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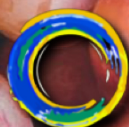
PENICILLIUM PIPERICOLA SP. NOV.: A NEWLY DISCOVERED SPECIES ISOLATED FROM BRAZILIAN BLACK PEPPER

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Brazil, globally recognized for its vast biodiversity, harbors an unparalleled wealth of ecosystems, including biomes of great ecological and economic relevance such as the Atlantic Forest, the Cerrado, and the Caatinga. These biomes, unique in their ecological complexity, have been attracting increasing scientific interest not only for their obvious biodiversity but also for the microbial diversity they host. In a recent investigation into the mycobiota of the Brazilian black pepper production chain, we identified a new species belonging to the genus *Penicillium*. The aim of this summary is to describe this new species based on polyphasic taxonomy. Morphological analyses followed Visagie et al. (2014) recommendations. Candidate species were tested on various media (MEA, CYA, CREA, YESA, DG18) and temperatures (25, 30 and 37 °C) for 7 days in triplicate. Microscopic analysis of colonies from MEA was conducted for size measurements using Carl Zeiss™ AxioVision Release 4.8.2. Multilocus phylogenetic analyses, including *CaM*, *ITS*, *RPB2*, and *BenA*, were conducted following the methods outlined by Silva et al. (2022), employing maximum likelihood, Bayesian inference, and coalescence-based approaches. Phylogenetically, the candidate species formed a robust monophyletic group, supported by multiple analytical approaches, suggesting an independent evolutionary lineage. Morphologically, it displayed distinct characteristics from its closest relative, *Penicillium mexicanum*, such as larger growth patterns, unique coloration, and distinctive microstructural features. The phenotypic and genotypic data strongly support the description of a new species in *Penicillium* subgen. *Penicillium* sect. *Paradoxa* Ser. *Atramentosa*, provisionally titled *Penicillium pipericola* sp. nov. (holotype ITAL-3J).

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