SECRETARIA DE ESTADO DO MEIO AMBIENTE
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INTERNATIONAL ASSOCIATION FOR PLANT TAXONOMY RESEARCH GRANT REPORT

Systematics of the phlebioid clade (Basidiomycota, Polyporales) in the Brazilian Atlantic Forest

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Within the Polyporales, the phlebioid clade groups species with hymenophore mainly smooth or formed by pores, teeth, or veins. All species of the group are saprophytic and cause white rot in the wood. In recent phylogenies the phlebioid clade is divided into three relatively well-supported sub-clades that have recently been transferred to a more stable nomenclature and are recognized at the family level: *Irpicaceae*, *Meruliaceae* and *Phanerochaetaceae*. Nevertheless, the representatives of the neotropical region in these phylogenetic hypotheses are very scarce, so the effect of adding these terminals on the stability of the preferred topologies is completely unknown. Within the Neotropics, the Brazilian Atlantic Forest is one of the most diverse and most threatened areas due to the high fragmentation of habitat and deforestation. As proposed, the main goals of my PhD were to assess the phylogenetic position of specimens collected in the Brazilian Atlantic Forest within the phlebioid clade; establish characteristics of taxonomic importance for identification and diagnoses of genera and describe possible new species and new records for the region studied.

The IAPT Grant allowed: 1) collect fresh material of approximately 250 specimens in 8 Conservation Units in the Brazilian Atlantic Forest of Rio de Janeiro, São Paulo, and Santa Catarina states (vouchers will be deposited in Herbarium SP); 2) obtain cultures of approximately 100 specimens that will be deposited in the Culture Collection of the Institute of Botany (CCIBt); 3) obtain sequences from the ITS, LSU and *tef* regions for 32 specimens for phylogenetic reconstruction, 4) acquire loan of different specimens for conducting detail examination and analyses with compound microscopy and scanning electron microscopy (SEM) in order to analyze important characters for diagnosis of genera, 5) interact and learn with worldwide recognized mycologists and 6) unrestricted access to the content of the Taxon journal where many important mycological studies are published.

Preliminary results of this study were presented in national and International congresses/meetings: 1) VIII Congresso Brasileiro de Micologia (3–6 October 2016, Santa Catarina, Brazil), 2) I Workshop Singer Foray: incursões micológicas na Amazônia (28–31 March 2017, Manaus, Brazil), 3) IX Latin-American Mycological Congress (22–25 August 2017, Lima, Peru), and 4) 24ª Reunião Annual do Instituto de Botânica (27 Nov – 1 Dez 2017, São Paulo, Brazil). Finally, we will present the work entitled: Evolutionary relationships of *Gloeoporus* (Irpicaceae, Basidiomycota) with emphasis on *G. dichrous* complex at the XI International Mycological Congress which will be held from 16 to 21 July, 2018, San Juan – Puerto Rico, continuing with the presentation of results obtained with the support of the IAPT Research Grant.

Currently we have submitted two manuscripts in international journals, recognizing the support provided by IAPT Research Grant: 1) Evolutionary relationships of *Bresadolia* (Basidiomycota, Polyporales) based on molecular and morphological evidence (submitted to Mycological Progress) and 2) *Bjerkandera* in the

neotropics revisited: *Bjerkandera neofumosa* and *Bjerkandera albocinerea*, two new species based on morphological and molecular evidence (Submitted to Plant Ecology and Evolution).
Two additional manuscripts are in the preparation process and will be submitted to TAXON and Mycologia Journals.

The IAPT research grant allowed me for the first time to be a member of an important society for taxonomists and systematics and since then I have remained an active member, having access to the content of the TAXON Journal.

Financial Report

The IAPT Research Grant was mainly used to pay collecting trips, obtaining and keeping the collection of cultures of this project and to obtain DNA sequencing for the ITS, LSU and *tef* loci.

USD $1 = R $3.504

Expense type	$ USD	$ BRL	Comments
Collecting trips	136.98	480	8 Conservation Units (CU) were visited collecting approximately 250 specimens (5 CU in São Paulo, 2 CU in Santa Catarina and 1 CU in Rio de Janeiro)
Accommodation and meals	123.73	433.58	During the collecting trips we stay inside the conservation units reducing the accommodation costs
Culture media, lab elements and reagents	141.40	495.50	Potato dextrose agar and plates were by for cultures, and plastic plates necessary for sequencing
DNA sequencing	598	2095,39	32 specimens were successfully sequenced for ITS, LSU and *tef* at Macrogen (Korea)
TOTAL	**1000,11**	**3504.58**	

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