Many vasoactive peptides induce vasodilation by acting via specific G-protein coupled receptors (GPCR). Drug development targets these receptors, as well as the enzymes that generate vasoactive peptides, as a means to gain control over this process as a potential treatment route of hypertension. Since its discovery by Yanagisawa in 1988, endothelin-1 (ET-1) has been consistently described as the most potent vasoconstrictor yet discovered. Specific antagonists to Endothelin A and B receptors are well-known and include BQ-123, BQ-610, and BQ-788. At the present time, urotensin (U II) is being considered the new endothelin by many due to its ultrapotent vasoconstrictive properties. Recently, Patachini et al. introduced Uranotide™ as a potent U II antagonist, the first reported of its kind. The importance of ET-1 and urotensin as cardiovascular and renal peptides in humans is well established, making these peptides and their antagonists highly important research tools.

<table>
<thead>
<tr>
<th>CODE</th>
<th>PRODUCT</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>PED-3739-PI</td>
<td>Big Endothelin-3 (Human, 1-41 Amide)</td>
<td>1 mg, 5 mg</td>
</tr>
<tr>
<td>PED-4198-s</td>
<td>Endothelin-1 (Human)</td>
<td>0.1 mg vial</td>
</tr>
<tr>
<td>PED-4360-s</td>
<td>Endothelin-1 (1-31) (Human)</td>
<td>0.1 mg vial</td>
</tr>
<tr>
<td>PED-3512-PI</td>
<td>BQ-123 Sodium Salt</td>
<td>1 mg, 5 mg</td>
</tr>
<tr>
<td>PED-3610-PI</td>
<td>BQ-610 ET&lt;sub&gt;B&lt;/sub&gt;-Selective Antagonist</td>
<td>1 mg, 5 mg</td>
</tr>
<tr>
<td>PED-3788-PI</td>
<td>BQ-788 Sodium Salt</td>
<td>1 mg, 5 mg</td>
</tr>
</tbody>
</table>

Urotensin II is one of the most potent vasoconstrictors known, and Uranotide has been reported to be the most potent antagonist of urotensin II - until now. Recent studies replacing the Asp amino acid in Uranotide led to the discovery of a new urotensin II antagonist, H-Tic-[Pen-Phe-d-Trp-Orn-Tyr-Cys]-Val-OH. It was found to be more potent than Uranotide at inducing contractions in isolated rat thoracic aorta, with a pA<sub>2</sub> value of 9.0 compared to a pA<sub>2</sub> value of 8.3 for Uranotide.

<table>
<thead>
<tr>
<th>CODE</th>
<th>PRODUCT</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUT-4365-v</td>
<td>Urotensin II (Human)</td>
<td>0.5 mg vial</td>
</tr>
<tr>
<td>PUT-4371-v</td>
<td>Urotensin II (Rat)</td>
<td>0.5 mg vial</td>
</tr>
<tr>
<td>PUT-4408-v</td>
<td>Urotensin II-Related Peptide (Human, Rat)</td>
<td>0.5 mg vial</td>
</tr>
</tbody>
</table>

Endogenous Ligand for U-II Rat Receptor
Vasoactive Peptides

<table>
<thead>
<tr>
<th>CODE</th>
<th>PRODUCT</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUT-3639-PI</td>
<td><strong>Urantide™</strong> H-Asp-[Pen-Phe-D-Trp-Orn-Tyr-Cys]-Val-OH Potent Urotensin II Antagonist</td>
<td>1 mg</td>
</tr>
<tr>
<td>PUT-3640-PI</td>
<td>H-Asp-[Pen-Phe-Trp-Lys-Tyr-Cys]-Val-OH Potent Urotensin II Agonist</td>
<td>1 mg</td>
</tr>
<tr>
<td>PUT-3928-PI</td>
<td>H-Tic-[Pen-Phe-D-Trp-Orn-Try-Cys]-Val-OH Potent Urotensin II Antagonist</td>
<td>1 mg</td>
</tr>
</tbody>
</table>

* This product is sold under exclusive license.

**Alarin**

In 2007, Alarin peptide was identified in human neuroblastic tumors\(^1\) and later in mouse. Its name is based on the N-terminal Ala and the C-terminal Ser residues in the primary structure of a splicing variant of galanin-like peptide (GALP, PGL-4391-s). Alarin mRNA was found to be present in murine brain, thymus, and skin. In contrast to GALP, alarin has no homology to galanin. Alarin immunoreactivity was detected in pericytes and venules in human dermis, but not in endothelial cells of blood vessels.\(^2\) Alarin inhibits substance P and CGRP activated inflammatory edema formation in picomolar range in mouse, dose-dependently, which is a characteristic feature also observed with galanin and GALP. The physiological effects of alarin do not appear to be mediated via the known galanin receptors. Further studies should clarify the receptor type and physiological activity of alarin.

**Other Vasoactive Peptides**

**VAS-3878-PI** [Arg8]-Vasopressin

\[
\text{H-[Cys-Tyr-Phe-Gln-Asn-Cys]-Pro-Arg-Gly-NH}_2
\]

(M.W. 1084.25) \(\text{C}_{46}\text{H}_{65}\text{N}_{15}\text{O}_{12}\text{S}_{2}\) [113-79-1] Peptide Antidiuretic Hormone Originating from Hypothalamus; Plays Role in Osmolalit
