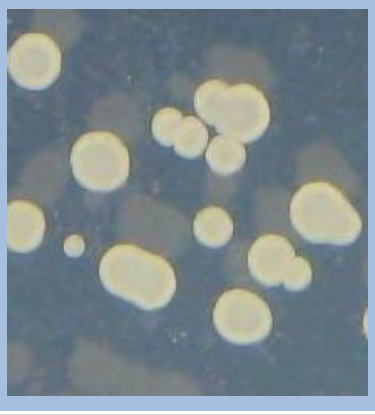
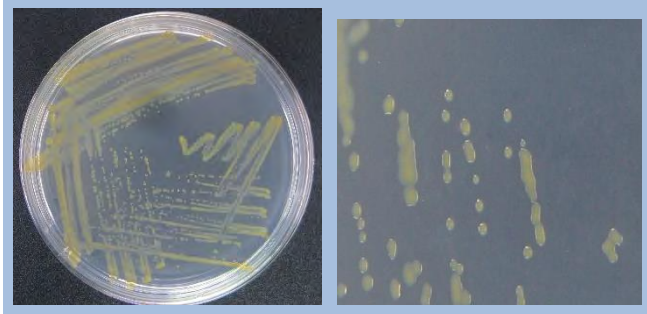
***Acinetobacter bereziniae* sp. CCB-MMP214**		
Colony morphology	Light beige; 2-3 mm; circular; entire; flat; glistening; opaque  	
Gram-stain	Gram-negative	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496°E, 100.73495°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Acinetobacter bereziniae***
	Top-hit strain	LMG 1003(T)
	Similarity (%)	99.67%
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Moraxellales;Moraxellaceae;Acinetobacter
Publication	No	
Date of Blast	26/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***Aestuariibaculum* CCB-ST4H1**		
Colony morphology	Dark beige colony; 1 mm size; circular; entire; raised; glistening; transparent 	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Aestuariibaculum lutulentum***
	Top-hit strain	L182(T)
	Similarity (%)	98.51%
	Top-hit taxonomy	Bacteria;Bacteroidetes;Flavobacteriia;Flavobacteriales;Flavobacteriaceae;Aestuariibaculum
Date of blast	12/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balacandra	
Risk group	1	
Additional information (Sequence)	NGGCAGGCCTACCATGCAAGTCGAGGGGTACAGGGAAGCTTGCTCCGC TGACGACCGGCGCACGGGTGCGTAACGCGTATACAATCTGCCTTGTAC TGGGGGATAGCCTTTAGAAATGAAGATTAACACCCCATAGTATATAGA GTTGGCATCAACTTTATATTAAAGGTTACGGTACAAGATGAGTATGCG TCCTATTAGCTAGATGGTGTGGTAACGGCACACCATGGCGACGATAGG TAGGGGGCCTGAGAGGGTTATCCCCCACACTGGTACTGAGACACGGAC	

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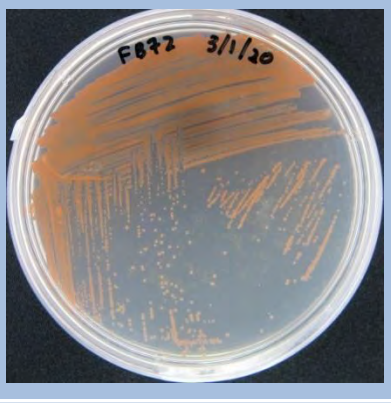
Algoriphagus halophilus sp. CCB-SMP264		
Colony morphology	Dark red; 1-2 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Gram-negative	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Algoriphagus halophilus***
