

Heptares grants Shire an Exclusive Worldwide License to Develop and Commercialise Novel Drug Candidate for CNS Disorders

Welwyn Garden City, UK and Boston, MA, USA, 20 March 2012 – Heptares Therapeutics, the leading GPCR drug discovery company, announces that an operating company of Shire plc (LSE: SHP, NASDAQ: SHPGY), the global specialty biopharmaceutical company, has exercised its exclusive option to license a novel adenosine A_{2A} antagonist discovered by Heptares that is currently in preclinical development. Adenosine A_{2A} is a G-protein coupled receptor (GPCR) involved in the regulation of dopaminergic pathways in the brain. Inhibition of the A_{2A} receptor is a validated mechanism in the treatment of CNS disorders.

Under the terms of the agreement Heptares grants Shire an exclusive licence to worldwide development and commercial rights to A_{2A} antagonists discovered by Heptares. Heptares receives upfront option grant and exercise payments and is also eligible to receive future development and commercial milestone payments up to US\$190 million plus royalties on product sales. Further terms of the agreement are not being disclosed.

Jeff Jonas, Senior Vice President, Research & Development, Specialty Pharmaceuticals and Regenerative Medicine, Shire, said: "Shire is continuously in search of innovations that have the potential to help us develop well differentiated medicines that will bring value to patients. This agreement with Heptares is a reflection of our growth strategy of investing and focusing on highly targeted drug discovery platforms. We are impressed with the novelty and quality of the A_{2A} antagonist leads generated by Heptares, resulting from what we believe to be the first time a structure-based drug discovery approach has been applied from the beginning to a GPCR drug target. We look forward to a fruitful partnership with Heptares and to advancing the programme for the benefit of patients suffering from CNS disorders."

"The exercise of this option and initiation of the worldwide licensing agreement with Shire, one of the world's leading CNS specialty pharmaceutical companies, is an outstanding achievement for Heptares," said Malcolm Weir, CEO of Heptares. "The A_{2A} programme is the most advanced example of the Heptares drug discovery platform, and highlights our ability to deliver fundamentally novel chemotypes as a basis for first-in-class and best-in-class medicines addressing a broad range of diseases."

The Heptares A_{2A} programme reflects a new approach to this GPCR target. Recently published papers (*refs 1-3*) describe how Heptares technology was used to stabilise the A_{2A} receptor, enabling the application for the first time of structure-based drug discovery (SBDD) techniques including Biophysical Mapping™, fragment screening and x-ray crystallography to the receptor. The advanced knowledge of the target generated by this approach enabled Heptares scientists to discover entirely new types of chemical structures for inhibiting the A_{2A} receptor, potentially possessing best-in-class drug-like characteristics, a radical advance after decades of largely unsuccessful medicinal chemistry.

References

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3. Zhukov, A. *et al.* (2012) *J. Med. Chem.*, 2011, 54 (13), pp 4312–4323