

## PRESS RELEASE

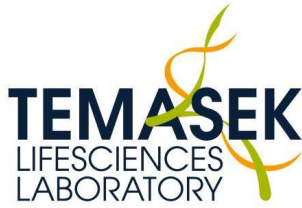
### TLL Young Scientists Receive Prestigious Awards For Outstanding Academic Accomplishment

**[27 May 2013], Singapore** – Two young scientists at Temasek Life Sciences Laboratory (TLL) have each received a significant award in recognition of their outstanding academic accomplishment. Ms Zhang Dan, a Junior Research Fellow at TLL, has been awarded the prestigious 2012 Chinese Government Award for Outstanding Self-financed Students Abroad by China Scholarship Council and Dr Guillaume Thibault, a postdoctoral fellow at TLL, has been awarded the Elite Nanyang Assistant Professorship Award 2013 by Nanyang Technological University.

Ms Zhang Dan graduated from Shanghai Jiao Tong University and joined TLL's Ph.D program in 2007 to study cell division using yeast as a model organism. She discovered that the architecture of intracellular membrane is supported by specific proteins and if disrupted, the structure will affect the symmetric division of a cell which can lead to abnormalities. The function of these specific proteins is conserved from yeast to human and is closely related to motor neuron diseases, such as the Amyotrophic Lateral Sclerosis (ALS) that affects nerves cells and causes muscle weakness. The findings have been published in the scientific journal *Current Biology*.

"The amazing thing about my research is that we can use simple yeast model to address very fundamental biological questions, such as why the morphology of the intracellular membrane is important," said Zhang Dan. "This research provides insights into the understanding of the causes of human motor neuron diseases and the possibility of finding suitable targets for therapeutic development."

In 2012, about 400,000 self-financed Chinese students pursued their studies abroad with 5% on graduate studies. A total of 489 Chinese Ph.D students across all fields of

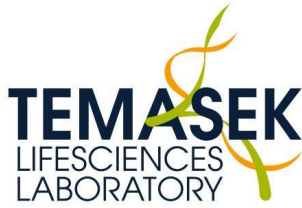


study from 25 nations received the award and out of which, 29 awardees are studying in Singapore. Ms Zhang Dan is the sole winner for the life sciences category in Singapore.

Dr Guillaume Thibault joined TLL in 2008 to focus on cell stress by studying the global effects of lipid imbalance using yeast as a model organism. He discovered that the lipid imbalance in yeast results in an accumulation of fats within a cell and in response to this, the cell changes its protein composition in order to neutralize the lethal effects from such lipid imbalance. This mechanism is also conserved from yeast to human liver cells where lipid imbalance can cause lipid droplets to form within a cell causing metabolic diseases such as the Non-Alcoholic Fatty Liver Disease (NAFLD) which can increase the chances of developing diabetes. The findings were published in a high impact journal *Molecular Cell* last year.

“It is important to establish the basis on how lipid imbalance may trigger various stress responses and contribute to diseases. The model system which I have developed will facilitate the advancement of unexplored research areas and I will apply the knowledge on higher organisms so as to study more complex systems,” said Guillaume. “By understanding the mechanisms on how cell responds to stress towards the development of metabolic diseases, there is a potential for developing diagnostic tests and treatments for early stage diseases.”

Professor Chan Soh Ha, Executive Director of TLL, says, “As part of TLL’s mandate, we aim to support and nurture our people and challenge them to be leaders in their own fields. TLL continues to attract young researchers and motivates them to achieve breakthrough science and impactful applications. In TLL, many of our scientists utilize a broad range of model organisms like yeast 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 Zhang Dan and Guillaume for their respective achievements and look forward to more exciting discoveries from their research work.”



### **About Chinese Governmental Award**

The Chinese Government Award was set up by the Chinese government in 2003 to honor overseas non-government sponsored Chinese students who have achieved outstanding academic accomplishment. The awards are based on academic merit and encourage international students to achieve first-class results during their studies.

For more information, please visit <http://en.csc.edu.cn>.

### **About Nanyang Assistant Professorship Award**

The Nanyang Assistant Professorship Scheme was launched in 2007 as an elite career award for outstanding young researchers and exceptional scholars worldwide who have the research leadership capability to independently lead their own research groups.

For more information, please visit <http://www3.ntu.edu.sg/NAP/index.html>.

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

TLL, established in 2002, is a beneficiary of Temasek Trust and is affiliated to the National University of Singapore and Nanyang Technological University. The research institute aims to build a preeminent organization of global talent to undertake bio-molecular science research and applications to benefit people in Asia and beyond.

For more information, please visit [www.tll.org.sg](http://www.tll.org.sg).

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