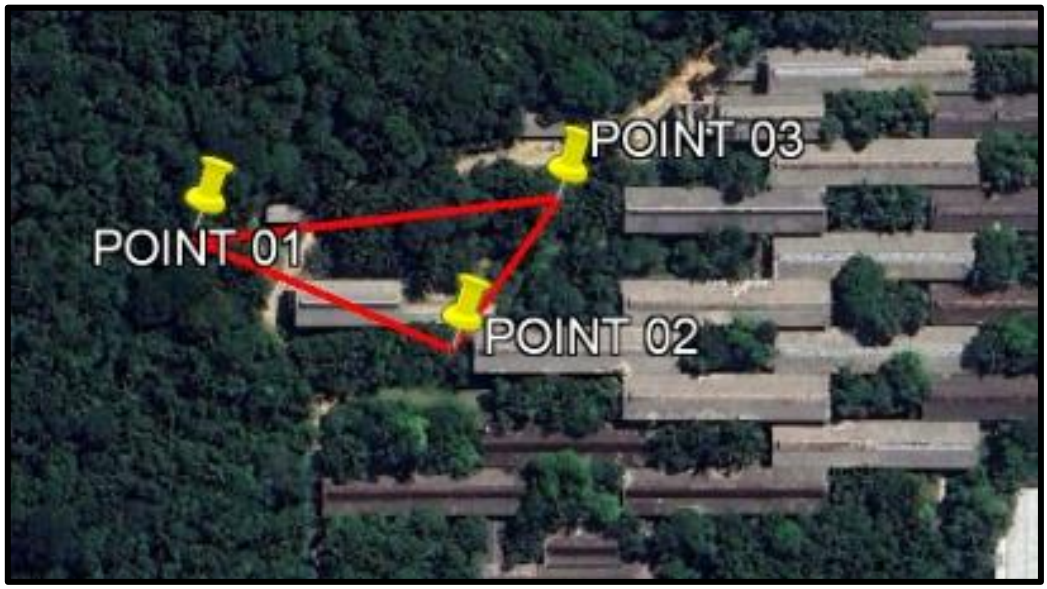
SUPPLEMENTARY MATERIAL

Potential biodiversity and antifungal activities of Amazonian actinomycetes isolated from rhizosphere of *Inga edulis* plants

Supplementary Material - SM1

Collection points within the Federal University of Amazonas Campus



Supplementary Material – SM2

STANDARD OPERATING PROCEDURE (SOP) FOR IMAGING SAMPLES IN THE SCANNING ELECTRON MICROSCOPE (SEM)

1. Pre-scanning electron microscopy processing:

1.1. Samples: approximately 0.5 cm culture medium discs containing the samples were sectioned and transferred to a 24-well plate;

1.2. Fixation: fixation by submerging samples in modified Karnovsky fixative (2.5% glutaraldehyde, 2.5% paraformaldehyde in 0.2 M sodium cacodylate buffer pH 7.2) for 24 hours, at room temperature;

1.3. Washing: 4 successive washes in 0.2 M sodium cacodylate buffer pH 7.2;

1.4. Post-fixation: submersion of samples for 2 hours in a solution of 2% osmium tetroxide and 1.6% potassium ferrocyanide (1:1 ratio) in 0.2 M sodium cacodylate buffer. Post-fixation was in the dark, covering the sample with aluminum paper;

1.5. Post-fixation washing: excess osmium was washed twice with 0.2 M sodium cacodylate buffer pH 7.2;

1.6. Dehydration: after washing in buffer, the samples were dehydrated with 30%, 50%, 70%, 80%, 90% and 100% ethanol solutions, keeping the samples submerged in each of the solutions for 20 minutes (This process was repeated three times in the 100% ethanol step.

