



## PRESS RELEASE

### TLL scientist receives prestigious Beadle and Tatum Award 2012

**[22 May 2012], Singapore** – Scientist at Temasek Life Sciences Laboratory (TLL) has been awarded the prestigious Beadle and Tatum Award 2012. Dr Gregory Jedd, Senior Principal Investigator at TLL, received his award on March 8<sup>th</sup> at the Neurospora conference in Asilomar, California.

Dr Gregory Jedd received his Bachelor's degree at Stanford University, his PhD from The University of Chicago and did post-doctoral work at the Rockefeller University where he began using the Neurospora model system. He established an independent research group at TLL in 2005 and was promoted to Senior Principal Investigator in 2010.

"I was attracted to Neurospora because it has the powerful genetics of unicellular yeasts, but possesses attributes common to multicellular eukaryotes, and this presented opportunities to ask questions about biological organization that are not readily addressed in other systems," said Dr Gregory Jedd.

All organisms are composed of cells, which contain diverse membrane bound organelles that perform tasks essential for cellular metabolism, growth and development. Defects in organelle function are often linked to human disease, yet our understanding of their basic biology remains rudimentary.

Motivated to discover fundamental principles of biological organization, Dr Jedd and his team make use of a multidisciplinary approach centered on Neurospora genetics to study how organelles assemble and function. They have identified molecular mechanisms that determine organelle differentiation, inheritance and abundance and their findings have been published in highly regarded international journals such as *Developmental Cell*, *PLoS Genetics* and *The Journal of Cell Biology*.



Dr Jedd says, “In the long-term, deciphering mechanisms that control organelle biogenesis and function in model organisms can yield insight into human biology and disease, and open new opportunities for treatment.”

Fungal infections pose a growing threat to human health and existing drug therapies are frequently ineffectual. Dr Jedd’s team is also using *Neurospora* genetics to identify targets for new antifungal drugs.

“*Neurospora*’s evolutionary relationship to important pathogenic fungi helps us to strike a balance between discovery-directed research and work that can produce a more immediate benefit to human society,” said Dr Jedd.

Professor Chan Soh Ha, Executive Director of TLL, says, “TLL utilizes a broad range of model organisms like *Neurospora* to study genetics and molecular cell biology which provide insights into the functions and mechanisms of other more complex organisms. I would like to congratulate Gregory for being a recipient of this prestigious award and look forward to future developments from his research.”

The fundamental aspects of biology are conserved from fungus to humans. For decades, the red bread mold, *Neurospora crassa*, has provided an ideal experimental system due to its ease of growth and haploid life cycle that greatly simplifies genetic analysis.

In the 1950s, Edward Tatum and George Wells Beadle used the genetics of *Neurospora* to obtain evidence indicating that discrete biochemical activities are typically encoded by a single gene. This work led to the “one gene, one enzyme” hypothesis, for which they were awarded the 1958 Nobel Prize in Physiology or Medicine. Established in 2002 by the community of *Neurospora* scientists, the Beadle and Tatum Award is presented biennially to individual to acknowledge outstanding and original research using *Neurospora* as a model organism.



### **About Temasek Life Sciences Laboratory (TLL)**

TLL is a non-profit organisation established in 2002 to undertake cutting-edge research in molecular biology and genetics utilising a broad range of model organisms. TLL is affiliated to the National University of Singapore and Nanyang Technological University. Our vision is to create an environment which can attract the brightest young minds worldwide, support their research and challenge them to be leaders in their own fields.

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