

Pseudoarthrographis phlogis



Fungal Planet 759 – 13 July 2018

Pseudoarthrographis* Crous & Thangavel, gen. nov.Etymology.* Name reflects a similarity to the genus *Arthrographis*.Classification — *Incertae sedis*, *Dothideomycetes*.

Mycelium consisting of smooth, pale brown, septate, branched, hyphae. *Conidiophores* solitary, arising directly from superficial hyphae, subcylindrical, pale brown, smooth, erect, 0–1-septate, or reduced to conidiogenous loci directly on hyphae. *Conidiogenous cells* solitary, loci on hyphae or terminal on conidiophores,

integrated. *Arthroconidia* occurring in chains, cylindrical with truncate ends, smooth, pale olivaceous in mass, 0–1-septate, in branched or unbranched chains, hila inconspicuous, truncate. *Chlamydospores* developing in culture, occurring in chains, globose, medium brown, smooth.

Type species. *Pseudoarthrographis phlogis* Crous & Thangavel.
Mycobank MB825401.

Pseudoarthrographis phlogis* Crous & Thangavel, sp. nov.Etymology.* Name refers to *Phlox*, the host genus from which this fungus was collected.

Mycelium consisting of smooth, pale brown, septate, branched, 2–2.5 µm diam hyphae. *Conidiophores* solitary, arising directly from superficial hyphae, subcylindrical, pale brown, smooth, erect, 0–1-septate, or reduced to conidiogenous loci directly on hyphae, 10–25 × 2.5 µm. *Conidiogenous cells* solitary, loci on hyphae or terminal on conidiophores, integrated, 1–10 × 2.5 µm. *Arthroconidia* occurring in chains, cylindrical with truncate ends, smooth, pale olivaceous in mass, (3–)8–12(–15) × 2.5 µm, 0–1-septate, in branched or unbranched chains, hila inconspicuous, truncate, 2–2.5 µm diam. *Chlamydospores* developing in culture, occurring in chains, globose, medium brown, smooth, 5–7 µm diam.

Culture characteristics — Colonies spreading, with moderate aerial mycelium and smooth, lobed margin, reaching 7 mm diam after 2 wk at 25 °C. On MEA, PDA and OA surface and reverse olivaceous grey, with diffuse purple pigment on OA.

Typus. NEW ZEALAND, Prebbleton, Trents Rd., RD6, on *Phlox subulata* (*Polemoniaceae*), 10 June 2016, R. Thangavel, T16_02340G (holotype CBS H-23588, culture ex-type CPC 32759 = CBS 144414, ITS and LSU sequences GenBank MH327796.1 and MH327832.1, MycoBank MB825402).

Notes — *Pseudoarthrographis* is morphologically similar to the genus *Arthrographis*, which also resides in the *Dothideomycetes* (*Eremomycetaceae*). Species of *Arthrographis* have been isolated from the air, compost, marine sediments, soil, wood and also from opportunistic human infections (Giraldo et al. 2014). Another genus to consider in this description is *Arthrospis*, which accommodates species with dark arthroconidia, joined by adjacent connectives and developing from undifferentiated conidiogenous hyphae (Sigler et al. 1982).

Based on a megablast search of NCBI's GenBank nucleotide database, the closest hits using the ITS sequence had highest similarity to *Neodactylaria obpyriformis* (GenBank NR_154267.1; Identities = 476/571 (83 %), 29 gaps (5 %)), *Hormococcus conorum* (GenBank KF993412.1; Identities = 477/577 (83 %), 33 gaps (5 %)) and *Oncopodiella trigonella* (GenBank KY853455.1; Identities = 348/397 (88 %), 6 gaps (1 %)). Closest hits using the LSU sequence are *Spissiomyces ramosus* (GenBank KF680785.1; Identities = 830/877 (95 %), 5 gaps (0 %)), *Hysteropatella clavispora* (GenBank AY541493.1; Identities = 831/880 (94 %), 7 gaps (0 %)) and *Coniosporium apollinis* (GenBank GU250896.1; Identities = 818/867 (94 %), 2 gaps (0 %)).

Colour illustrations. *Phlox subulata* in New Zealand; hyphae forming chains of disarticulating conidia, chlamydospore-like structures and conidia. Scale bars = 10 µm.

Pedro W. Crous & Johannes Z. Groenewald, Westerdijk Fungal Biodiversity Institute, P.O. Box 85167, 3508 AD Utrecht, The Netherlands; e-mail: p.crous@westerdijkinstituut.nl & e.groenewald@westerdijkinstituut.nl
Raja Thangavel, Plant Health and Environment Laboratory, Ministry for Primary Industries, P.O. Box 2095, Auckland 1140, New Zealand; e-mail: thangavel.raja@mpi.govt.nz