



News Release

Success in research leads to the spinning off of a biofuel company

25 November 2008, Singapore - Temasek Life Sciences Laboratory Limited (TLL) is pleased to announce the successful development of several key platform technologies related to the biofuel plant, *Jatropha curcus*, to address current issues confronting the bioenergy industry. These technologies allow TLL to make use of powerful molecular techniques to generate superior *Jatropha* planting materials with customized traits so that plantation and countries can secure ample supply of biofuel feedstock without compromising its carbon index.

Together with Tata Chemicals (through its wholly-owned subsidiary, Tata Chemicals Asia Pacific Pte Ltd), Temasek Life Sciences Ventures Pte Ltd (a joint venture between a Temasek Holdings subsidiary & TLL) and other investors in Singapore, TLL has recently set up – JOil (S) Pte. Ltd. (JOil) to commercialize these *Jatropha*-related biotechnologies and discoveries globally. Tata Chemicals, which is part of the India-based Tata Group, is planning to enter into biodiesel business including *Jatropha* plantations and will be an exclusive partner of choice for JOil in its Indian and East African operations.

Dr Hong Yan, the General Manager of JOil said, "One of the key challenges in *Jatropha* plantation today is the lack of uniform and high quality starting plant materials. Plants derived from seeds in a traditional way would vary in terms of productivity and yield." He added that, "With one of the technologies developed in TLL, we would be able to successfully clone elite and high-yielding mother plants and produce millions of genetically similar copies for planting. These technologies are genotype independent and give JOil and its partners the advantage of being able to customize planting materials to suit different regions and environment."

Jatropha has been touted as a possible alternative to palm oil as a feedstock for biodiesel. One of the key advantages of Jatropha is the possibility of using marginal lands for its cultivation. "By developing tough, high yielding varieties suitable for planting and growth in these marginal lands, we would be able to address the often cited criticism of countries diverting scarce arable resources away from food production to biofuels.", said Dr Hong Yan.

After the execution of the Subscription Agreement on 21 November 2008, Mr. P K. Ghose, Executive Vice President and CFO of Tata Chemicals Ltd. said, "We are delighted to be able to partner in a venture which could in future have a significant benefit for the production of biodiesel from Jatropha both in terms of yields and cost".

"I am very pleased that the work done in TLL's Strategic Research Program has received such an endorsement from our international partners. I look forward to the establishment of continued joint collaboration between JOil and other partners with TLL so that we can develop a whole suite of technologies to further exploit the potential of the renewable energy industry." said Dr Tan Guong Ching, Chairman of TLL.

Mr Peter Chia, Chief Operating Officer of TLL said, "We are very thankful to the Singapore Millennium Foundation and the Economic Development Board who have provided support for our research programs in plant biotechnology. Singapore is an excellent place for translating discoveries and ideas into patentable inventions, and providing us with an excellent platform to showcase our work to an international panel of investors. I look forward to TLL's partnership with JOil and other industry partners to establish a bioenergy R&D and Innovation nerve center in Singapore that will lead to future development and deployment of technologies to accelerate the use of alternative energy resources."



TLL is organizing its inaugural Jatropha International Congress in Singapore this December. TLL's researchers, together with a congregation of internationally renowned experts will be sharing their discoveries and knowledge at this congress. More information is available at www.jatrophacongress.org

About Temasek Life Sciences Laboratory (TLL)

Temasek Life Sciences Laboratory (TLL) was established in August 2002 by the National University of Singapore, Nanyang Technological University and Temasek Holdings to undertake cutting edge research in molecular biology and genetics in the broad field of life sciences. In addition, TLL has training programs for graduate students, postdoctoral fellows, as well as students from the universities and junior colleges.

More information is available at www.tll.org.sg

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