The discovery of an orally bioavailable benzimidazole derived small molecule inhibitor of IL-17A

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The interleukin 17A (IL-17A) is a proinflammatory cytokine and the founder member of the IL-17 family. It is known to play a key role in the pathogenesis of diseases such as Psoriasis and blocking of the IL-17A pathway with antibody therapies has now been established as a highly effective treatment option. Successful disruption of the protein-protein interaction (PPI) of the IL-17A homodimer complex with its receptor by a small molecule would be a powerful alternative to the sometimes costly and less accessible antibody therapies on offer.

In this oral presentation we will disclose the discovery of a series of potent and orally bioavailable benzimidazole derived inhibitors of IL-17A, detailing how the compounds were developed from a poorly active highly cleared fragment-like starting point to a highly potent metabolically robust lead molecule suitable for evaluation *in vivo.*