protein kinase gene, and pS321 (unknown function). These results suggest that the differentially expressed genes may mediate the strong resistance of soybean 561 to *Pseudomonas aeruoginosa*.

1-19. CGMMV Resistant Watermelon Stock

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In order to cultivate watermelon on farm, grafting of the watermelon seedling to the watermelon stock is necessary because the watermelon root is less viable than the root of watermelon stock. Recently, commercially important watermelon varieties further require a resistant stock against especially CGMMV to control the heavy loss of the total yield of watermelon by CGMMV infection. Therefore, we have set out a project to develop a CGMMV-resistant watermelon stock. We have successfully transformed dozens of watermelon stocks (gongdae) during last two years especially using a cDNA encoding the coat protein of CGMMV (cucumber green mottle mosaic virus). Recently we have tested levels of resistance of those watermelon stocks against CGMMV infection. For CGMMV inoculation, the leaves of one month old gongdae (T1) were rubbed by carborundum mixed with the CGMMV. A total of 140 plants (T1) were exposed to the CGMMV and we found that ten plants were completely resistant to virus infection. This is the first report that by genetic engineering a cucubitaceae crop resistant to CGMMV infection is ever developed. Further information will be provided in the poster.

1-20. Association of Aster Yellow Phytoplasma with Witches' Broom Disease of Ash (*Fraxinus rhynchophylla* Hence) in Korea

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Typical whiches broom symptoms caused by phytoplasma were observed in Ash (*Fraxinus rhynchophylla* Hence) in Korea. The symptoms were showing abnormally small leaves, short internodes, and proliferation of shoots. Fluorescence and electron microscopy of leaf midribs revealed phytoplasma positive DAPI fluorescence and numerous phytoplasma bodies localized in the phloem sieve tubes. Phytoplasma DNA of 1.8 Kb was detected consistently from all symptomatic samples by the amplification of phytoplasma DNA with the phytoplasma specific primer pair P1/P7. But no phytoplasma DNA was detected in healthy ash seedlings. Based on sequence analyses of an amplified region, this phytoplasma is closely related to Eqilodium phyllody, Mulberry dwarf, and Aster yellows phytoplasmas with the homology of 99.95 %, 99.79 % and 99.78 %, respectively, This phylogenetic analyses indicate that ash witches broom phytoplasma but is evidently distinct from the ash yellows group 16SrVII and should be classified into the Aster yellows group 16SrVI.