Backgrounder: Psoriasis

For Media Use Only

What is psoriasis?

Psoriasis is a **chronic inflammatory condition** affecting **up to 3% of the world's population**, or more than **125 million people**^{1,2}. This common and distressing disease is not simply a cosmetic problem – even people with very mild symptoms find the condition affects their everyday lives^{1,2}.

There are several different types of psoriasis³. Plaque psoriasis is the most common, accounting for 80 to 95% of cases and is characterized by thick and extensive skin lesions, called plaques, known to cause itching, scaling and pain⁴.

More than one third of people with plaque psoriasis suffer from its **moderate-to-severe form**⁵, which can be **difficult to treat**⁶. People are considered to have moderate-to-severe symptoms when **more than 10% of their body surface is affected**, or when sensitive areas of the body are involved, such as the **hands or feet**, which can greatly impact quality of life^{7,8}.

Psoriasis symptoms can begin at any age, including in childhood, but the disease mainly affects adults⁶. Symptoms start when a combination of **environmental triggers and genetic factors** disrupt the lifecycle of skin cells⁴.

What is the immune system's role in psoriasis?

The immune system **produces over a dozen proteins called cytokines**, which serve as "messengers" that coordinate communication between immune cells in response to an infection. One of these cytokines, **interleukin-17A (IL-17A)** is considered to play a **key role** in the development of **psoriasis**^{9,10}.

If there are **increased levels of IL-17A in the skin**, it can trigger an immune response even if there is no threat of infection, causing inflammatory symptoms like **itching** and **redness**⁴. In addition, it signals to the skin to grow new cells at a faster rate than normal, resulting in characteristic psoriasis symptoms like **thickened skin** and **plaques** (scaly skin) because cells build up on the skin's surface⁴.

What are the physical and psychological effects of psoriasis?

Psoriasis **negatively affects** people's lives both **physically and psychosocially**^{11,12}. Physical symptoms are often painful and include **burning sensations**, joint pain, itching and skin **soreness**¹¹. These factors regularly **limit people's ability to undertake daily activities** and impact their psychological state¹¹.

In fact, the effect of psoriasis on people's health-related quality of life has been shown to be similar to diseases such as cancer, heart disease, arthritis, type 2 diabetes and depression¹¹. People with psoriasis also report feelings of stigmatization in society due the appearance of their skin, as well as feelings of depression, feelings of unattractiveness, suicidal thoughts, financial distress and professional difficulties^{3,11}.

A number of international studies also confirm that people with more severe forms of psoriasis have a significantly reduced life expectancy¹². This is because they are more likely to suffer from a range of co-morbid conditions, including diabetes, psoriatic arthritis, heart disease, obesity, metabolic syndrome, cardiovascular disease, psychiatric illness and cancer (lymphoma)¹².

What are the unmet needs in psoriasis?

Traditional treatments for psoriasis include **topical therapies** (creams and gels), **phototherapy** and **systemic medicines**⁶. However, there remains an **unmet need for new efficacious therapies that act faster and longer** to relieve the pain, itching and other disease symptoms^{4,13-15}.

Research illustrates that people with psoriasis regularly lack confidence in available therapies^{3,16-18}, with approximately 40-50% reporting dissatisfaction with their current options^{3,17}. Concerns with perceived treatment inefficacy and side effects have broader implications, with a survey of 1,095 people with psoriasis demonstrating they are the main reasons for discontinuing therapy¹⁹.

Therefore, effective treatment is high on the agenda for improving the lives of people living with psoriasis.