	Top-hit strain	DSM 15292(T)
	Similarity (%)	99.32%
	Top-hit taxonomy	Bacteria;Bacteroidetes;Cytophagia;Cytophagales;Cyclobacteriaceae;Algoriphagus
Publication	No	
Date of Blast	08/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***Alkalihalobacillus algicola* sp. CCB-ST3L37**		
Colony morphology	Beige; 1-2 mm; circular; flat; entire; glistering; opaque  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar;	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Alkalihalobacillus algicola***
	Top-hit strain	KMM 3737(T)
	Similarity (%)	99.58
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Pseudalkalibacillus
Publication	No	
Date of Blast	13/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information	NNNNNNNNNCGGNNNGCNATACATGCAAGTCGAGCGGAGAA ATGGGAGCTTGCTCCCATTTCTCAGCGGCGGACGGGTGAGTA ACACGTGGGCAACCTGCCCTACAGACTGGGATAACTCCGGGA AACCGGAGCTAATACCGGGTAATACATAGCATCGCATGATGC AACGTTGAAAGTTGGCCTTTGGCTAACACTGTAGGATGGGCC CGCGGCGCATTAGCTAGTTGGTAAGGTAACGGCTTACCAAGG CCACGATGCGTAGCCGACCTGAGAGGGTGATCGGCCACACTG GGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTAG GGAATCTTCCGCAATGGACGAAAGTCTGACGGAGCAACGCCG CGTGAGTGACGAAGGCCTTCGGGTCGTAAAGCTCTGTTGTTAG	

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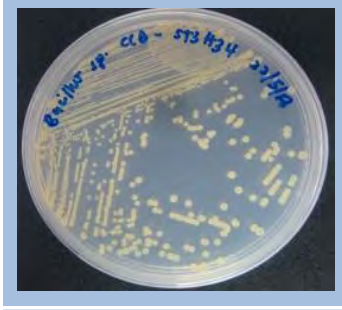
***Alkalihalobacillus* sp. CCB-ST3H34**		
Colony morphology	Light Beige; 1-2 mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-Positive	
Isolation medium	Tryptone + Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Alkalihalobacillus algicola***
	Top-hit strain	KMM 3737(T)
	Similarity (%)	99.63
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Pseudalkalibacillus