1.7. Critical point drying: after dehydration, the samples submerged in absolute ethanol were subjected to Leica EM CPD300 critical point drying for 2h with 14 cycles;

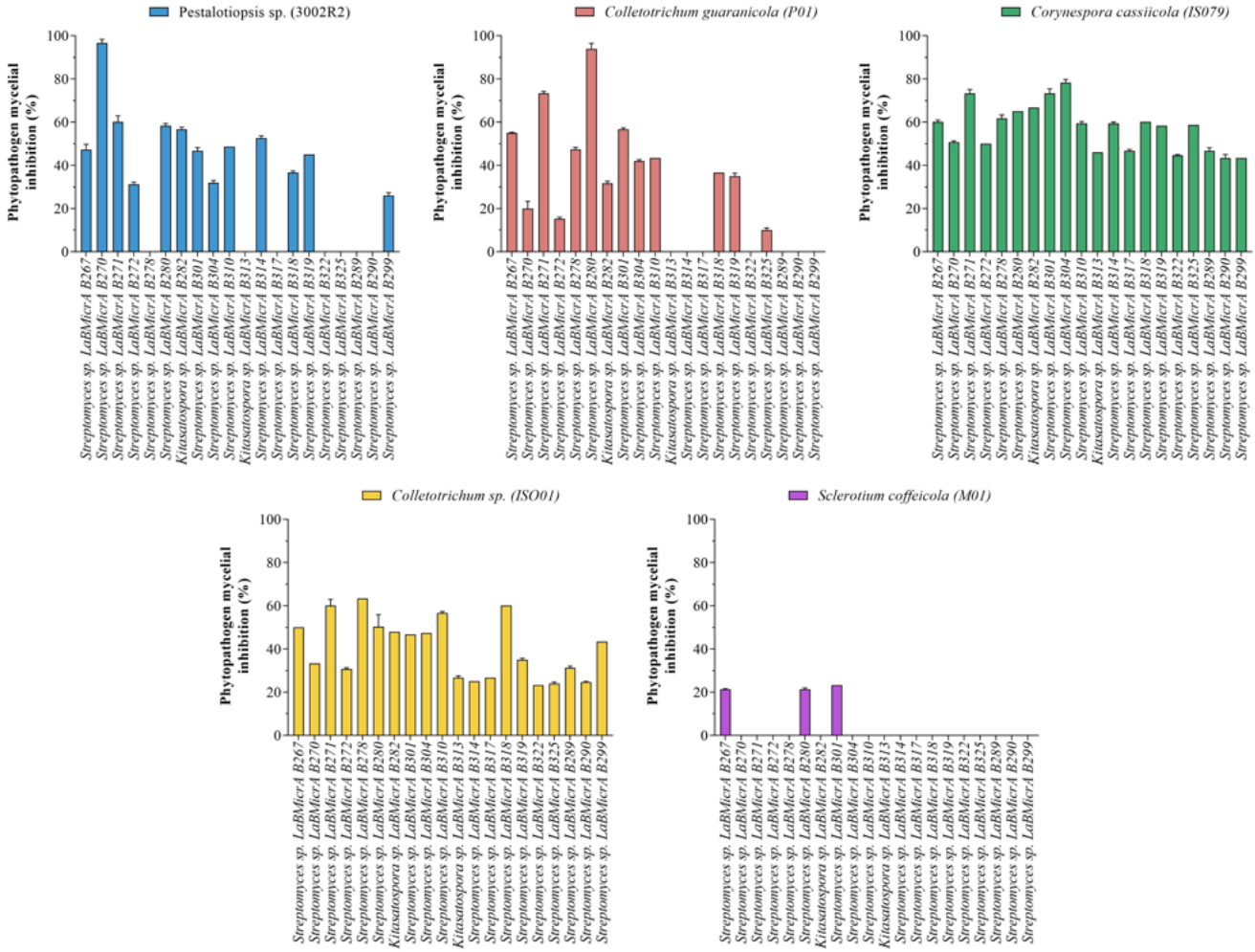
1.8. Metallization: after the processes mentioned above, the samples will be fixed on carbon tapes to the stubs and subjected to 4 minutes of metallization with gold, in the JEOL Smart Coater metalizer.

