

## Curriculum Vitae

Hiroo Fukuda (male), PhD.

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**Personal History:** Born: October 8, 1953  
Nationality: Japan

**Education:** 1973-1977, B.S., University of Tokyo (Tokyo, Japan) - Biology  
1977-1979, M.S., University of Tokyo - Botany  
1979-1982, PhD., University of Tokyo - Botany

**Research Career:**  
1982-1983, Postdoctoral Fellow - University of Tokyo  
1983-1989, Assistant Professor - Dept. of Biology, Osaka University (Osaka, Japan)  
1987-1988, Visiting Scientist - Max-Planck-Institut für Züchtungsforschung (Cologne, Germany)  
1989-1994, Associate Professor - Dept. of Biology, Tohoku University (Sendai, Japan)  
1994-1995, Professor - Dept. of Biology, Tohoku University  
1995-1997, Professor - Botanical Gardens, University of Tokyo (Tokyo, Japan)  
1997-present, Professor - Dept. of Biological Sciences, the University of Tokyo (Tokyo, Japan)  
2000-2005, Group Director - Plant Science Center, RIKEN (Yokohama, Japan)

**Editorial Duties:**  
1991-1994, Advisory Board of The Plant Journal  
1991-1995, Editorial member of Plant and Cell Physiology  
1993-1994, Editor of Journal of Plant Research  
1995-1999, Editor of Plant and Cell Physiology  
1996-2003, Editor of Plant Molecular Biology  
1998-2003, Editorial member of Planta  
1998-present, Editorial member of International Review of Cytology  
2001-present, Editorial member of Journal of Plant Biology  
2001-2003, Member of an online journal, Faculty of 1000  
2004- 2007, Editor-in-Chief of Plant and Cell Physiology

**Others**  
2009-2013, President of Japan Society of Botany

2009-2012, Vice-dean, Graduate School of Science, University of Tokyo  
2011-, Council Member, Science Council of Japan

## **Publications**

### **1. Original papers**

Ito, Y., Nakanomyo, I., Motose, H., Iwamoto, K., Sawa, S., Dohmae, N., and Fukuda, H.:  
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reveals genes involved in vascular development. *Plant Cell Physiol.* 47: 1394-1405, 2006.

Pyo, H., Demura, T. and Fukuda, H.: Vascular expression patterns of *Arabidopsis* bZIP group I  
genes. *Plant Biotech.* 23: 497-501, 2006.

Yamamoto, R., Fujioka, S., Iwamoto, K., Demura, T., Takatsuto, S. Yoshida, S. and Fukuda, H.:  
Co-regulation of brassinosteroid biosynthesis-related genes during xylem cell differentiation. *Plant  
Cell Physiol.* 48: 74-83, 2007.

Pyo, H., Demura, T., and Fukuda, H.: TERE; a novel cis-element responsible for a coordinated  
expression of genes related to programmed cell death and secondary wall formation during  
tracheary element differentiation. *Plant J.* 51: 955-965, 2007.

Shinya, T., Gális, I., Narisawa, T., Sasaki, M., Fukuda, H., Matsuoka, H., Saito, M. and Matsuoka,  
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reveals a novel MYB transcription factor involved in the regulation of phenylpropanoid metabolism.  
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Kinoshita, A., Nakamura, Y., Sasaki, E., Kyozuka, J., Fukuda, H. and Sawa, S.: Gain-of-function  
phenotypes of chemically synthetic *CLAVATA3/ESR*-related (CLE) peptides in *Arabidopsis  
thaliana* and *Oryza sativa*. *Plant Cell Physiol.* 48: 1821-1825, 2007.

Endo, S., Pesquet, E., Tashiro, G., Kuriyama, H., Goffner, D., Fukuda, H. and Demura, T.:  
Transient transformation and RNA silencing in *Zinnia* tracheary element differentiating cell  
cultures. *Plant J.* 53: 864-875, 2008.

Morinaga, S.-I., Nagano, A.J., Miyazaki, S., Kubo, M., Demura, T., Fukuda, H., Sakai, S. and  
Hasebe, M.: Ecogenomics of cleistogamous and chasmogamous flowering: genome-wide gene  
expression patterns from cross-species microarray analysis in *Cardamine kokaiensis* (Brassicaceae).  
*J. Ecol.* 96: 1086-1097, 2008.

Yamaguchi, M., Kubo, M., Fukuda, H. and Demura, T.: VASCULAR-RELATED NAC-DOMAIN7 is involved in differentiation of all types of xylem vessels in Arabidopsis roots and shoots. *Plant J.* 55: 652-664, 2008.

Sawa, S., Kinoshita, A., Betsuyaku, S., and Fukuda H.: A large family of genes that share homology with CLE domain in Arabidopsis and rice. *Plant Signaling & Behavior*, 3: 337-339, 2008.

Hirakawa Y., Shinohara, H., Kondo, Y., Inoue, A., Nakanomyo, I., Ogawa, M., Sawa, S., Ohashi-Ito, K., Matsubayashi, Y. and Fukuda, H.: Non-cell-autonomous control of vascular stem cell fates by a CLE peptide/receptor system. *Proc. Natl. Acad. Sci. USA*, 105: 15208-15213, 2008.