Date of blast	11/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	TCTCAGCGGCGGACGGGTGAGTAACACGTGGGCAACCTGCCCTACAGA CTGGGATAACTCCGGGAAACCGGAGCTAATACCGGGTAATACATAGCA TCGCATGATGCAACGTTGAAAGTTGGCCTCTGGCTAACACTGTAGGAT GGGCCCGCGGCGCATTAGCTAGTTGGTAAGGTAACGGCTTACCAAGGC CACGATGCGTAGCCGACCTGAGAGGGTGATCGGCCACACTGGGACTGA GACACGGCCCAGACTCCTACGGGAGGCAGCAGTAGGGAATCTTCCGCA ATGGACGAAAGTCTGACGGAGCAACGCCGCGTGAGTGACGAAGGCCTT CGGGTCGTAAAGCTCTGTTGTTAGGGAAGAACAAGTACCGTTCGAATA GGGCGGTACCTTGACGGTACCTAACCAGAAAGCCACGGCTAACTACGT	

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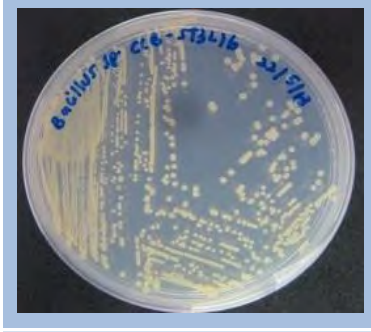
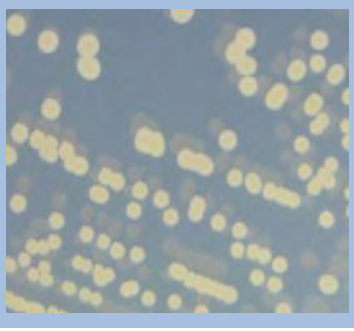
***Alkalihalobacillus* sp. CCB-ST3L16**		
Colony morphology	Light Beige; 1 mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-Positive	
Isolation medium	Tryptone + Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Alkalihalobacillus algicola***
	Top-hit strain	KMM 3737(T)
	Similarity (%)	99.63%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Pseudalkalibacillus
Date of blast	11/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	TCAGCGGCGGACGGGTGAGTAACACGTGGGCAACCTGCCCTACAGACT GGGATAACTCCGGGAAACCGGAGCTAATACCGGGTAATACATAGCATC GCATGATGCAACGTTGAAAGTTGGCCTCTGGCTAACACTGTAGGATGG GCCCGCGGCGCATTAGCTAGTTGGTAAGGTAACGGCTTACCAAGGCCA CGATGCGTAGCCGACCTGAGAGGGTGATCGGCCACACTGGGACTGAGA CACGGCCCAGACTCCTACGGGAGGCAGCAGTAGGGAATCTTCCGCAAT GGACGAAAGTCTGACGGAGCAACGCCGCGTGAGTGACGAAGGCCTTCG GGTCGTAAAGCTCTGTTGTTAGGGAAGAACAAGTACCGTTCGAATAGG GCGGTACCTTGACGGTACCTAACCAGAAAGCCACGGCTAACTACGTGC	

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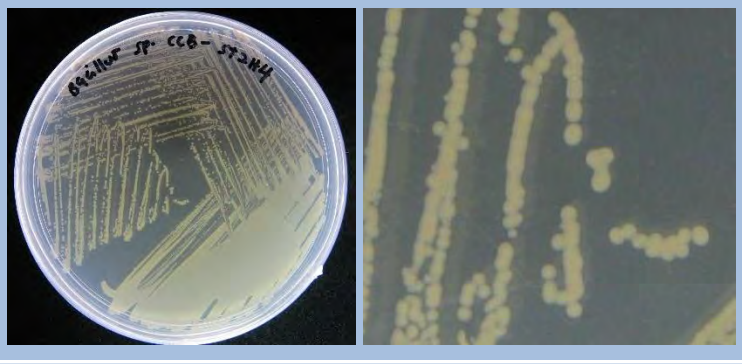
***Alkalihalobacillus* sp. ST2H4**		
Colony morphology	Light Beige; 1 mm; circular; raised; entire; glistening; opaque 	
