

Name: Streptomyces caeruleus

Authors: (Baldacci 1944) Pridham et al. 1958  
Lanoot 2002

Status: Approved Lists

Reference(s): Int. J. Syst. Bacteriol. 30:374 (AL)

Risk group: 1 (German classification)

Type strain: ATCC 27421, CBS 645.72, IFO 13344, IMET  
40622, ISP 5103, RIA 1305, DSM 40103

Synonym(s): *Streptomyces niveus* (heterotypic synonym)  
*Streptomyces sphaeroides* (heterotypic synonym)

Author(s) Lanoot, B., Vancanneyt, M., Cleenwerck, I., Wang, L., Li, W.,  
Liu, Z., Swings, J.

Title The search for synonyms among streptomycetes by using  
SDS-PAGE of whole-cell proteins. Emendation of the species  
*Streptomyces aurantiacus*, *Streptomyces cacaoi* subsp.  
*cacaoi*, *Streptomyces caeruleus* and *Streptomyces violatus*.

Journal Int. J. Syst. Evol. Microbiol.

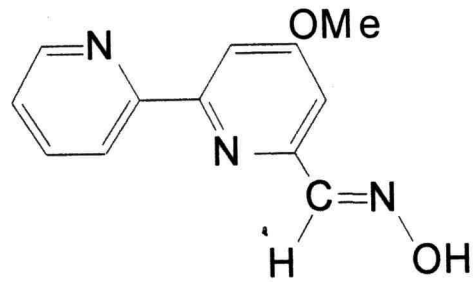
Volume 52

Page(s) 823-829

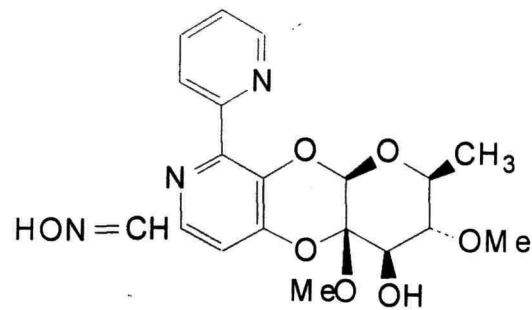
Year 2002

Secondary metabolites from *Streptomyces caeruleus*

Caerulomycin, active against yeasts, fungi and *Entamoeba histolytica*



Caerulomycin D



**Genus:** *Streptomyces*

FH 2010

**Species:** *caeruleus*

**Numbers in other collections:** IMET 40622

Morphology:

	G	R
<u>ISP 2</u>	good	blue
	A	SP
	dark gray	blue
	G	R
<u>ISP 3</u>	good	blue
	A	SP
	gray	none
	G	R
<u>ISP 4</u>	good	dark blue to black
	A	SP
	dark gray	dark blue
	G	R
<u>ISP 5</u>	good	blue
	A	SP
	gray	yellow
	G	R
<u>ISP 6</u>	good	blue
	A	SP
	none	none
	G	R
<u>ISP 7</u>	none	blue
	A	SP
	gray	yellow

Spore chains: RF

Spore surface: smooth to warty

Sporangia:

Fragmentation:

