





# 章保羅 Paul E. Verslues

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## 代表作名稱:

- ★ Sandeep Sharma, Joji Grace Villamor, and <u>Paul E. Verslues</u>\*. "Essential Role of Tissue-specific Proline Synthesis and Catabolism in Growth and Redox Balance at Low Water Potential." *Plant Physiology* 57 (2011): 292-304.
- ★ Ravi Kesari, Jesse R. Lasky, Joji Grace Villamor, David L. Des Marais, Ying-Jiun C. Chen, Tzu-Wen Liu, Wendar Lin, Thomas E. Juenger, and <u>Paul E. Verslues</u>\*. "Intron-mediated Alternative Splicing of Arabidopsis P5CS1 and its Association with Natural Variation in Proline and Climate Adaptation." *Proceedings of the National Academy of Sciences of the United States of America* 109.23 (2012): 9197-9202.
- ★ Govinal Badiger Bhaskara, Thao Thi Nguyen, and <u>Paul E. Verslues</u>\*. "Unique Drought Resistance Functions of the Highly-ABA-Induced Clade A Protein Phosphatase 2Cs." *Plant Physiology* 160 (2012): 379-395.

#### 得獎簡評:

韋保羅博士主要從事植物因應逆境生理調控的研究。植物在乾旱的環境下,會大量 累積脯胺酸,但過去對其機制不甚了解。韋博士的研究團隊對了解植物抗旱的機制,有 極其重要的成果。他們發現在乾旱環境下,脯胺酸的生合成及降解的調控都是維持植物 生長的重要因素。他們也利用不同品系的阿拉伯芥草間的自然差異性來研究植物因應逆 境的機制,發現選擇性的剪接與此有所關連。植物逆境研究是一個高度競爭的領域。韋 博士能夠採用不同的策略來研究植物抗逆境的機制,並獲得重大成果,顯示其具有傑出 的研究能力,值得獲此獎的肯定。



# 2014年中央研究院年輕學者研究著作獎得獎人簡介

生命科學組

## 得獎人簡歷:

Paul Verslues joined the faculty of the Institute of Plant and Microbial Biology, Academia Sinica as an Assistant Research Fellow in 2007 and was appointed as an Associate Research Fellow in 2013. The Verslues laboratory works to understand molecular mechanisms important to maintain plant productivity in suboptimal and changing environmental conditions. Dr. Verslues received his B.S. and M.S. degrees in Agronomy and Plant Physiology from the University of Missouri, and did his PhD and postdoctoral research in Plant Biology at the University of California-Riverside.

## 代表作簡介:

Many plants accumulate proline during drought; however, how proline contributes to drought resistance has remained unclear. We found that proline metabolism controls celluar redox status during stress (Sharma et al., 2011) and discovered that alternative splicing is used as a mechanism to adjust the protein level of proline synthesis enzyme P5CS1 and modify proline synthesis as part of adaptation to different environments (Kesari et al., 2012). We also found new roles of protein phosphatases in controlling drought responses (Bhaskara et al., 2012).

#### 得獎感言:

I appreciate very much this recognition as well as the great efforts of everyone in my laboratory and family support which have made this possible.