2. Analysis using the Jeol JSM-IT500HR scanning electron microscope

3. Theoretical framework: adapted from SOUZA, W. de. Electron microscopy techniques applied to Biological Sciences. Brazilian Society of Microscopy, Rio de Janeiro, 2007.

Supplementary Material – SM3

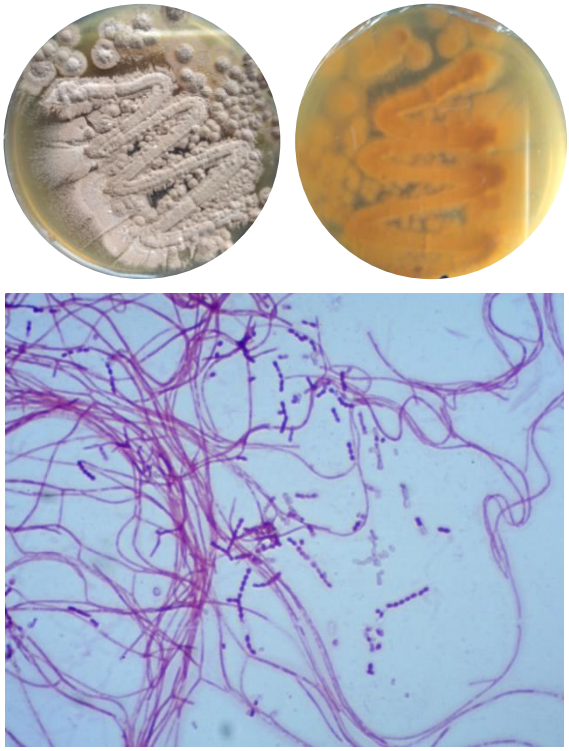
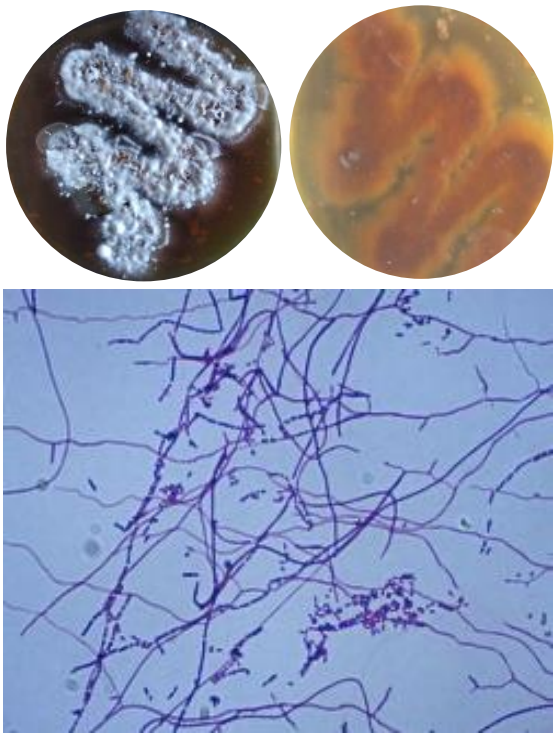
Bar graphs with standard deviation values for each test Standard Deviation.