**Melanoid pigment:** - - - -

**NaCl resistance:**

**Lysozyme resistance:**

**pH:** Value- Optimum-

**Temperature :** Value- Optimum- 28 °C

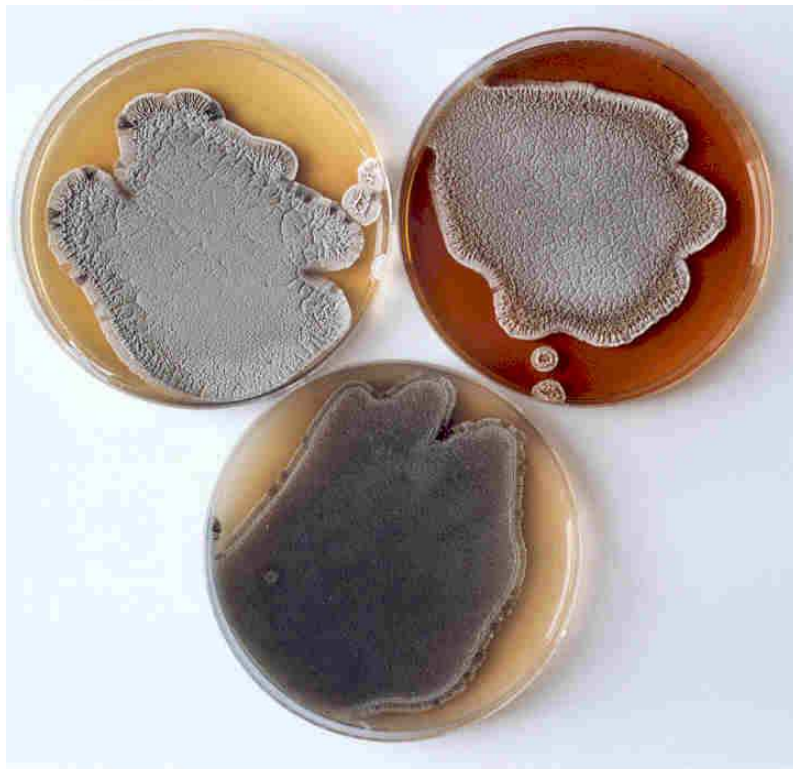
**Carbon utilization:**

Glu	Ara	Suc	Xyl	Ino	Man	Fru	Rha	Raf	Cel
+	+	-	-	-	-	-	-	-	-

**Enzymes:**

Gel	Cit	Ure	Arg	Onp	Trp	Lys	Odc	VP	Ind	H2S
+	+	+	+	+	+	-	-	-	-	-

**Comments**



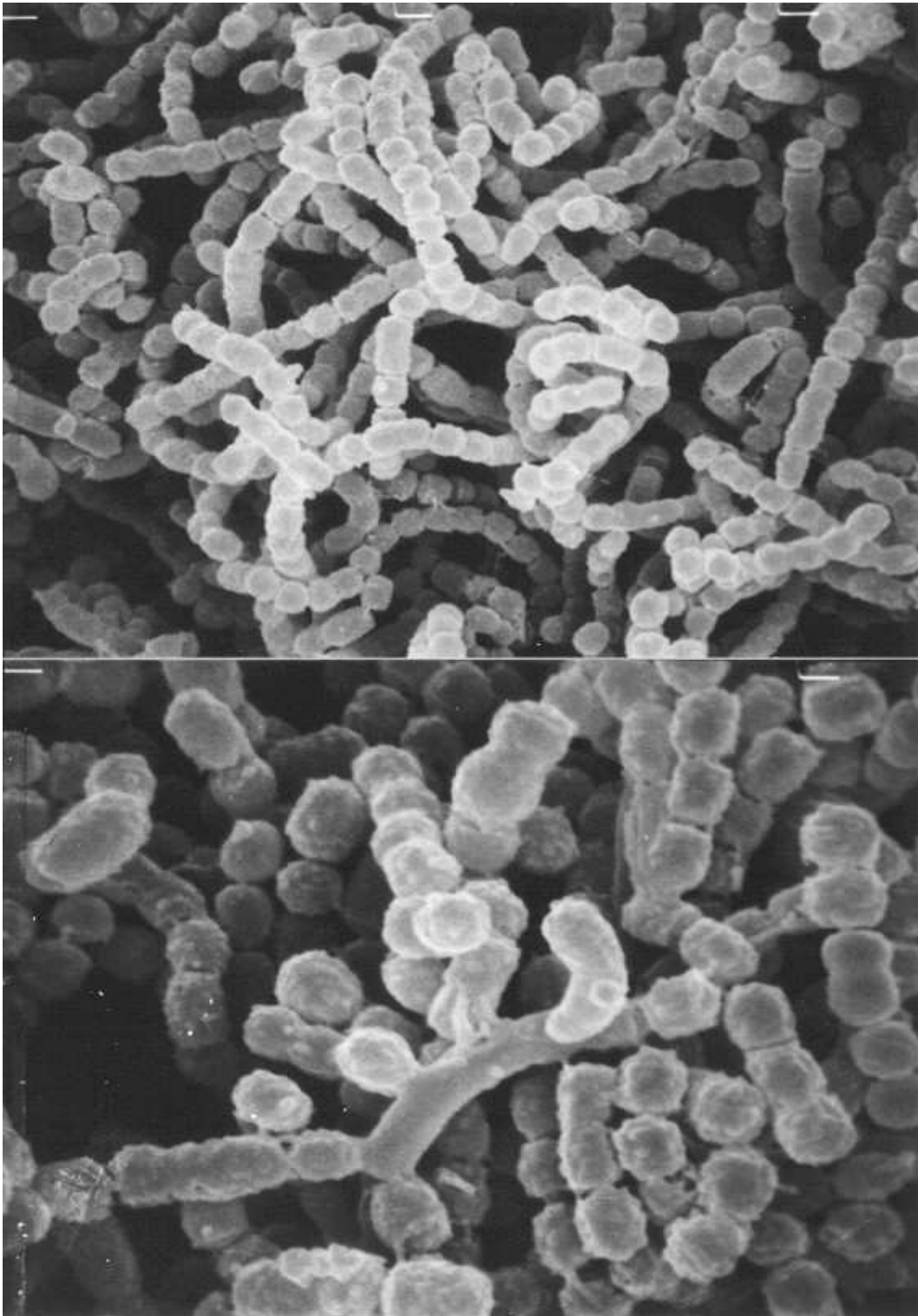
***Streptomyces caeruleus***

A and B – Agar plates medium 5006, 5265 and 5315



***Streptomyces caeruleus***

C and D – Microplate with ISP- and melanin media



***Streptomyces caeruleus***

Spore chain morphology and spore surface in SEM

E x 5.000 and F x 10.000

**Genus:** *Streptomyces*

**FH 1585**

**Species:** *caeruleus*

**Numbers in other collections:** **DSM 40103**

Morphology:

	G	R
<u>ISP 2</u>	good	umber grey
	A	SP
	dusty grey	brown beige
	G	R
<u>ISP 3</u>	good	dusty grey
	A	SP
	dusty grey	none
	G	R
<u>ISP 4</u>	good	umber grey
	A	SP
	dusty grey	brown beige
	G	R
<u>ISP 5</u>	good	umber grey
	A	SP
	dusty grey	brown beige
	G	R
<u>ISP 6</u>	good	beige
	A	SP
	beige	none
	G	R
<u>ISP 7</u>	good	umber grey
	A	SP
	dusty grey	brown beige

Spore chains:

Spore surface:

Sporangia:

Fragmentation:

**Melanoid pigment:** - - - -

**NaCl resistance:** 2,5 %

**Lysozyme resistance:**

**pH:** Value- Optimum-

**Temperature :** Value- Optimum- 28 °C

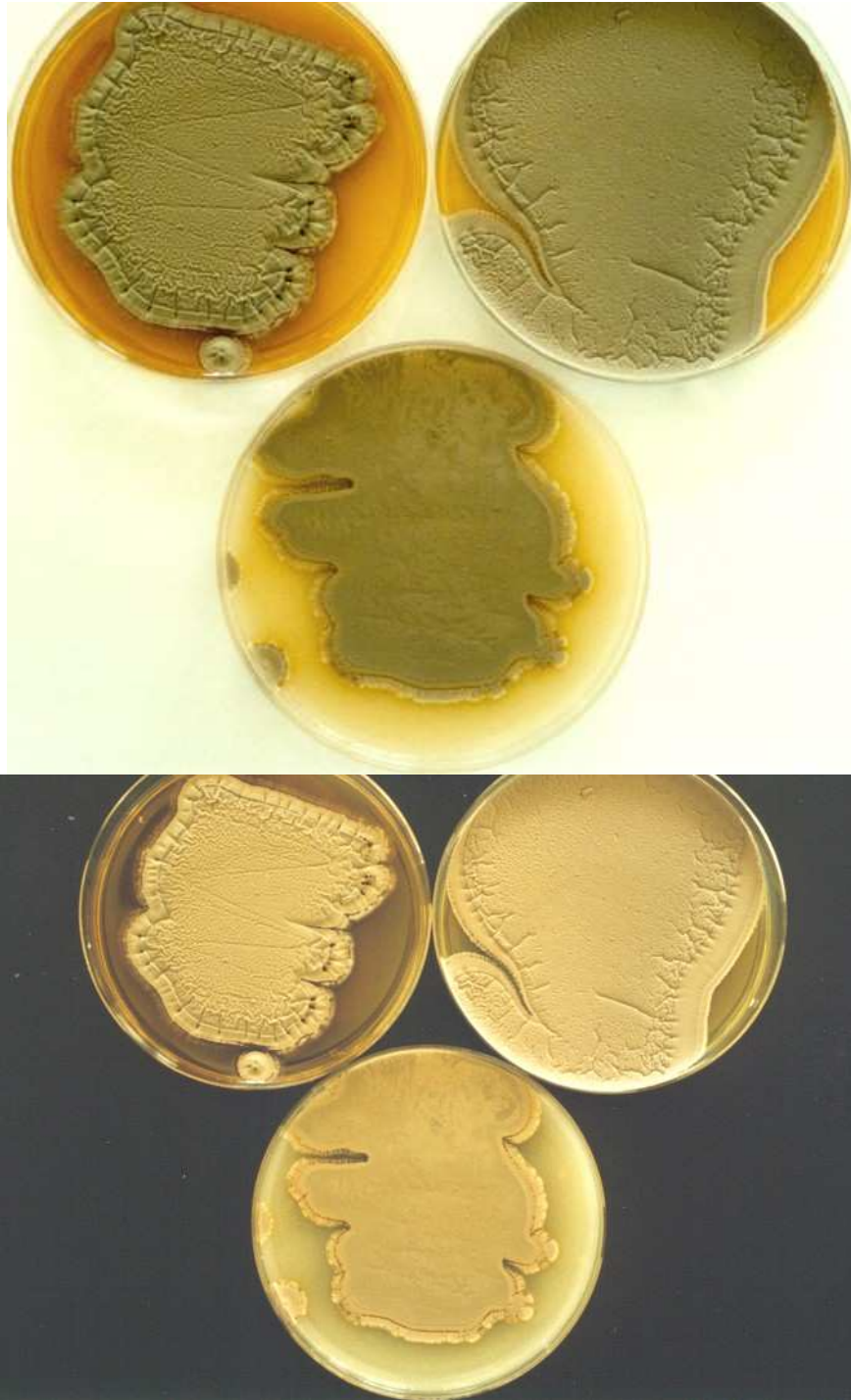
**Carbon utilization:**

Glu	Ara	Suc	Xyl	Ino	Man	Fru	Rha	Raf	Cel
+	+	+	+	+	+	+	+	+	+

**Enzymes:**

Gel	Cit	Ure	Arg	Onp	Trp	Lys	Odc	VP	Ind	H2S
-	+	+	(+)	-	-	-	-	+	-	-

**Comments**



***Streptomyces caeruleus***

A and B – Agar plates medium 5006, 5265 and 5315





***Streptomyces caeruleus***

C – Microplate with ISP- and melanin media



<b>Genus:</b>	<i>Streptomyces</i>										<b>FH 2090</b>
<b>Species:</b>	<i>niveus</i>										
<b>Numbers in other collections: DSM 40088</b>											
<u>Morphology:</u>											
<u>ISP 2</u>	G										R
	good										brown
	A										SP
	white										none
<u>ISP 3</u>	G										R
	good										yellow
	A										SP
	white										none
<u>ISP 4</u>	G										R
	good										yellow
	A										SP
	white										none
<u>ISP 5</u>	G										R
	good										yellow
	A										SP
	white										none
<u>ISP 6</u>	G										R
	A										SP
<u>ISP 7</u>	G										R
	A										SP
<u>Spore chains:</u> RF						<u>Spore surface:</u> smooth					
<u>Sporangia:</u>						<u>Fragmentation:</u>					
<b><u>Melanoid pigment:</u> -</b>											
<b><u>NaCl resistance:</u> until 5 %</b>											
<b><u>Lysozyme resistance:</u></b>											
<b><u>pH:</u> Value-</b>						<b>Optimum-</b>					
<b><u>Temperature :</u> Value-</b>						<b>Optimum- 30°C</b>					
<b><u>Carbon utilization:</u></b>											
	Glu	Ara	Suc	Xyl	Ino	Man	Fru	Rha	Raf	Cel	
	+	+	+	+	+	+	+	+	+	+	
<b><u>Enzymes:</u></b>											
	Gel	Cit	Ure	Arg	Onp	Trp	Lys	Odc	VP	Ind	H2S
	+	+	+	-	+	-	+	-	-	-	-
<b><u>Comments:</u></b>											



