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For Immediate Release

Ninna-ji Temple
Sumitomo Forestry Co., Ltd.

—Ninna-ji Temple, Omurozakura Research Project—

Omurozakura—Launch Trial Planting of Tissue Culture Seedlings

The *Omurozakura* cherry trees at Ninna-ji Temple (Head priest: Yodo Minami, Ukyo-ku, Kyoto; hereinafter “Ninna-ji”), the headquarters of the Omuro Buddhist sect, are famous for being late blooming cherry trees that add the final touches of color to the end of Kyoto’s beautiful spring season. The *Omurozakura* of Ninna-ji are designated as a Historic Monument of Ancient Kyoto, a UNESCO (United Nations Educational, Scientific and Cultural Organization) World Heritage Site. The *Omurozakura* Research Project, which includes Ninna-ji and Sumitomo Forestry Co., Ltd. (President and Representative Director: Akira Ichikawa; Head Office: Chiyoda-ku, Tokyo; hereinafter “Sumitomo Forestry”), announced that the first *Omurozakura* seedlings, which Sumitomo Forestry’s Tsukuba Research Institute (Director: Naoteru Umesaki; Location: Tsukuba City, Ibaraki Prefecture) successfully bred in January 2010 using tissue culture, had reached an optimal size for planting, and will be returned to Ninna-ji and trial planting will be conducted in several locations with different soil and weather conditions.

To reach the grove of *Omurozakura* at Ninna-ji, one passes through the inner gate of the temple grounds. The cherry trees are to the left. The *Omurozakura* are unique because they do not grow taller than the height of an average adult, and consequently their blossoms can be viewed at eye level. The *Omurozakura* are believed to have been planted in the third year of Shoho (1646), when the temple’s reconstruction was completed, are thought to be more than 360 years old. In light of the pronounced decline in the trees’ vitality in recent years, Ninna-ji consulted with the Cultural Properties Division of Kyoto and various other government agencies, aiming to unravel the mysteries of the growth of these cherry trees and to manage and maintain their scenic beauty. In April 2007, Sumitomo Forestry, in conjunction with the Graduate School of Horticulture, Faculty of Horticulture, Chiba University, established the *Omurozakura* Research Project and has since conducted research, including growth surveys, soil and root system surveys, breeding of seedlings, and DNA analysis.

The trial planting is to be conducted across Japan at locations including Ninna-ji and on land managed by Sumitomo Forestry. The project is considering inviting several elementary and junior high schools damaged in the Great East Japan Earthquake to participate in the research project, to get children to think about the future by nurturing the seedling cherry trees. Related institutions, including the Ministry of Education, Culture, Sports, Science and Technology and the Board of Education of various municipalities, are being consulted and proposals are being made to carry out the trial planting. The objective of the *Omurozakura* Research Project is to protect and pass on the culture of the *Omurozakura* cherry trees. By implementing the trial jointly with regional elementary and junior high schools, the tissue culture seedlings to be planted in the devastated areas will become a symbol that will continue to convey the memories of the disaster to future generations.

■ *Omurozakura* tissue cultures

The *Omurozakura* seedlings were multiplied by dividing the roots from the parent plant. This type of cherry tree is very delicate and in many cases the flowers become single-petal flowers, reverting to their ancestral form, after the roots are divided, and gradually stop producing the double-petal flowers which they are known for.

Tsukuba Research Institute employed the shoot-tip culture method, a tissue culture technique, and developed a means of cultivation that will make it highly possible to grow double-petal blossoming *Omurozakura* cherry trees, to pass on the scenery created by the *Omurozakura* for later generations. In the shoot-tip culture method, the meristem of the bud (shoot-tip) is extracted under a microscope and reproduced. The shoot-tip, even under natural conditions, is said to be in an aseptic (sterile) state. Consequently, there is a relatively low risk of the seedlings being affected by disease or harmful insects.

In addition, by reproducing seedlings using this method, it is likely that the flowers will not revert to a single-petal form but instead retain their double-petal structure.

Theoretically, seedlings reproduced by harvesting materials from the branch of a double-petal *Omurozakura* cherry tree and using the shoot-tip culture method should always produce cherry trees with double-petal flowers. Given the very delicate nature of the *Omurozakura*, it is necessary to conduct an inspection of the petals of the reproduced seedlings and confirm that they are indeed double-petal. To do this, trial planting will be conducted of seedlings that have reached a height where they can now be replanted.

■ Trial planting

(1) Summary of the trial

Since the reproduced tree adopts a form identical to the tree that was the source of tissue for propagation, it can be assumed that all the seedlings will develop in the same way under similar soil and weather conditions. Consequently, by observing growth patterns of reproduced seedlings planted in areas other than Ninna-ji, it can likely be discerned as to whether soil, the unique traits of the tree itself, or a combination of the two are determinant factors for growth.

Trial planting is to be conducted at five locations—the grounds of Ninna-ji and land managed by the Sumitomo Forestry group in Miyazaki, Ehime, Kanagawa, and Ibaraki Prefectures. Planting is also scheduled to be carried out at several areas in the Tohoku region that were damaged during the Great East Japan Earthquake. Plans are to plant between 1 to 10 seedlings at each location. The trial planting is scheduled to begin in November 2012. At Ninna-ji, a total of nearly 50 reproduced seedlings are slated to be planted gradually over time after going through several phases.

(2) Trial planting in the Tohoku region

Steps will be taken to achieve trial planting in the Tohoku region from November 2012 after consulting with related parties, including the Ministry of Education, Culture, Sports, Science and Technology and the Boards of Education of various municipalities. As a part of the trial planting, in which the Tohoku elementary and junior high school students will participate, Ninna-ji will arrange for personnel who are well-informed in the *Omurozakura* and its history, and prepare detailed materials, to properly convey the significance of carrying on the tradition of the *Omurozakura*. The Sumitomo Forestry Group will provide biotechnologies related to the *Omurozakura* tissue culture seedlings and their rearing, and cover the costs of the project. Specifically, the following measures will be taken. Given the need to conduct ongoing observations and research, the areas to be selected for trial planting will exclude locations such as those that experience deep snow, where surveys can only be carried out for short periods of time, or where there is potential for salt damage.

(1) Trial planting and growth survey of the *Omurozakura* tissue culture seedlings jointly with elementary and junior high school students in the quake devastated areas.

(2) Annual meetings where participating elementary and junior high schools gather to report on their research and also the preparation of research reports.

(3) The trial planting is to be implemented for a period of five years. After the trial is completed, the elementary and junior high schools that conducted the research will take on the responsibility of caring for the plants.

* Sumitomo Forestry Tsukuba Research Institute

The institute was established in 1991 at the Tsukuba Science City, which is in Tsukuba City, Ibaraki Prefecture. The goal of the institute is to conduct extensive R&D to discover comprehensive uses for wood. From the standpoint of the wood-based resources, and construction and housing operations, the institute pursues the potential uses for wood as a building material, conducts research on developing appealing wood housing materials, identifies effective uses for resources, and tackles various other research themes aiming to develop a recycling-oriented society, including R&D to create a comfortable living environment. In addition, the adjacent Techno Center, which conducts testing and verification of the quality of various components and housing materials, and the Wood and Housing Technical Data Center, which gathers research results and technological information, and provides information in a timely fashion, supports initiatives for the commercialization of cutting-edge technologies.