###

References

- 1. International Federation of Psoriasis Associations (IFPA) World Psoriasis Day website. "About Psoriasis." http://www.worldpsoriasisday.com/web/page.aspx?refid=114. Accessed August 2013.
- Stern RS, Nijsten T, Feldman SR, Margolis DJ, Rolstad T. Psoriasis Is Common, Carries a Substantial Burden Even When Not Extensive, and Is Associated with Widespread Treatment Dissatisfaction. *J Investig Dermatol Symp Proc* 2004; 9(2):136-9.
- 3. Langley RGB, Krueger GG, Griffiths CEM. Psoriasis: epidemiology, clinical features, and quality of life. *Ann Rheum Dis* 2005; 64(suppl 2):ii18-ii23.
- 4. Nestle FO, Kaplan DH, Barker J. Psoriasis. N Engl J Med 2009; 361(5):496-509.
- 5. Herrier R. Advances in the treatment of moderate-to-severe plaque psoriasis. *Am J Health-Syst Pharm* 2011; 68:795-806.
- Raval K, Lofland JH, Waters HC, Tak Piech C. Disease and treatment burden of psoriasis: Examining the impact of biologics. J Drugs Dermatol 2011; 10(2):189-96.
- 7. Mrowietz U, Kragballe K, Reich K, *et al.* Definition of treatment goals for moderate to severe psoriasis: a European consensus. *Arch Dermatol Res*; 303(1):1-10.
- 8. Finlay AY. Current severe psoriasis and the rule of tens. *Br J Dermatol* 2005; 152(5):861-7.
- 9. Ivanov S, Linden A. Interleukin-17 as a drug target in human disease. *Trends in Pharmacological Sciences* 2009; 30(2):95-103.
- 10. McKenzie BS, Kastelein RA, Cua DJ. Understanding the IL-23 IL-17 immune pathway. *Trends in immunology* 2006; 27(1):17-23.
- 11. Rapp SR, Feldman SR, Exum ML, Fleischer AB, Jr., Reboussin DM. Psoriasis causes as much disability as other major medical diseases. *J Am Acad Dermatol* 1999; 41(3 Pt 1):401-7.
- 12. Farley E et al. Psoriasis: comorbidities and associations. G Ital Dermatol Venereol. 2011 Feb;146(1):9-15.
- 13. Krueger JG, Koo J, Lebwohl M, et al. The impact of psoriasis on quality of life: Results for a 1998 National Psoriasis Foundation patient membership survey. *Arch Derm.* 2001; 137:280-284.
- 14. Ljosaa TM, Mork C, Stubhaug A, et al. Skin pain and skin discomfort is associated with quality of life in patients with psoriasis. *J Eur Acad Dermatol Venereol.* 2012;26:29–35.
- Sterry W, Barker J, Boehncke WH, Bos JD, Chimenti S, Christophers E, De La Brassinne M, Ferrandiz C, Griffiths C, Katsambas A, Kragballe K, Lynde C, Menter A, Ortonne JP, Papp K, Prinz J, Rzany B, Ronnevig J, Saurat JH, Stahle M, Stengel FM, Van De Kerkhof P, Voorhees J. Biological therapies in the systemic management of psoriasis: International Consensus Conference. *Br J Dermatol.* 2004 Aug;151 Suppl 69:3-17.
- 16. Christophers E, Griffiths C E M, Gaitanis G, et al. The unmet treatment need for moderate to severe psoriasis: results of a survey and chart review. *J Eur Acad Dermatol Venereol.* 2006; 20:921-925.
- 17. Bewley A, Cerio R, Clement M. Current application of National Institute for Health and Clinical Excellence (NICE) guidance in the management of patients with severe psoriasis: a clinical audit against NICE guidance in seven National Health Service specialist dermatology units in England. *Clin Exp Dermatol.* 2011; 36(6):602-606.
- Dubertret L, Mrowietz U, Ranki A, et al. European patient perspectives on the impact of psoriasis: the EUROPSO patient membership survey. Br J Dermatol 2006; 155(4):729-36.
- 19. Yeung H, Wan J, Van Voorhees AS, *et al.* Patient-reported reasons for the discontinuation of commonly used treatments for moderate to severe psoriasis. *J Am Acad Dermatol* 2012; Advance online publication.

U NOVARTIS

Novartis Pharma AG CH-4002 Basel, Switzerland [©]2013 Novartis Pharma AG PSOPR001/0913