, Florence, Italy; 3Nicox Ophthalmics Inc., Worth, TX, USA

INTRODUCTION

Nitric oxide (NO) and prostaglandin F2 alpha (PGF2α) analogues lower intraocular pressure (IOP) by increasing aqueous humor outflow via relaxation of the trabecular meshwork and Schlemm's canal (conventional route) and through the uveoscleral pathway (nonconventional route), respectively.1-2 Both mechanisms have been combined into Latanoprostenebunod, a novel NO-donating prostaglandin FP receptor agonist, proven to be safe and effective in lowering IOP in adults with glaucoma or ocular hypertension.3 NCX 667 is a novel stand alone NO-donor, potentially useful for treating ocular hypertension and glaucoma alone or combined with standard-of-care treatments.

PURPOSE

To study NCX 667, a novel NO donor, for IOP lowering efficacy alone and combined with clinically relevant doses of travoprost in New Zealand white rabbits.

RESULTS

NCX 667 dose-dependently lowers IOP in transient ocular hypertensive rabbits

<table>
<thead>
<tr>
<th>Normotensive rabbits</th>
<th>Hypertensive rabbits</th>
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<tbody>
<tr>
<td>NCX 667 (%)</td>
<td>Travoprost (mmHg)</td>
</tr>
<tr>
<td>0.1</td>
<td>-2.7 ± 0.4*</td>
</tr>
<tr>
<td>0.3</td>
<td>-4.6 ± 1.0*</td>
</tr>
<tr>
<td>1.0</td>
<td>-5.3 ± 0.8*</td>
</tr>
</tbody>
</table>

\[ E_{\text{max}} = (IOP_{\text{base}} - IOP_{\text{max}}) \times (IOP_{\max} - IOP_{\text{base}}) \]

where changes are maximal ± SEM (n=6-8).* p<0.05 vs vehicle.

NCX 667 combined with travoprost results in superior efficacy vs. each drug given alone in ocular normotensive NZW rabbits

Figure refers to treatment paradigm B. IOP change was calculated as follows: (Drug IOP-Tx-Drug IOP0) - (Veh IOP-Tx - Veh IOP0) where IOP-Tx and IOP0 are respectively the IOP at the time of interest and prior to dosing. Data are reported as mean ± SEM of n=14-22.* p<0.05. Treatment paradigm A resulted in similar data.

NCX 667 combined with travoprost results in superior efficacy and duration vs. each drug given alone in ocular normotensive NZW rabbits

<table>
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Commercial Relationships Disclosure:

Contact Information:
Elena Bastia
Scientific Project Manager, Nicox Research Institute
Via Ariosto 21, 20091 Bresso (Milano), Italy
bastia@nicox.it

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