



NEWS RELEASE

## Akaal Pharma's Australian patent accepted for S1P1 Receptor Modulators Useful in the Treatment of Autoimmune and Inflammatory Diseases

MELBOURNE, Australia and SAN DIEGO, CA, USA, January 19, 2015. Akaal Pharma Pty Ltd (Akaal Pharma) announced today that the Australian Patent Office has accepted its patent application for registration and patent grant. This covers Akaal Pharma's internally discovered novel compounds (small molecule drug candidates) as modulators of Sphingosine 1-Phosphate receptors (S1P) useful in the treatment of autoimmune and inflammatory diseases. This covers compositions-of-matter, various novel chemical scaffolds, synthetic intermediates and processes for the manufacture of drug candidates claimed including the developmental candidate. The patent applications have already been filed in Europe, China, Japan, and India. Earlier Akaal Pharma was granted patents both in the USA and New Zealand.

"The acceptance of this patent has strengthened our intellectual property, discovered internally by Akaal Pharma's team, a milestone achieved by the Company. We believe that our drug candidates claimed in our patent could provide new drugs for the treatment of autoimmune and inflammatory diseases including psoriasis, atopic dermatitis, multiple sclerosis, rheumatoid arthritis, ulcerative colitis and Crohn's disease", said Dale Dhanoa, Ph.D., CEO of Akaal Pharma.

### About Sphingosine 1-Phosphate Receptor Subtype-1

Sphingosine 1-Phosphate Receptor Subtype-1 (S1P1) is one of the five S1P receptors (S1P1-5), a class of G-protein coupled receptors (GPCRs) that are activated by the endogenous ligand phospholipid Sphingosine 1-phosphate (S1P). S1P1 plays a key role in the regulation of multiple biological processes including immune cell trafficking, neuronal and vascular function. The auto reactive lymphocytes uncontrollably attack healthy tissues or organs resulting in inflammatory damage. Compounds that activate the S1P1 receptor (S1P1 agonists) cause a reversible reduction in circulating lymphocytes into peripheral blood and to the inflammatory sites. The S1P1 receptor directly impacts neuronal survival and endothelial barrier enhancement. S1P1 agonists not only have shown activity in preclinical models of inflammation, autoimmune, neuronal and vascular diseases, but have also shown a clinical benefit in the treatment of multiple sclerosis, an autoimmune disease.

### About Akaal Pharma

Akaal Pharma Pty Ltd (Akaal Pharma) is a clinical-stage drug discovery and development company focused on the development of novel small molecule drugs for the treatment of inflammatory and autoimmune diseases including psoriasis, atopic dermatitis, multiple sclerosis, ulcerative colitis, Crohn's disease and rheumatoid arthritis. Akaal Pharma has created a robust pipeline of novel, potent, and highly selective S1P1 receptor modulators that show excellent oral and topical drug profiles. Akaal Pharma applies its medicinal chemistry and drug discovery platform to design, discover and develop novel, safer and highly effective topical and oral drugs for the treatment of inflammation and immune diseases. For more information, visit [www.akaalpharma.com](http://www.akaalpharma.com).

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