Poster Presentation 3

P3-31

New disease of Sequoia sempervirens in Japan caused by the *Pestalotiopsis* spp.

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Purpose: Pinnate compound leaves of *Sequoia sempervirens* which had turned to brown and withered were collected in Japan in March 2019. This symptom resembles the leaf disease of *S. sempervirens* caused by *Cercospra exosporioides*, but differs in that the disease which occurred in 2019 produced many acervuli on the back of the leaves. Conidia are typical morphologies of *Pestalotiopsis* fungi. The aim of this study is to diagnose this unknown disease.

Methods: Two monocultural strains (TAP19K001, TAP19K002) were obtained from the leaves which showed symptoms. Pathogenicity tests were conducted on the healthy leaves with mycelial discs. The pathogens were identified based on molecular and morphological analyses.

Results: Both strains had pathogenicity to healthy leaves with wounds and were re-isolated form the leaves showing symptoms.Conidia of TAP19K001: 14-24x6-7.5 μm in size; three median cells; mainly versicolorous, 12-17 μm; apical appendages, 6.5-19.5 μm. These characteristics are similar to *P. palmarum*. TAP19K002: 14-26.5x3.5-6 μm; three median cells, concolourous, 12-17 μm; apical appendages, 6-17 μm. Identity of nucleotide sequences of ITS+β-tubulin+TEF1 between these strains was 99.6%. NJ tree based on these sequences showed both strains were placed in the *P. chamaeropis* clade with 94% BS value. However, the conidial morphologies of both strains differed from those of P. chamaeropis.

Conclusion: This disease that affects the leaves of *S. sempervirens* was caused by an unidentified species belonging to the genus *Pesalotiopsis*. There is no record of this disease in Japan.