**Identification of drought tolerance genes in rice**

LeLe Wang1, LeLe Liu1,2,\*

1 Conway Institute and School of Computer Science, University College Dublin, Dublin, Ireland

2 College of Life Sciences, Peking University, Beijing 100871, China

\*Corresponding author: test@pku.edu.cn

Synthetic lethal interactions, where mutation of one gene renders cells sensitive to inhibition of another gene, can be exploited for the development of targeted therapeutics in cancer. Pairs of duplicate genes (paralogs) often share common functionality and hence are a potentially rich source of synthetic lethal interactions. Because the majority of human genes have paralogs, exploiting such interactions could be a widely applicable approach for targeting gene loss in cancer. Moreover, existing small-molecule drugs may exploit synthetic lethal interactions by inhibiting multiple paralogs simultaneously. Consequently, the identification of synthetic lethal interactions between paralogs could be extremely informative for drug development. Here we review approaches to identify such interactions and discuss some of the challenges of exploiting them.

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