

Antibiotic activity of fungi associated with larva of black soldier fly *Hermetia illucens*



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OBJECT OF STUDY

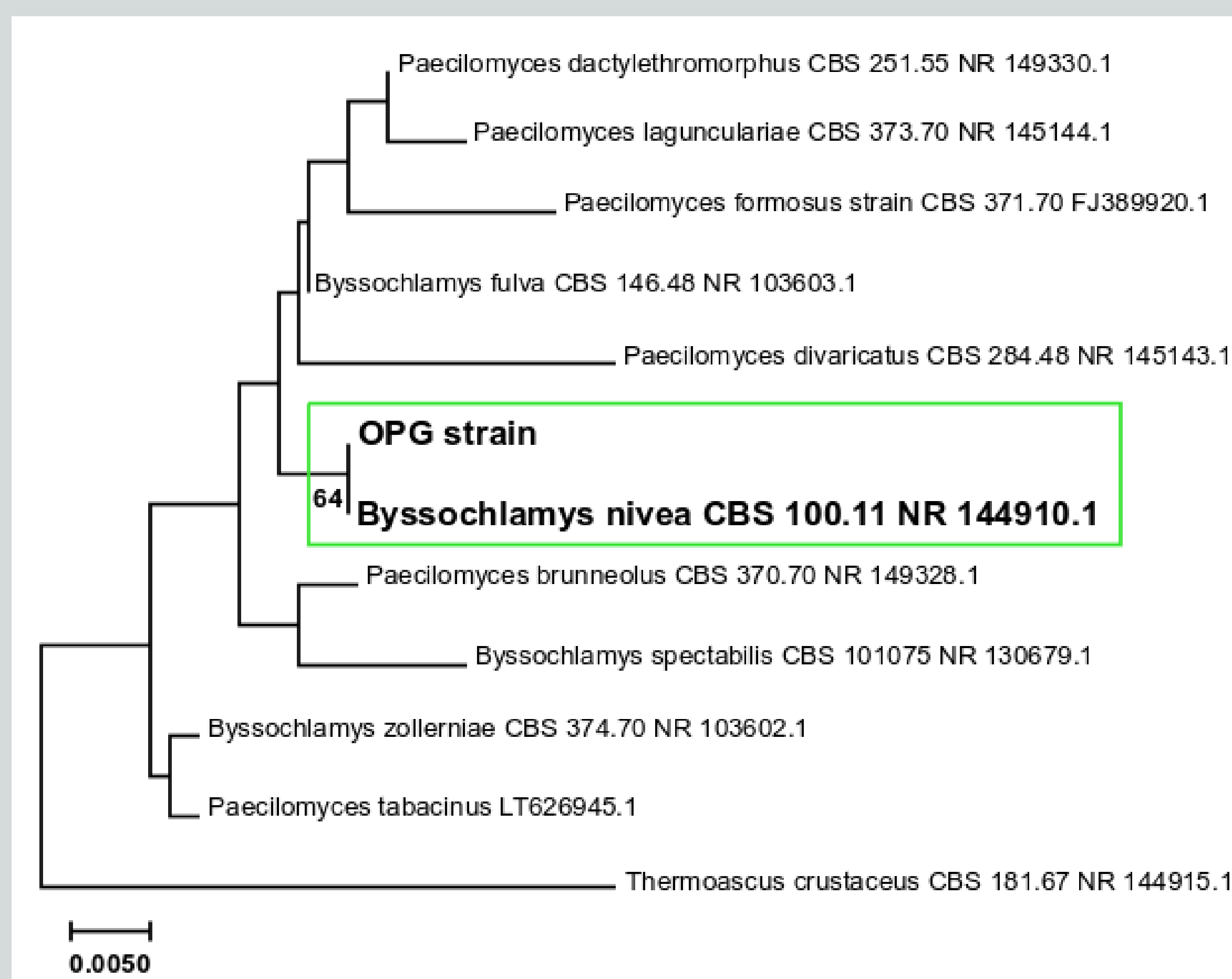
Isolation



Morphological characterization

