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Kinexus Bioinformatics Corporation and University of British Columbia Discover New Link Between Key Cell Signalling Enzymes

Kinexus Discovers ERK1 and p38 Form a Previously Unrecognized Complex

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VANCOUVER, British Columbia - Kinexus Bioinformatics Corporation, a Vancouver-based proteomics and bioinformatics company, is pleased to report the discovery of an important linkage between two major cell communication pathways. This research undertaken in collaboration with Dr. Steven Pelech's laboratory in the Department of Medicine at the University of British Columbia and the Vancouver Hospital Health and Sciences Centre, is reported today in an accelerated communication in the *Journal of Biological Chemistry* (Volume 276, pages 6905-6908). The work has revealed that two related cell signalling enzymes well known to the pharmaceutical industry as the mitogen-activated protein kinases ERK1 and p38 form a previously unrecognized complex. ERK1 is important for the stimulation of cell proliferation in response to the body's growth hormones, whereas p38 mediates inhibition of cell reproduction in response to stress factors and conditions. Both enzymes have been the focus of active drug development programs in many major pharmaceutical companies. Activated p38 was shown to form a physical complex to prevent stimulation of ERK1. These findings provide new insights into how stressful conditions such as toxins and radiation can impede the repair of the body's tissues following injury.

"We are very excited by the discovery of the direct interaction of the ERK1 and p38 MAP kinases," said Dr. Steven Pelech, President and C.E.O. of Kinexus. "The ability of these enzymes to form a stable physical complex was very surprising, and has major implications on drug development. This interaction appears to be highly conserved in evolution, since we have also detected it in starfish eggs. The observation of the interaction between these important cell signalling enzymes was initially detected using our company's commercial Kinetworks™ screens, and it validates the application of this approach for discovery of novel protein-protein interactions."

Protein kinases like ERK1 and p38 have been linked to hundreds of human diseases including cancer, cardiovascular disease, diabetes, immunological and neurological disorders. Kinexus offers biomedical researchers in academia and the biopharmaceutical industry the ability to simultaneously track the presence and activation states of hundreds of different kinase enzymes and their targets in cell and tissue specimens using the company's proprietary Kinetworks™ screens. Kinexus is compiling and analyzing the data from the Kinetworks™ Screens to create functional proteomics databases, called Kinformatics™ databases, that will be available by website to subscribing customers.

For further information, please contact Kinexus Bioinformatics Corporation toll free at 1-866-KINEXUS or visit our website at www.kinexus.ca.