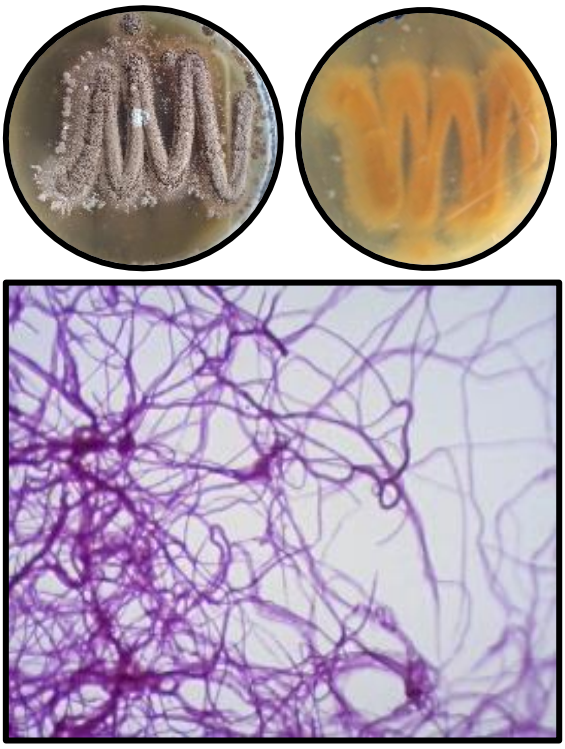


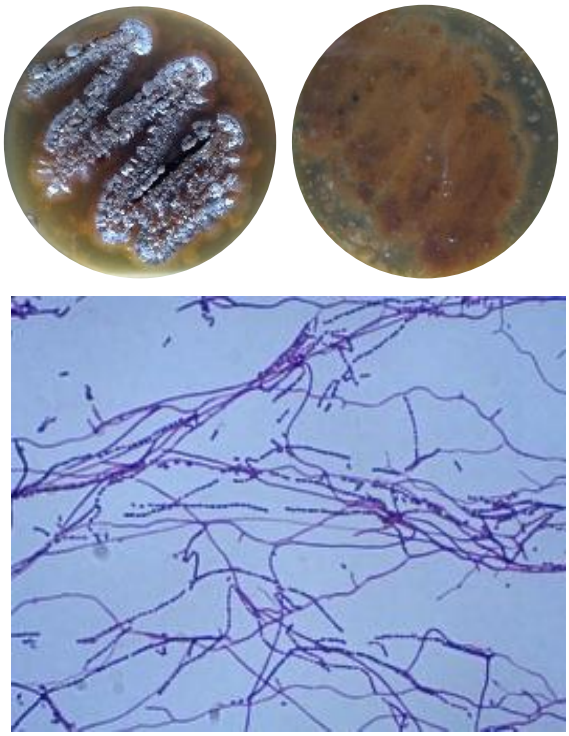
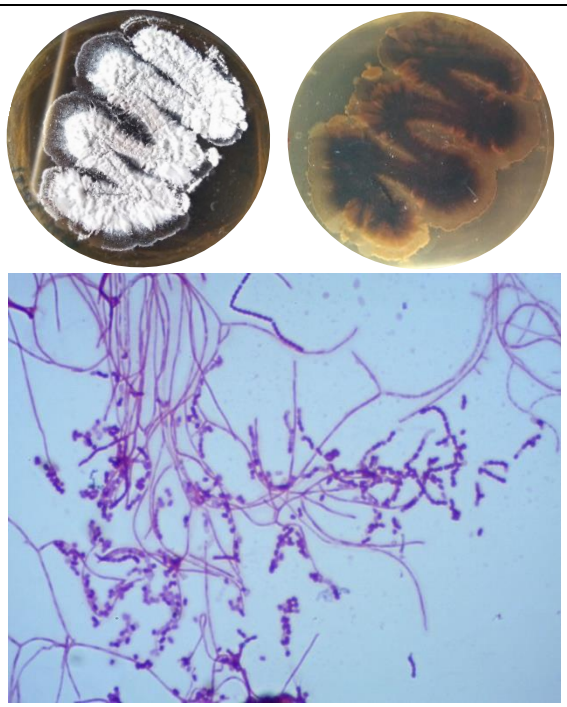
Supplementary Material – SM4

