Abstract: Methods are provided for treating diseases, such as asthma, inflammatory bowel disease, autoimmune disease and cancers in which IL-6 production by dendritic cells is elevated. Dendritic cell c-Kit signaling is implicated herein in the production of IL-6 and an elevated Th17 response, such as an elevated Th2/Th17 response. Inhibition of c-Kit activity can reduce the elevated IL-6 production via a pathway that involves stem cell factor (KIT ligand), PI3 kinase p110β and the Notch ligand Jagged-2. Compositions and drug products useful in treatment of those diseases also are provided. Methods of identifying compounds that target c-Kit activity in the production or overproduction of IL-6 also are provided.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
   IPC(8) - A61K 49/00 (2009.01)
   USPC - 424/9.2
   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)
   USPC: 424/9.2

   Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
   USPC: 424/9.2, 85.2, 130.1; 435/6, 343, 343.1, 343.2; 436/501; 530/350, 351
   (text search)

   Electronic database consulted during the international search (name of database and, where practicable, search terms used)
   PubMed, PGPB, USPTO, EPO, EP, JPA, PCT, Google, PubMed
   Search terms: C-Ki, stem cell factor, dendritic cell, IL-6, dendritic cell vaccine, asthma, CD205, imatinib mesylate

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim</th>
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</thead>
<tbody>
<tr>
<td>Y</td>
<td>WANG et al. Imatinib mesylate (STI-571) enhances antigen-presenting cell function and overcomes tumor-induced CD4+ T-cell tolerance. Blood. 1 February 2005 (01.02.2005), Vol. 105, No. 3, pages 1135-1145; Figs. 1A, 1D, 5, 7C</td>
<td>17-21</td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of Box C.

Date of the actual completion of the international search
13 September 2009 (13.09.2009)

Date of mailing of the international search report
21 SEP 2009

Name and mailing address of the ISA/US
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P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-3201

Authorized officer:
Lee W. Young
PCT Helpdesk: 571-272-4200
PCT OSP: 571-272-7774
<table>
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</tr>
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<tbody>
<tr>
<td>Y</td>
<td>BERLIN et al. Inhibition of SCF attenuates peribronchial remodeling in chronic cockroach allergen-induced asthma. Lab. Invest. June 2006 (06.2006), Vol. 86, No. 6, pages 557-565; abstract</td>
<td>14</td>
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