



Silicon Kinetics Announces Collaborations in Japan in Clinical Proteomics
Inline MIK-MS (Molecular Interaction Kinetics-Mass Spectrometry) with SKi Pro™
Enables Compound Screening for Lung Cancer Treatment

San Diego, California, 28 February, 2017 — Silicon Kinetics Inc., the supplier of 3D nano-porous silicon biosensors and instruments for sensitive, label-free biomolecular interaction analysis, has announced collaborations with Biosys Technologies, Tokyo University and St. Marianna University, School of Medicine in Japan. The collaborators expect rapid and effective screening and ranking of inhibitors, thanks to the novel inline MIK-MS approach pioneered by Silicon Kinetics.

MIK-MS (Molecular Interaction Kinetics - Mass Spectrometry) enables researchers to kinetically rank target molecules by affinity capture on silicon biosensor surfaces, then elute the candidate inhibitors to an inline LC- ESI mass spectrometer for identification and quantitation. The 3D surface of SKi Sensors captures more than 100 times the quantities on planar surfaces, making possible this MIK-MS workflow, previously not viable on planar biosensors such as those used in SPR (Surface Plasmon Resonance). The higher loading capacity of 3D SKi Sensors allows the quantification of kinetics, even when the ratio of the molecular weights of the interacting molecules is high (as in the case of a large protein interacting with a small molecule), or when a drug candidate needs to be highly diluted for solubility, or when the biomolecular interactions are weak. MIK-MS technology thus brings new and effective screening capabilities to PPI (Protein Pump Inhibitor), FBDD (Fragment-Based Drug Discovery) and biomarker discovery.

Biosys Technologies, Inc., is an application development and system integration company based in Tokyo, serving the biotech and pharma markets in Japan. Through its clinical and technological alliances with major medical schools and hospitals, Biosys has access to tissue and blood samples and cancer databases. Silicon Kinetics and Biosys have agreed to work with lung cancer experts at Tokyo University and St. Marianna University, such as Dr. Kawamura and Prof. Nishimura, to study the progression of lung cancer in non-smoking adults, as well as potential treatments based on the principles of personalized medicine.

“The novel MIK-MS approach forms the basis for state-of-the art-screening, as it not only enables novel protein identification but also gives information about protein interactions, signal pathways and mutations in conjunction with databases and related informatics,” said Prof. Toshihide Nishimura, the Director of the Translational Medicine Informatics, St. Marianna University School of Medicine.

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About Silicon Kinetics: Silicon Kinetics Inc. is the developer and supplier of the world's first nano-porous silicon biosensor for analyzing biomolecular interactions, including antibody-antigen and protein-small molecule interactions. Unlike the planar surface of biosensors based on SPR, the 3D volume of SKi Sensors, interrogated by white-light interferometry in the SKi Pro line of instruments, offers researchers higher sensitivities in traditional biomolecular interaction analysis and larger amounts of captured molecules in MIK-MS (Molecular Interaction Kinetics - Mass Spectrometry) applications. For MIK-MS, Silicon Kinetics offers SKi Bridge, which acts as a fraction collector and timing synchronization tool, directly connected to any mass spectrometer. More information can be found at www.siliconkinetics.com.

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