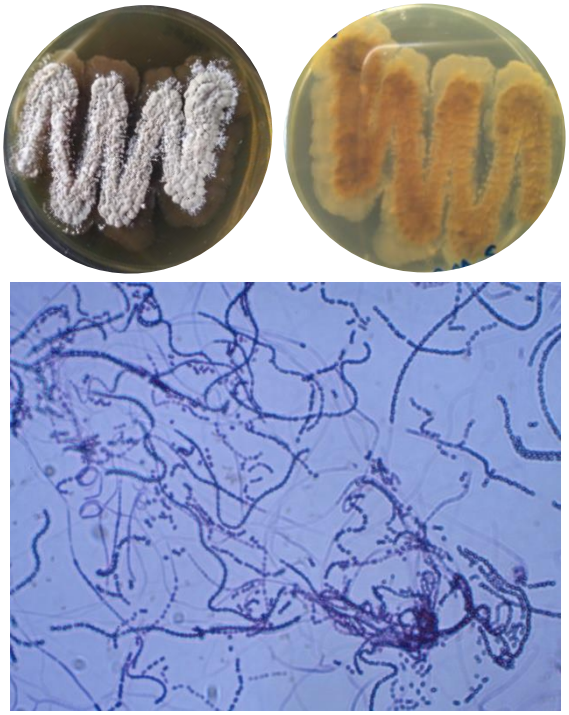
GenBank/NCBI accession codes and macromorphologies and micromorphologies of the selected strains. Macro- and micromorphological characteristics of strains with outstanding antifungal activities. Microcultures visualized under an optical microscope (Carl Zeiss) coupled to the Zen Photo/Image program (AxioCamER-Zen lite 2012), using a 100x objective and 0.5 µm scale.

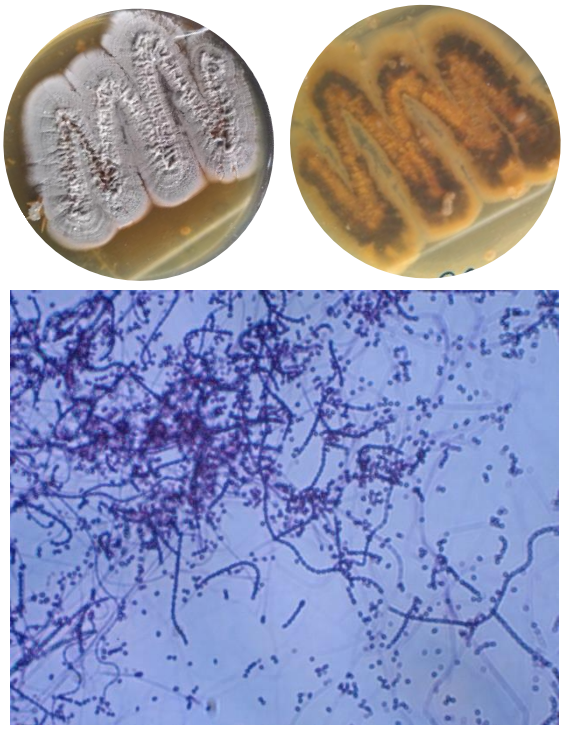
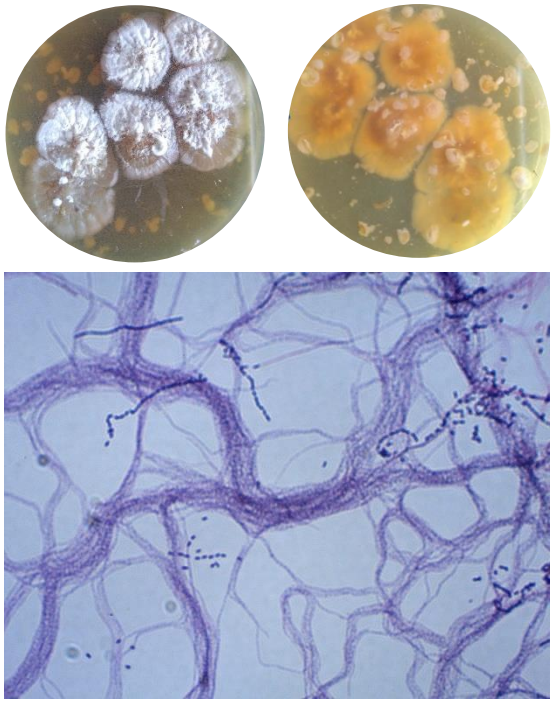
Isolated strains	**Code GenBank/NCBI**	**Morphology**
Streptomyces sp. LaBMicrA B267	OR724644	
Streptomyces sp. LaBMicrA B270		