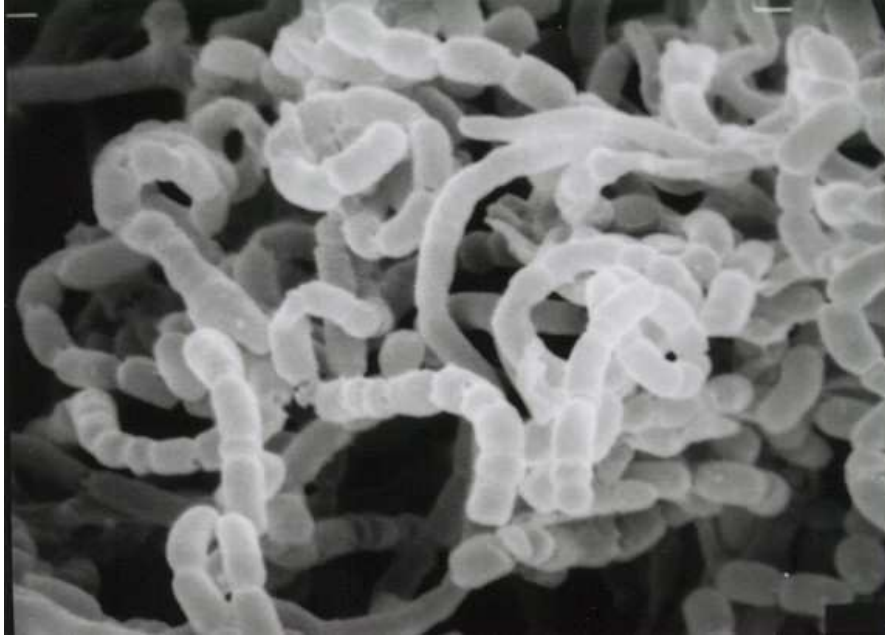
***Streptomyces niveus***

A and B – Agar plates medium 5006, 5265 and 5315



*Streptomyces niveus*

C and D – Microplate with ISP- and melanin media



***Streptomyces niveus***

Spore chains and spore surface in SEM (x 10.000)

Name:	<i>Streptomyces spheroids</i>
Authors:	Wallick et al. 1956
Status:	Approved Lists
Reference(s):	Int. J. Syst. Bacteriol. 30:401 (AL)
Risk group:	1 (German classification)
Type strain:	NRRL 2449, DSM 40292
Synonym(s):	<i>Streptomyces caeruleus</i> <i>Streptomyces niveus</i>

**Genus:** *Streptomyces*

FH 2092

**Species:** *sphaeroides*

**Numbers in other collections:** DSM 40292

Morphology:

<u>ISP 2</u>	G good A white	R yellow SP none
<u>ISP 3</u>	G good A white	R yellow SP none
<u>ISP 4</u>	G good A grey	R yellow SP none
<u>ISP 5</u>	G good A white	R yellow SP none
<u>ISP 6</u>	G A	R SP
<u>ISP 7</u>	G A	R SP

Spore chains: RF

Spore surface: smooth

Sporangia:

Fragmentation:

Melanoid pigment: -

NaCl resistance:

Lysozyme resistance:

pH: Value-

Optimum-

Temperature : Value-

Optimum- 30°C

Carbon utilization:

Glu	Ara	Suc	Xyl	Ino	Man	Fru	Rha	Raf	Cel
+	-	+	-	-	+	+	+	-	-

Enzymes:

Gel	Cit	Ure	Arg	Onp	Trp	Lys	Odc	VP	Ind	H2S
+	+	+	+	+	+	-	+	(+)	-	-

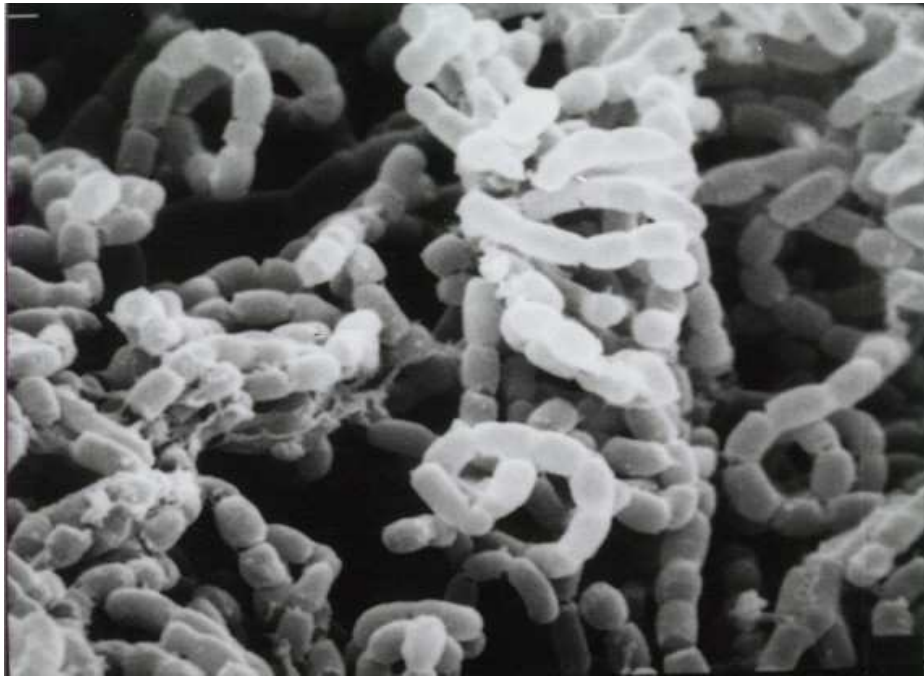
Comments:



***Streptomyces sphaeroides***

A and B – Agar plates medium 5315, 5317, 5265 and 5323





***Streptomyces sphaeroides***

Spore chain morphology and spore surface in SEM

C x 7.500 D x 5.000