Psoriasis Treatments 2012-2013 Patent Landscape

Description: This IP report is focused on psoriasis treatments. It provides a statistical analysis of new patent applications published from August 2012 to August 2013.

Psoriasis is an inflammatory skin disease of unknown cause which is usually chronic, frequently recurrent and acute in nature. This skin disease produces lesions that occur predominantly at certain sites, such as elbows, knees and scalp, although other areas of the body may be also inflamed. More than 7 million Americans have been diagnosed with psoriasis and/or psoriatic arthritis, a degenerative disease of the joints and connective tissues associated with psoriasis.

Psoriasis typically first strikes people between the ages of 15 and 35, but can affect anyone at any age, including children. There are a number of different treatment options for psoriasis. Typically topical agents are used for mild disease, phototherapy for moderate disease, and systemic agents for severe disease. There is yet no cure for psoriasis.

The field of psoriasis treatments has shown an intensive patenting activity since early 2000s. Today, there are more than 22,000 patent families filed all over the world. More than 1030 new patent families were published between August 2012 and August 2013. They were filed by over 500 patent applicants mainly located in USA, China, Europe and Korea. The main patent applicants are MERCK, ALLERGAN, ABBOTT, ALMIRALL and ROCHE. About 90% of assignees have less than 3 published patents. More than 3000 patent inventors are involved in psoriasis treatments, and about 2400 of them have filed only 1 new patent. The academic organisms account for almost 21% of new patent filings and they are mainly located in US, China and Korea.

About 67% of patents claimed anti-inflammatory activity, and main treatments claimed contain corticosteroids (mainly prednisone and dexamethasone) or interleukin inhibitors (mainly IL-6, IL-17 and IL-1). A lot of other autoimmune diseases are also claimed, such as rheumatoid arthritis, lupus erythematosus or Crohn's disease. The data set was segmented by type (New Chemical Entity (NCE), Biologic, Method of use (USE), Formulation, Natural products and traditional medicine, Device, Diagnostic and Process). Over 37% of new patent families published from August 2012 to August 2013 are related to NCE. Main treatments claimed in these patents are JAK inhibitors (mainly JAK3 inhibitors). The leading applicants are MERCK, ALMIRALL and ROCHE, and the patent filings remain dominated by US companies.

The patents claiming an invention related to Biologic, Use and Formulation represent 16%, 15% and 15% of new filings respectively. The patents dedicated to Biologic were mainly filed by ABBVIE, CATHOLIC UNIVERSITY OF KOREA and NOVO NORDISK. Antibodies are the main type of biologic agents claimed. The main immunotherapeutic targets claimed are TNF, CD3, CD4, IL-6 and IL-17. The patents dedicated to Use were mainly filed by ALLERGAN, UNIVERSITY OF NAMIBIA and BETH ISRAEL HOSPITAL. The patents dedicated to Formulation were mainly filed by ANTERIOS, CATHOLIC UNIVERSITY OF KOREA and ALLERGAN.

This report also provides an Excel database of all the relevant patents:

- Patent publication number
- Hyperlink to original documents
- Oldest priority date
- Title
- Abstract
- Applicants

Methodology:

- The data was extracted from the FamPat database (Questel-ORBIT) which provides 60+ million patent documents from 95 offices.
- Search strategy: (psoria+ OR antipsoria+)/Title OR Abstract OR Claims.
- 1038 relevant patent families have been selected. The selection of patents has been done both
automatically and manually.
- The statistical analysis was performed with INTELLIXIR System.

The patents were categorized using keyword analysis of patent title, abstract and claims, in conjunction with expert review of the subject-matter of inventions:

- New Chemical Entity
- Biologic
- Use
- Formulation
- Natural product and traditional medicine
- Device
- Process
- Diagnostic

Searches for patents were conducted early August 2013 hence patents published/granted after this date will not be available in this deliverable. The patents were grouped according FamPat's family rules (variation of EPO strict family): A Patent Family comprises patents linked by exactly same priority numbers (strict family), plus comparison of priority and application numbers, specific rules by country and information gathered from other sources (national files, legal status).

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