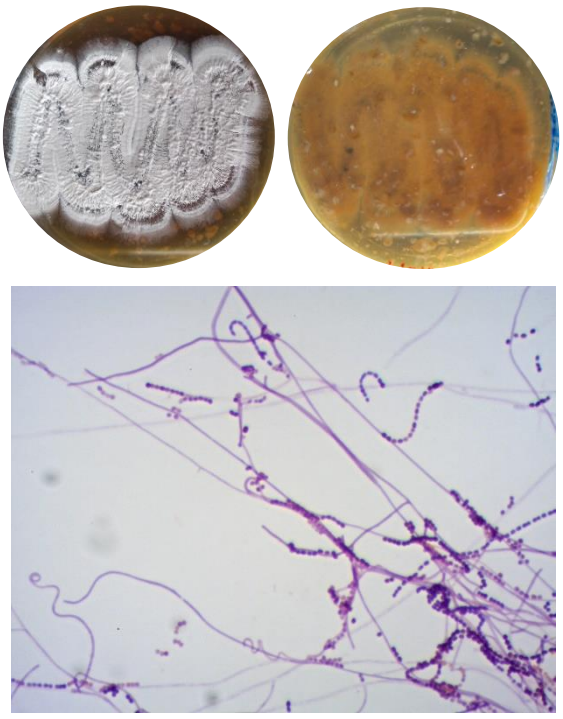
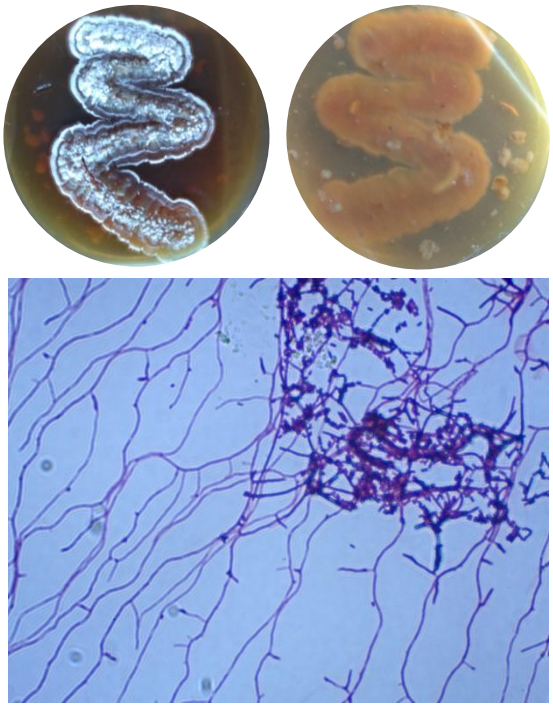
Streptomyces sp. LaBMicrA B271	OR724661	
Streptomyces sp. LaBMicrA B272	OR725986	

