Preventing Inflammation by Inhibiting Cox-2 Gene Transcription

**DESCRIPTION**
Excess inflammation is a contributing factor in many health conditions including cardiovascular disease, diabetes and stroke. The enzyme COX-2 is involved in the pro-inflammatory signaling cascade. Previous attempts to inhibit COX-2 activity that have focused on post-transcriptional inhibition have achieved suboptimal results.

This technology relates to methods of treating inflammation by administering the COX-2 transcription inhibitor, and caffeic acid derivative, cyanocinnamate. This easily synthesized small molecule specifically and effectively inhibits transcription of COX-2 without affecting expression other related enzymes.

**KEY ASPECTS**
- Easily synthesized small molecule therapeutic for control of inflammation
- Potent inhibitor of inflammation-induced cellular damage in pancreatic β-cells
- Works at the transcriptional level to silence gene expression of COX-2
- Specific for COX-2 enzyme while leaving related enzymes (e.g., COX-1) unaffected

**INTELLECTUAL PROPERTY**

<table>
<thead>
<tr>
<th>Title</th>
<th>US Patent Number</th>
<th>Issued</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhibition of Inflammation Via Inhibition of Cox-2 Gene Transcription</td>
<td>6,469,063</td>
<td>10/22/02</td>
</tr>
</tbody>
</table>

**CONTACT**
Ryan Kelly, Ph.D.
Manager, Office of Technology Licensing
Telephone: (626) 471 5694 | Email: rykelly@coh.org

This material is a summary of public domain and non-confidential City of Hope information. Additional material may be disclosed under a confidentiality agreement.

MK-007