Sakaguchi, J. and Fukuda, H.: Cell differentiation in the longitudinal veins and formation of commissural veins in rice (*Oryza sativa*) and maize (*Zea mays*). *J. Plant Res.* 121: 593-602, 2008.

Miwa, H., Betsuyaku, S., Iwamoto, K., Kinoshita, A., Fukuda H., and Sawa, S.: The receptor-like kinase SOL2 mediates CLE signaling in Arabidopsis. *Plant Cell Physiol.* 49: 1752-1757: 2008.

Kato, K., Gális, I., Suzuki, S., Araki, S., Demura, T., Criqui, M.-C., Potuschak, T., Genschik, P., Fukuda, H., Matsuoka, K., and Ito, M.: Preferential up-regulation of G2/M phase-specific genes by overexpression of hyperactive form of NtmybA2 lacking its negative regulation domain in tobacco BY2 cells. *Plant Physiol.* 149: 1945-1957, 2009.

Motose, H., Iwamoto, K., Endo, S., Demura, T., Sakagami, Y., Matsubayashi, Y., Moore, K. L. and Fukuda, H.: Involvement of phytosulfokine in the attenuation of stress response during the transdifferentiation of *Zinnia* mesophyll cells into tracheary elements. *Plant Physiol.* 150: 437-447, 2009.

Yoshida, S., Iwamoto, K., Demura, T. and Fukuda, H.: Comprehensive analysis of the regulatory roles of auxin in early transdifferentiation into xylem cells. *Plant Mol Biol.*, 70: 457-469, 2009.

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Kuroha, T., Tokunaga, H., Kojima, M., Ueda, N., Ishida, T., Nagawa, S., Fukuda, H., Sugimoto-Shirasu, K., and Sakakibara, H.: Functional analyses of the Arabidopsis LONELY GUY family encoding cytokinin-activating enzymes reveal the importance of the direct activation pathway in Arabidopsis thaliana. *Plant Cell* 21: 3152-3169, 2009.

Yamaguchi, M., Ohtania, M., Mitsuda, N., Kubo, M., Ohme-Takagi, M., Fukuda, H. and Demura,

T.: VND-INTERACTING2, a NAC Domain Protein, Negatively Regulates Xylem Vessel Formation in Arabidopsis. *Plant Cell* 22: 1249-1263, 2010.

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Hirakawa Y., Kondo, Y., and Fukuda, H.: TDIF peptide signaling regulates vascular stem cell proliferation via the *wox4* homeobox gene in Arabidopsis. *Plant Cell*, 22: 2618-2629, 2010. (selected as an In Brief and cover)

Ohashi-Ito, K., Oda, Y. and Fukuda, H.: Arabidopsis VASCULAR-RELATED NAC-DOMAIN6 directly regulates genes that govern programmed cell death and secondary wall formation in a coordinated way during xylem differentiation. *Plant Cell*, 22: 3461-3473, 2010.

Kinoshita, A., Betsuyaku, S., Osakabe, Y., Mizuno, S., Nagawa, S., Stahl, Y., Simon, R., Yamaguchi-Shinozaki, K., Fukuda, H. and Sawa, S.: RPK2/TOAD2 is an essential receptor-like kinase transmitting the CLV3 signal in Arabidopsis. *Development*, 137: 3911-3920, 2010. (selected in in this issue)

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Kubo, M., Furuta, K., Demura, T., Fukuda, H., Liu, Y.-G., Shibata, S. and Kakimoto, T.: The CKH1/EER4 gene encoding a TAF12-like protein negatively regulates cytokinin sensitivity in *Arabidopsis thaliana*. *Plant Cell Physiol.* 52: 629-637, 2011.

Kobayashi, Y., Motose, H., Iwamoto, K. and Fukuda, H.: Expression and genome-wide analysis of the xylogen-type gene family. *Plant Cell Physiol.* 52: 1095-1106, 2011.

Yaginuma, H., Hirakawa, Y., Kondo, Y., Ohashi-Ito, K. and Fukuda, H.: A novel function of TDIF-related peptides: Promotion of axillary bud formation. *Plant Cell Physiol.* 52: 1354-1364, 2011.

### **Reviews**

Demura, T. and Fukuda, H.: Transcriptional regulation in wood formation. *Trends in Plant Sci.* 12: 64-70, 2007.

Fukuda, H., Hirakawa, Y. and Sawa, S.: Peptide signaling in vascular development. *Curr Opin Plant Biol.* 10: 477-482, 2007.

Miwa, H., Kinoshita, A., Fukuda, H. and Sawa, S.: Plant Meristems: CLAVATA3/ESR-related signaling in the shoot apical meristem and the root apical meristem. *J. Plant Research* 122: 31-39, 2008.

Hirakawa Y., Kondo, Y. and Fukuda, H.: Regulation of vascular development by CLE peptide-receptor systems. *J. Int. Plant Biol.*, 52: 8-16, 2010.

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Hirakawa Y., Kondo, Y. and Fukuda, H.: Establishment and maintenance of vascular cell communities through local signaling. *Curr. Opin. Plant Biol.* 14: 17-23, 2011.

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