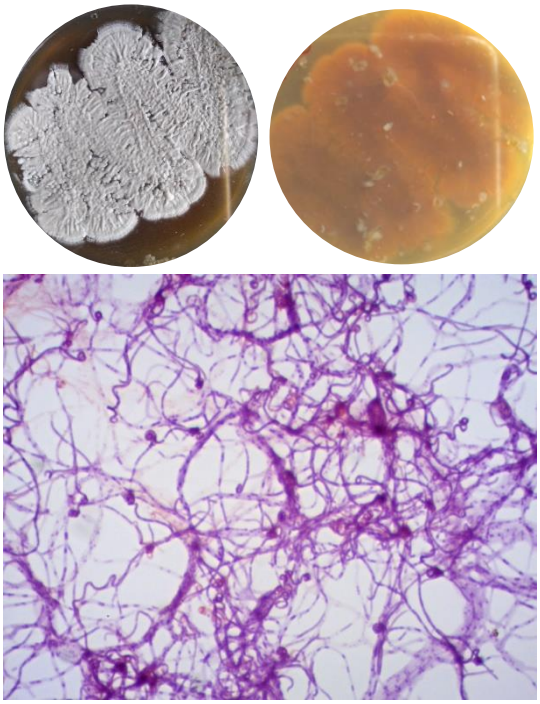
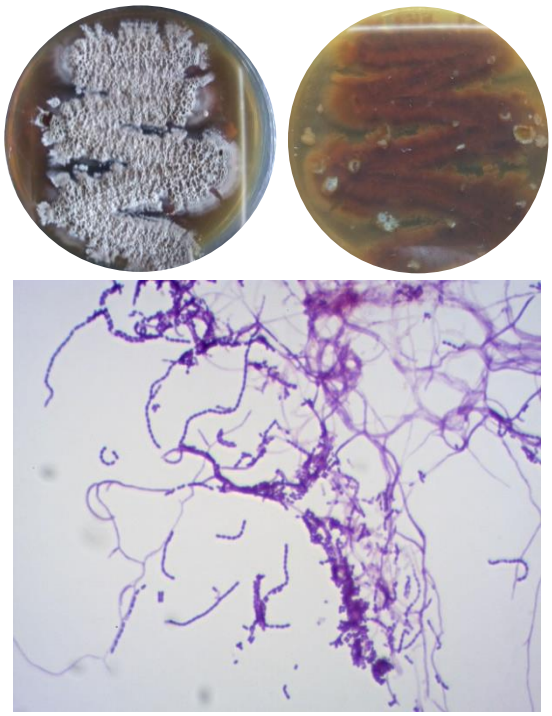
Streptomyces sp. LaBMicrA B278	OR724700	
Streptomyces sp. LaBMicrA B280		

Kitasatospora sp. LaBMicrA B282	OR725990	
Streptomyces sp. LaBMicrA B301	OR724719	

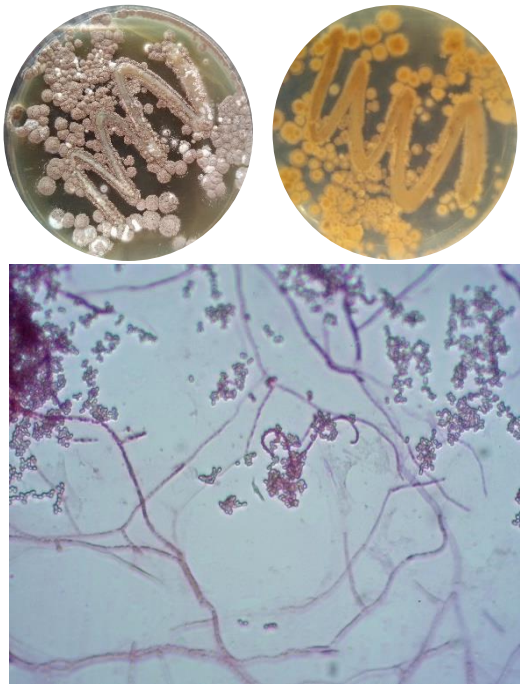
Streptomyces sp. LaBMicrA B304	OR725980	
Streptomyces sp. LaBMicrA B310	OR726013	

Kitasatospora sp. LaBMicrA B313	OR726028	
Streptomyces sp. LaBMicrA B314	OR726569	

Streptomyces sp. LaBMicrA B317	OR733339	
Streptomyces sp. LaBMicrA B318	OR730983	

Streptomyces sp. LaBMicrA B319	OR730984	
Streptomyces sp. LaBMicrA B322	OR730985	

Streptomyces sp. LaBMicrA B325	OR730986	
Streptomyces sp. LaBMicrA B289	OR733333	

Streptomyces sp. LaBMicrA B290	OR733337	
Streptomyces sp. LaBMicrA B299	OR734917