INNOVATES, ENABLES, PERFORMS

PRESS RELEASE

Axxam launches the ion channel^{FLASH} technology based on light mediated activation of voltage-gated ion channels

April 29th, 2014 – Axxam SpA (Milan/Italy), a leading provider of discovery services has developed ion channel^{FLASH}, an innovative approach for the "in vitro" study of voltage-gated ion channels. Axxam scientists have turned the idea of target activation by light impulse into a new technology platform, which allows assays for voltage-gated ion channels to be run without the need of artificial activation with KCl.

In the ion channel^{FLASH} platform, the activation of a voltage-gated ion channel is triggered by a light impulse. This light impulse activates channel rhodopsin, a light sensitive ion channel cloned from the unicellular alga *Chlamydomonas reinardti*, which triggers a membrane depolarization thereby activating the voltage-gated ion channels. Ion channel^{FLASH} based assays can be used on FLIPR^{TETRA} and other similar instruments which use LED-based photon generating systems eliminating time consuming, low throughput and expensive patch-clamp based methods for ion channel discovery research. The ion channel^{FLASH} platform, which comprises different channel rhodopsin receptors, will be used to provide clients with a turnkey approach for the generation of innovative cell-based assays as research and screening tools for the important target class of voltage-gated ion channels.

Stefan Lohmer, Chief Executive Officer at Axxam, commented: "Voltage-gated ion channels represent a very important drug target class, however, current screening technologies are either inaccurate or very expensive and time-consuming. Now with the ion channel^{FLASH} system, the activity of voltage-gated ion channels is stimulated by discrete light impulses producing a clearly defined, accurate, controlled and reversible signal that substitutes for the unspecific KCl-based protocols. This approach produces a much more physiological accurate situation. With ion channel^{FLASH} Axxam has generated an exciting tool which paves the way to conduct very accurate HTS campaigns for voltage-gated ion channels. The development of this tool is a further demonstration of Axxam's continuous commitment to innovation".

The technology is based on a license agreement with Max-Planck-Innovation GmbH (München/Germany) for the use of biological photoreceptors to directly light-activate ion channels. Under the license, Axxam gains access to the channel rhodopsin technology discovered by Ernst Bamberg and Georg Nagel from the Max Planck Institute of Biophysics (MPI) and Peter Hegemann from the University of Regensburg, which is protected through several patent applications. The MPI is an Institute of the Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V. ("MPG"), Germany´s leading basic research organization.

About Axxam

Axxam is a privately owned contract research and discovery company. The Company has developed a proven track record as a third party research and discovery services provider for the Life Science industry. In addition, Axxam conducts several discovery programs for selected targets which are carried out in partnership with other companies or non-profit organizations. For further information please visit our website www.axxam.com.

For more information, please contact:

Axxam SpA
Dr. Doris Hafenbradl, VP Discovery Services
Phone: +39 02 2105680
Email: doris.hafenbradl.dh@axxam.com