MOLECULAR CHARACTERIZATION OF *COLLETOTRICHUM* ASSOCIATED WITH ANTHRACNOSE ON *CAPSICUM CHINENSE* IN THE STATE OF AMAZONAS

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The genus *Colletotrichum* includes a number of plant pathogens species of major importance, causing anthracnose diseases of a wide variety of plants mainly in tropical and subtropical region. These fungal pathogens are a huge problem on perennial crops and also frequently causes significant economic losses in annual crops. Different species of *Colletotrichum* can be jointly associated with anthracnose on a single host. Currently there are four described species of Colletotrichum associated with anthracnose of chilli pepper *Capsicum chinense*, the *C. capsici* and *C. gloeosporioides* (India, Indonesia, Korea, Thailand), *C. acutatum* in Australia and *C. coccodes* in New Zealand. In Brazil few studies have been conducted with the aim of characterize the species responsible for anthracnose in *C. chinense*, despite the importance of the accurate taxonomic identification for plant breeding purposes and disease management. The goal of this study was to compare different isolates of *Colletotrichum* from anthracnose lesion on *C. chinense* collected in the state of Amazonas, using molecular markers. The monosporic culture and molecular analysis (ERIC-PCR, ISSR and Glutamine syntetase (GS) RFLP-PCR) of five isolates (2403, 2286, 2629, 2066, 1858) from the chili and three species previously identified (*C. fragariae, C. gloeosporioides* and *C. fruticola*), was carried out at the Molecular Biology Laboratory of Embrapa Western Amazon. The amplification was positive using specific primers to ERIC-PCR (ERIC1 5' ATGTTAAG TCCCTGGGGATTCAC-3' and ERIC2 5'-AGTAAGTGACTGGGGT GAGCG-3'), GS (GSF1 5'-ATGGCCGAGTACATCTGG-3' and GSR1 5'-AACCGT CGAAGTTCCAC-3') and ISSR (UBC 885 BHBGAGAGAGAGAGAGA). The ERIC-PCR and ISSR showed a unique and different band profiles for each of the three species of *Colletotrichum*, indicating the ability to differentiate the species of this genus. These molecular marker also were able to distinguish two of the five isolates from *Capsicum chinense* with unique band profiles The RFLP of the 1-kb GS intron based on PstI enzyme digestion, which is able to separate *C. acutacum* from *C. gloeosporioides*, showed that three left isolates can possibly be *C. acutatum*. Another isolate had a restriction profile similar to *C. gloeosporioides* and the last one is completely different from the others confirming the data from ERIC and ISSR. The specie identification of isolate from *C. chinense* will be performed subsequently, by sequence of specific regions and phylogenetic analysis.