The SigNET KnowledgeBank – A series of on-line, open-access proteomics websites for biomarker identification and drug development

Kinexus has developed multiple powerful microarray- and multi-immunoblotting-based methods that enable high depth monitoring of protein levels, phosphorylation and interactions. To assist in the meta-analyses of the large data sets generated from these high throughput techniques, Kinexus has created the SigNET KnowledgeBank, which is open-access, on-line suite of proteomics websites with empirical and predictive information. These include: TranscriptoNET (www.transcriptonet.ca) with information on the mRNA expression levels of 21,000 human genes in about 250 normal human tissues, 50 tumour types and 300 cancer cell lines; KinaseNET (www.kinasenet.ca) with detailed information on 534 human protein kinases; DrugKiNET (www.drugkinet.ca) with information on over 850 protein kinase inhibitors and 106,000 known and 200,000 predicted interactions with protein kinases; PhosphoNET (www.phosphonnet.ca) with information on nearly 1 million known and predicted human phosphosites, including their evolutionary conservation, similarity with other phosphosites the specific kinases that are predicted to target these phosphosites; and OncoNET (www.onconet.ca) with information on over 3000 human proteins related to cancer. The main objective of our proteomics and bioinformatics studies is to use the experimental results from the application of our array technologies to map the architecture of signaling networks in a cell- or tissue-specific manner and make these findings available at our KinATLAS (www.kinatlas.ca) website.

Biography

Steven Pelech is the Founder, President and CSO of Kinexus Bioinformatics. He was previously the Founder and President of Kinetek Pharmaceuticals. His Post-doctoral training was with Sir Philip Cohen at the University of Dundee and Nobel laureate Dr. Edwin Krebs at the University of Washington in Seattle. Since 1988, he has concurrently been on Faculty at the University of British Columbia (UBC) and is a full Professor in the Department of Medicine. He received his BSc (1979; Honours) and PhD (1982) degrees in Biochemistry from UBC. He has authored over 220 peer-reviewed publications about cell signalling and is one of the discoverers of the MAP kinases.

spelech@shaw.ca

Notes: