

Enhancing malaria research

As part of a National University of Singapore (NUS) research project, Dr Martin Lear from NUS Department of Chemistry and Dr Kevin Tan from the NUS Department of Microbiology successfully tagged a fluorescent marker to chloroquine, a drug that has been used in the treatment of malaria since 1947.

The fluorescent-labelled chloroquine molecule, known as LynxTag-CQ, demonstrated the same biological activity as normal chloroquine. Due to the fluorescent tagging, researchers are now able to visualize intracellular drug-cell interactions, in an easy and cost-effective manner.

Assessing the significant potential of Lynx Tag, the two gave a thought to commercialize the technology and hence formed BioLynx, a biotech company. The company was formed to provide research tools targeting international malaria research, and to focus on developing and commercializing its LynxTag technology platform for other drugs and diseases.

The company believes that malaria researchers will find LynxTag-CQ a useful research tool for studying topics such as chloroquine resistance, drug uptake, mechanism of drug action, or chemo-sensitization.

“We already validated LynxTag-CQ as a research tool for malaria research. In addition, we believe it has greater potential and can be used to study mechanisms of other diseases at a cellular level. For example, chloroquine is used in treating immune diseases, cancer and some viral infections. Moving forward, we plan to go beyond chloroquine to have a pipeline of products and synthesize

chemical tags for other high value drugs,” says Dr Kevin Tan, co-founder of BioLynx.

LynxTag-CQ is currently the only chloroquine-based fluorescent probe in the market and is available in a blue or green fluorescent form. To introduce LynxTag-CQ for the research community, BioLynx is providing some 100 free samples internationally in which each sample contains 50 tests.

BioLynx plans to commence sales of LynxTag-CQ from the beginning of 2012, pricing it at S\$500 per box

BioLynx Singapore

BioLynx was formed to provide research tools targeting international malaria research, and to focus on developing and commercializing its LynxTag technology platform for other drugs and diseases

(with 100 tests per box). LynxTag products aim to provide a solution for direct visualization of drug action and localization on samples, such as blood and tissue samples. Qualitative and quantitative observations using flow cytometry or fluorescence microscopy in a research laboratory can then be obtained for studies involving relevant topics such as malaria.

The LynxTag of fluorescent tagged drugs have been validated to be pharmacologically similar to their parent drugs, thus allowing both visualiza-



L-R Dr Martin Lear and Dr Kevin Tan, founders, BioLynx, Singapore

“We validated LynxTag-CQ as a research tool for malaria research and believe it has greater potential and can be used to study mechanisms of other diseases at a cellular level.”

Dr Kevin Tan
co-founder, BioLynx.

tion and quantification of drug activity. Its high versatility also allows it to be applied to a wide range of drugs, enabling studies on drug resistance, localization and sensitivity.

BioLynx has raised \$0.7 million (S\$1 million) in funding, including research grants from Singapore government agencies and personal investments from the founders. The funding is being used to commercialize the technology and bring it to the market. The company is looking for more investments to grow and market its product internationally.

The NUS Industry Liaison Office has filed a PCT patent application for the fluorescent-labelled chloroquine molecule, and has licensed the technology exclusively to BioLynx. **BS**

AMRITA TEJASVI IN SINGAPORE