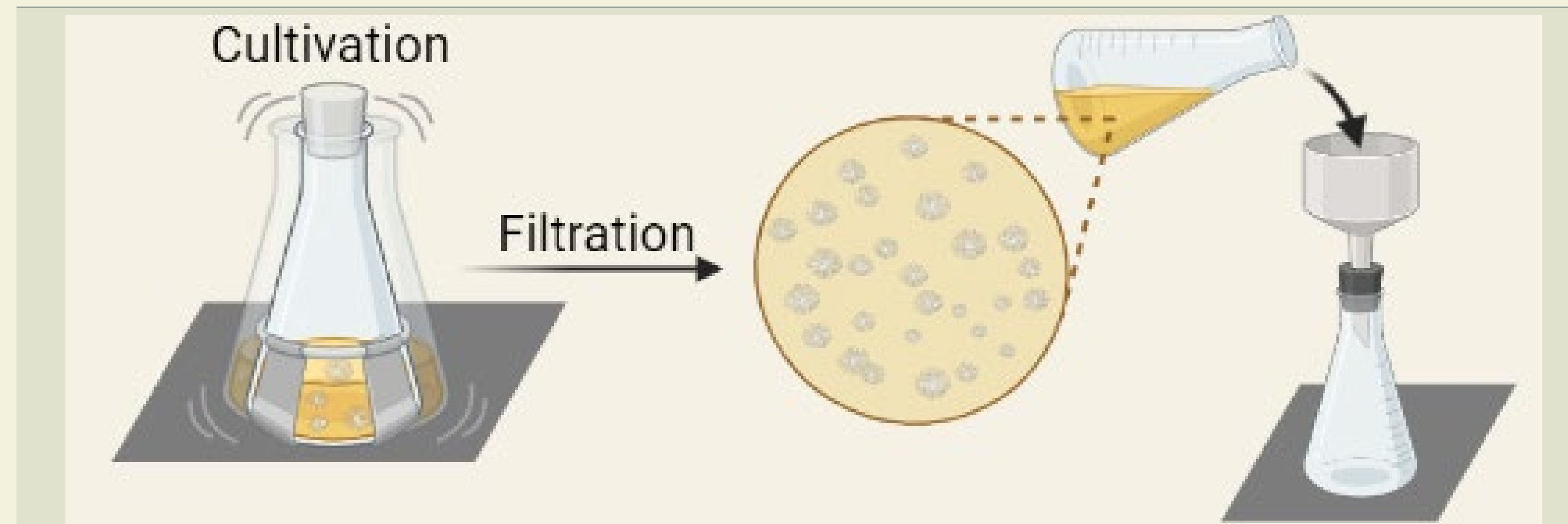


DNA sequencing

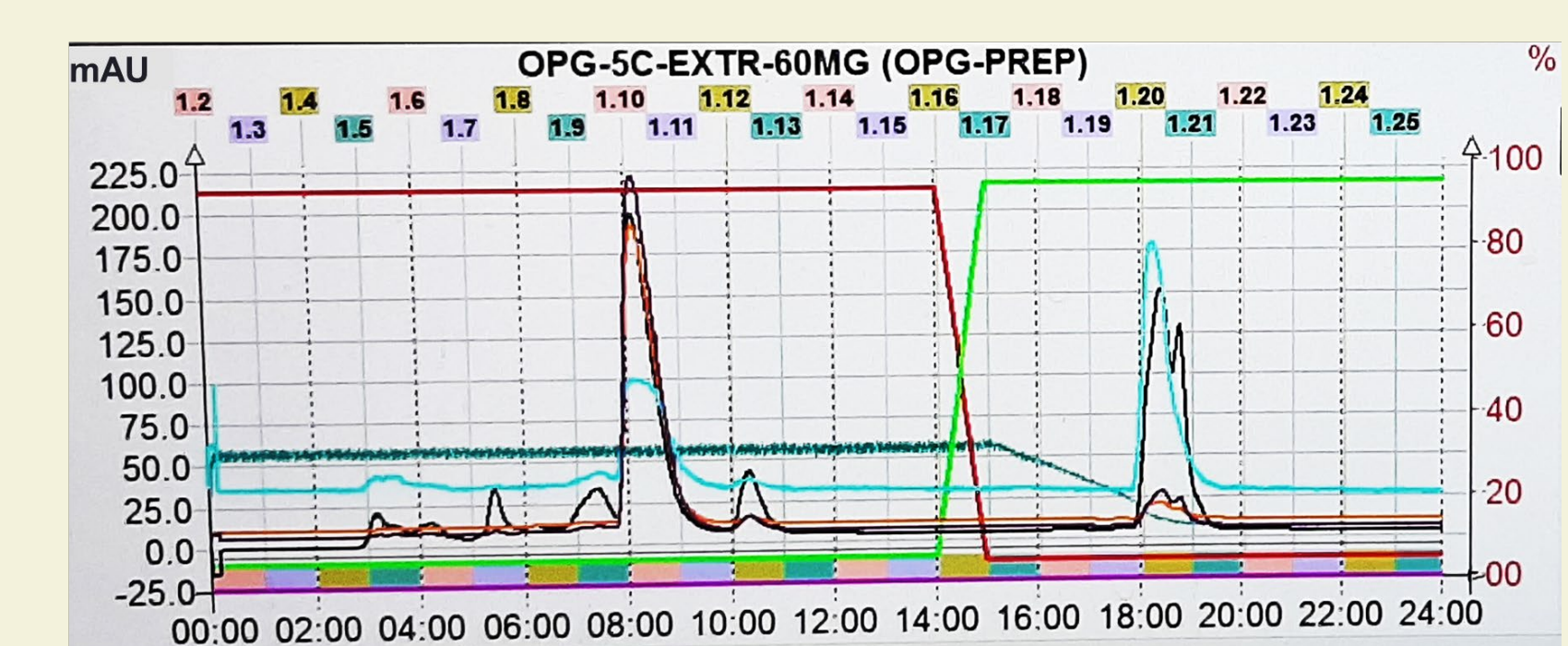
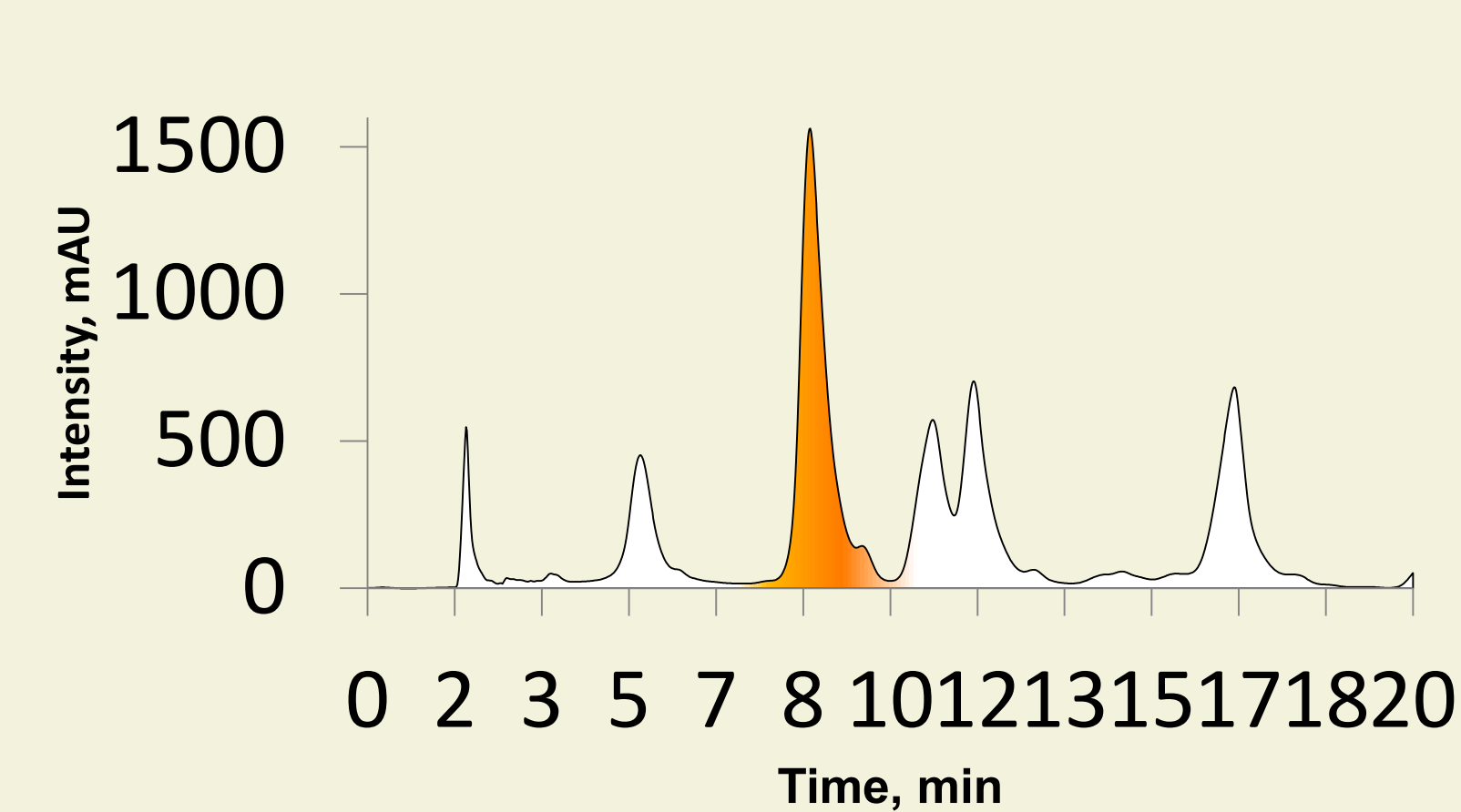


