Title: TREATING GASTROINTESTINAL DISEASES WITH MODULATION OF RETINOIC ACID

Abstract: T cells are programmed to target the gastrointestinal tract by activation with dendritic cells capable of producing and/or transporting retinoic acid. Methods for using the programmed dendritic cells and/or T and/or B cells to treat a variety of pathogens and infectious agents residing in the intestine are also disclosed. Similarly, inhibitors of retinoic acid synthesis by dendritic cells or other cells in the gut, and inhibitors of retinoic acid receptors in T and/or B cells or other cells in the intestinal mucosa, are disclosed for treating a variety of gastrointestinal autoimmune diseases such as inflammatory bowel disease and celiac disease.
## INTERNATIONAL SEARCH REPORT

**A. CLASSIFICATION OF SUBJECT MATTER**

**IPC:**
- C12N 5/08( 2006.01); A01N 63/00( 2006.01); A61K 45/00( 2006.01); 47/00( 2006.01)

**USPC:**
- 435/273; 424/93.71, 278.1

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
- U.S.: 435/273; 424/93.71, 278.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
- WEST, BIOSIS, EMBASE, SCISEARCH, CAPLUS, MEDLINE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
</table>

[ ] Further documents are listed in the continuation of Box C. [ ] See patent family annex.

**Date of the actual completion of the international search**
- 21 May 2008 (21.05.2008)

**Date of mailing of the international search report**
- 01 JUL 2008

**Name and mailing address of the ISA/US**
- Mail Stop PCT, Attn: ISA/US Commissioner for Patents
- P.O. Box 1450
- Alexandria, Virginia 22313-1450

**Facsimile No.**
- (571) 273-3201

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**Authorized officer**
- AMY E. JUDES

**Telephone No.**
- 571-272-1600