Announcement of awards by the *Journal of Plant Research*

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Best Paper Awards 2010

I am very pleased to announce that the two following papers won the *Journal of Plant Research* (JPR) Best Paper Award 2010:

- (1) Michitaka Notaguchi, Yasufumi Daimon, Mitsutomo Abe, and Takashi Araki (2009) Adaptation of a seedling micro-grafting technique to the study of long-distance signaling in flowering of *Arabidopsis thaliana*. J Plant Res 122: 201–214
- (2) Kosei Sone, Alata Antonio Suzuki, Shin-Ichi Miyazawa, Ko Noguchi, and Ichiro Terashima (2009) Maintenance mechanisms of the pipe model relationship and Leonardo da Vinci's rule in the branching architecture of *Acer rufinerve* trees. J Plant Res 122: 41–52.

These award-winning works were selected from all the original papers published in the *Journal of Plant Research* in 2009 by a vote of the editorial board members according to the JPR Awards Selection Procedure. Reflecting the broad scope of our journal, which covers a wide range of plant sciences from taxonomy, anatomy, physiology, and ecology, to molecular genetics, these two papers are in the fields of molecular physiology and ecophysiology, respectively. Here I would like to briefly introduce the contents of the two papers.

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In Notaguchi et al. (2009), the authors reported an improvement of a micro-grafting technique for small and thin *Arabidopsis* seedlings. The grafting technique is a very useful one for testing whether growth regulators are transmitted from a particular organ to another, but the small *Arabidopsis* plant body is not good material for such surgical experiments. I myself reported on grafting in *Arabidopsis* in 1993, which was one of the earliest trials of grafting in *Arabidopsis* (Tsukaya et al. 1993), and then many people adopted grafting techniques to *Arabidopsis* seedlings. However, the micro-grafting technique reported by Notaguchi et al. (2009) is far more elegant than the previous ones. This sophisticated technique enabled the research team of Prof. Araki, the last author of an earlier paper (Notaguchi et al. 2008), to show that florigen is a protein, not mRNA, which had been under debate.

In Sone et al. (2009), the authors analyzed the effects of branch manipulation on pipe model relationships using five *Acer rufinerve* trees. On tree branching, two rules are known to be dominant: pipe model relationships (constancy of branch cross-sectional area/leaf area) and Leonardo da Vinci's rule (equality of total cross-sectional area of the daughter branches and cross-sectional area of their mother branch). From well-designed experimental treatments, Sone et al. (2009) revealed that these rules are maintained under the source–sink balance and branch shedding. This study is a good representative of Japanese ecophysiology, which has a long history.

Most-Cited Paper Award

In addition to the above-mentioned awards, the winner of the Most-Cited Paper Award is selected from all the papers

published in 2007 by reference to the ISI database. That award was won by the following paper:

Tomonobu Kusano, Koji Yamaguchi, Thomas Berberich, and Yoshihiro Takahashi (2007) Advances in polyamine research in 2007. *J Plant Res* 120: 345–350.

In recent decades, many new plant growth regulators have been discovered and analyzed: peptides, new hormones, and others. Japanese researchers have contributed greatly to this research field. In the review by Kusano et al. (2007), the authors focused on polyamines. From studies of mutants that have defects in the biosynthesis of polyamines, we now know that polyamines are important for plant growth and development. In other words, lacking such genetic tools, we had overlooked the importance of these small compounds. This review concisely summarized the recent progress in studies of polyamines in plants and has caught the interest of a wide range of readers. In fact, this paper was cited 25 times before the end of 2009 and it continues to be cited.

As represented by the above three articles, JPR has published outstanding papers from a broad spectrum of research fields, papers that are cited by many plant scientists. Although the ISI impact factor of JPR has steadily increased from 2006 to 2008, the score for 2009 showed a very slight decrease, to 1.524 versus 1.590 for 2008. Following my analysis, I believe this is partly because in 2008 JPR did not publish any special issues or reviews, which often increase the number of citations. But this is good news, as it shows that even without review articles, JPR is now able to maintain a citation score of at least 1.5 approximately. This is attributable to the great efforts of editors, authors, reviewers, readers, and our publisher, Springer, to improve the quality of the journal.

As seen in three special issues this year, we invited articles on Leaf Development and Evolution, Cytoplasmic Inheritance, Arabidopsis Research, and Ecology of Carbon Cycle Process to remind readers and potential authors that our journal is an international journal covering an extensive range of basic plant sciences. In addition to this message, there are further, ongoing improvement trials, which will enhance the reputation of JPR in the plant science field.

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