ISOLATION OF ANTIBIOTICS

Filtration



Extraction



ANTIMICROBIAL ACTIVITY

Growth inhibition*

Test strain	Growth inhibition*		
	Culture liquid before extraction	Extract	Culture liquid after extraction
<i>A. niger</i> INA 00760	-	+	-
<i>C. albicans</i> CBS 8836	-	+	-
<i>B. subtilis</i> ATCC 6633	+	+++	-
<i>E. coli</i> ATCC 25922	++	+++	+

MIC, µg/ml

	<i>A.niger</i> INA 00760	<i>C.albicans</i> CBS 8836	<i>B.subtilis</i> ATCC 6633	<i>St.aureus</i> ATCC 29213	<i>E.coli</i> ATCC 25922	<i>P.aeruginosa</i> ATCC 27853
OPG	128	128	32	64-128	16	32

ANTAGONISTIC ACTIVITY

Plate A - Cross streak assay

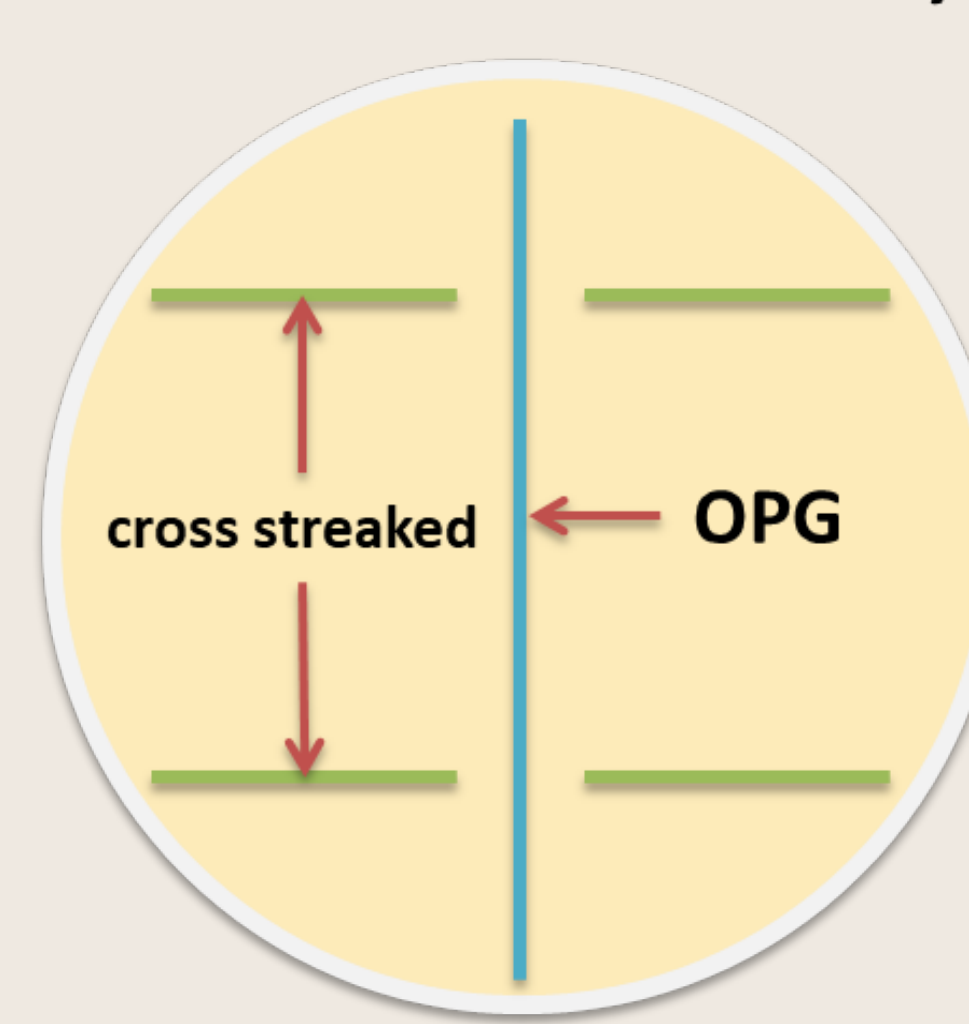


Plate B - Dual-culture assay I

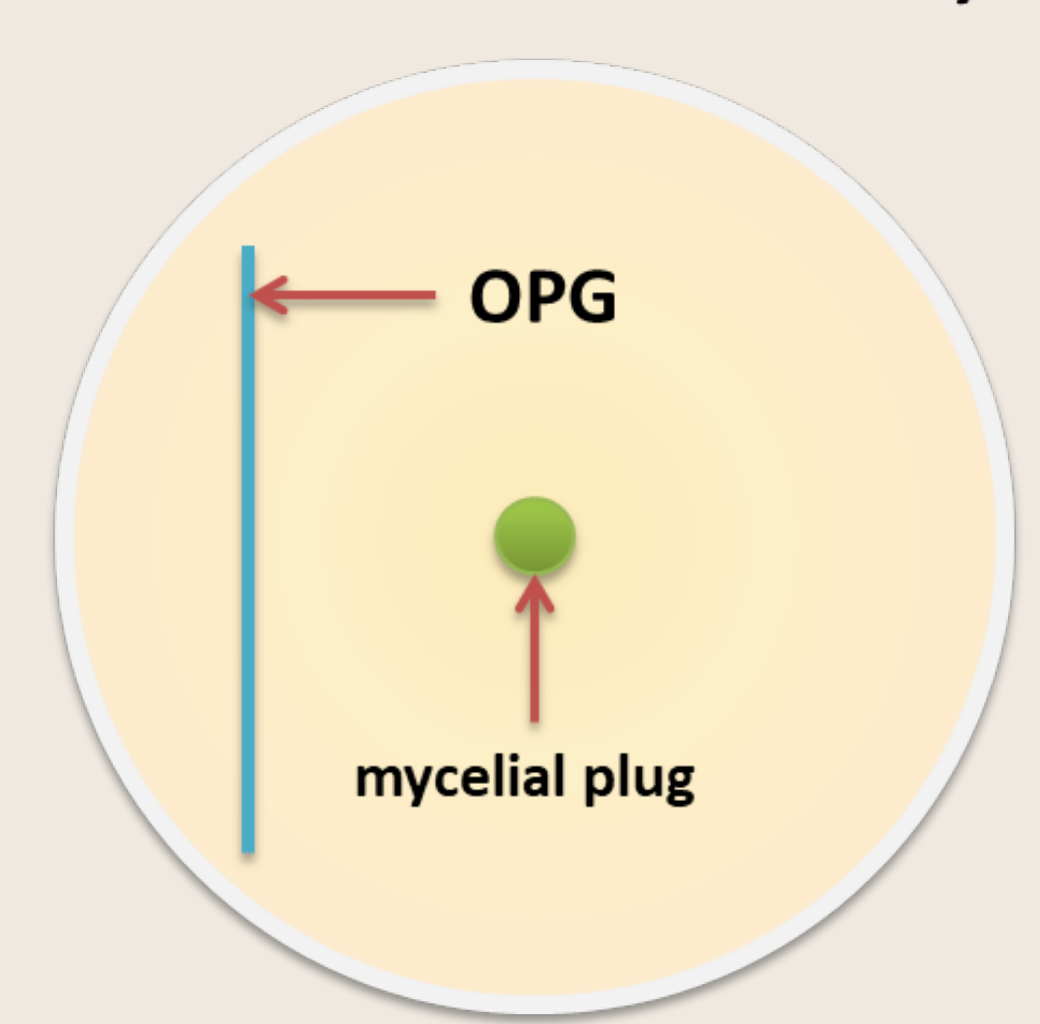
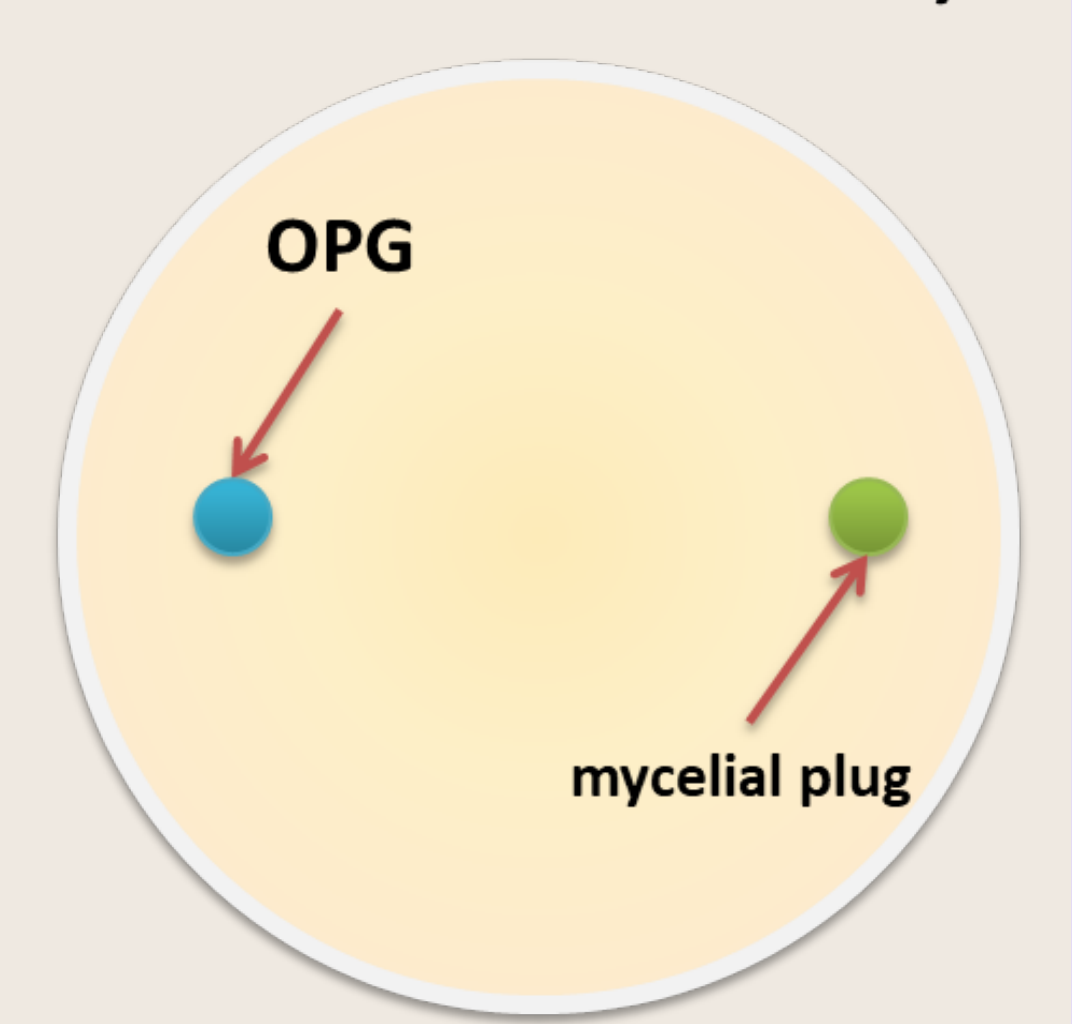


Plate C - Dual-culture assay II



Test strain

Growth inhibition rate (%)* from dual-culture assay I and II

Growth inhibition from cross streak assay

Test strain	Growth inhibition rate (%)* from dual-culture assay I and II		Growth inhibition from cross streak assay
	dual-culture assay I	dual-culture assay II	
<i>O. sinensis</i> VKPM F-1479	59.33±3.58	54.57±8.80	+++
<i>C. coronatus</i> VKPM F-1359	40.54±6.16	36.72±8.49	+++
<i>B. bassiana</i> VKPM F-1357	71.40±4.08	70.53±3.54	++
<i>C. coronatus</i> VKPM F-442	48.17±1.76	48.23±1.76	+++
<i>M. rileyi</i> VKPM F-1360	34.67±8.88	43.70±17.42	+++
<i>L. lecanii</i> VKPM F-837	5.90±4.75	7.24±4.72	+