

Partnering Opportunity



Condition

Pсориа́s is a chronic, non-infectious disease that affects mainly the skin. It commonly causes red, scaly patches to appear on the skin, although some patients have no dermatological symptoms. The scaly patches caused by psoriasis, called psoriatic plaques, are areas of inflammation and excessive skin production. Skin rapidly accumulates at these sites. Plaques frequently occur on the skin of the elbows and knees, but can affect any area including the scalp, palms of hands and soles of feet, and even genitals.

This condition affects 3% of the population. The onset may appear at any age, although is more frequent between 15 and 35 years. Psoriasis can also cause inflammation of the joints, which is known as psoriatic arthritis. Approximately 10-15% of the people with psoriasis have psoriatic arthritis.

Its cause is yet to be elucidated, although there is evidence that it may be a genetic disease related to immune response and inflammation of the skin. However, the role of the immune system and genetic factors are not fully understood.

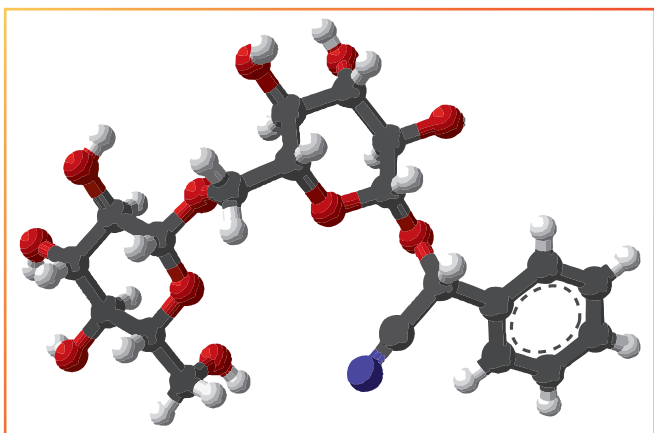
Technology

As numerous scientific studies report, peptide T regulates the expression of some cytokines resulting in an anti-inflammatory effect. Its pharmacological profile shows that peptide T is useful to treat psoriasis. However, its absorption, metabolic instability and immunogenic consequences does not make it suitable for use as a drug.

Given the need to find peptidomimetics of peptide T, a computer-based model was developed utilizing previous studies on peptide T's chemotactic profile where amygdalin¹ was identified as a suitable candidate. As amygdalin has a toxic cyano group, analogous compounds were searched to reduce its natural toxicity.

Researchers have found a group of structural analogs to amygdalin with a similar chemotactic profile that makes them potentially useful for psoriasis treatment.

¹ Amygdalin is primarily extracted from almond or apricot kernels.



Partnering Opportunity



Current Status

- Genoma España in collaboration with Catalonia's Polytechnic University is funding IP fees and the synthesis of compounds: preliminar MTD and PK assays (half-life serum).
- Three compounds were tested in a proof-of-efficacy trial in xenografted mice.
- Two of the three compounds showed promising results in terms of epidermal thickness reduction and semi-quantitative PASI score.

IP Status

- International application PCT/ES2005/000641 "Use of amygdalin analogues for the treatment of psoriasis". Patent granted in USA 11/754,917 and Spain 200402912. Patent is pending in Europe EP 05823007.9 and Japan 2007-542014.

Commercial Opportunity

- More comfortable administration route (oral), with respect to current intravenous drugs.
- Cost efficiency with regard to current treatments based on antibodies.
- These compounds lack the cyano group, therefore, a good MTD was obtained.
- An estimated of 0,8M€ of additional funding is needed to scale-up the synthesis of compounds and complete preclinical GMP assays, which will lead to clinical trials in humans.

Contact:

Dr. Juan Jesús Pérez
Chemical Engineering Professor
+34 934 016 679
juan.jesus.perez@upc.edu
<http://lem.upc.es>



Contact:

Juan Pedro Rodríguez Serrate
Project Manager
+34 914 491 250 EXT 043
jp.rodriguez@gen-es.org
<http://www.gen-es.org/>