Gram-stain	Gram-Positive	
Isolation medium	Tryptone + Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Alkalihalobacillus algicola***
	Top-hit strain	KMM3737(T)
	Similarity (%)	99.63%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Pseudalkalibacillus
Date of blast	12/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	NTNNNAAGGTACCGGAAAGTACATGCAAGTCGAGCGGAGAATGGGAGC TTGCTCCCATTTCTCAGCGGCGGACGGGTGAGTAACACGTGGGCAACC TGCCCTACAGACTGGGATAACTCCGGGAAACCGGAGCTAATACCGGGT AATACATAGCATCGCATGATGCAACGTTGAAAGTTGGCCTCTGGCTAA CACTGTAGGATGGGCCCGCGGCGCATTAGCTAGTTGGTAAGGTAACGG CTTACCAAGGCCACGATGCGTAGCCGACCTGAGAGGGTGATCGGCCAC ACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTAGGG	

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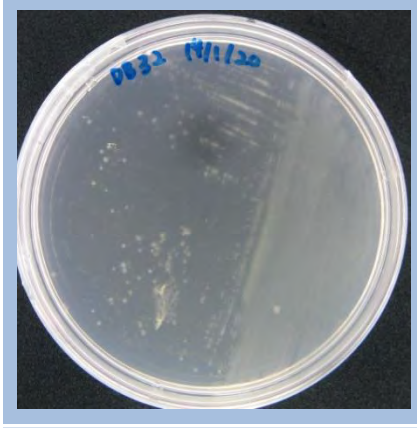
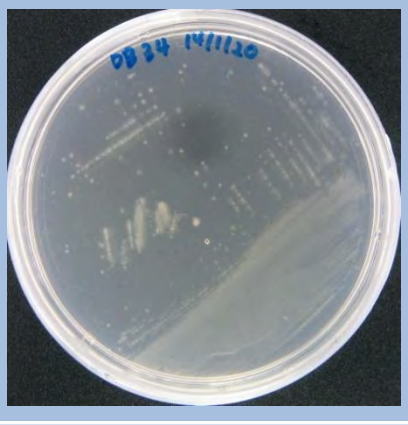
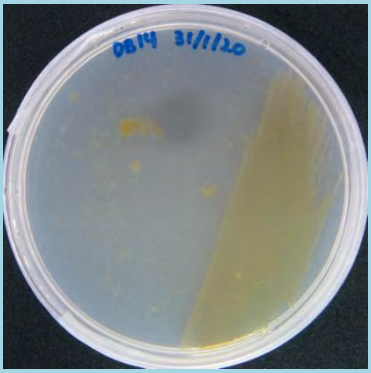
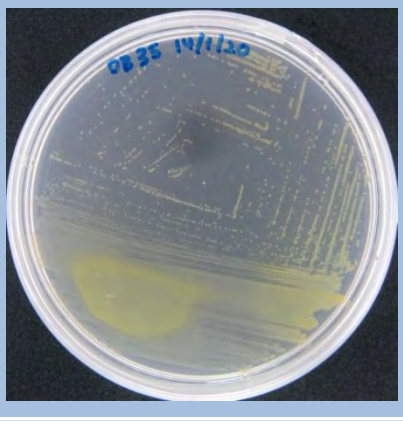
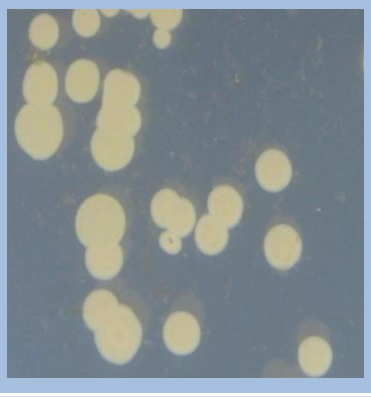
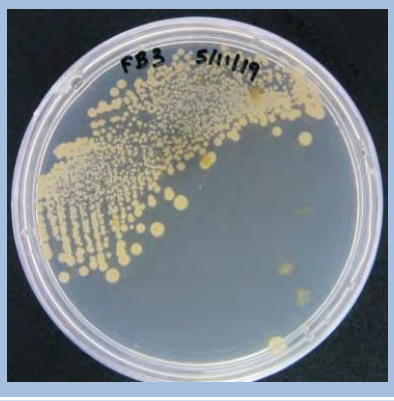
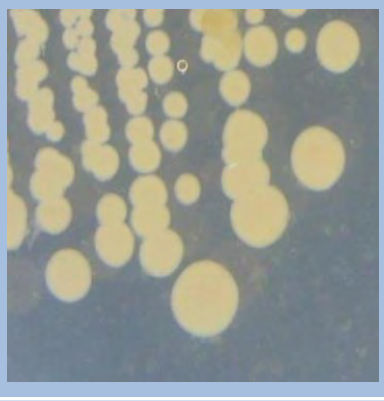
***Alloalcanivorax dieselolei* sp. CCB-CTB325**		
Colony morphology	White; 1-2 mm; circular; entire; raised; glistening; transparent  	
Gram-stain	Negative rod	
Isolation medium	Marine agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2016; CEMACS Teluk Bahang, N05°28.100' E100°12.011'; Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Alloalcanivorax dieselolei***
	Top-hit strain	B-5(T)
	Similarity (%)	99.86%
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Oceanospirillales;Alcanivoracaceae;Alloalcanivorax
Publication	No	
Date of Blast	19/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

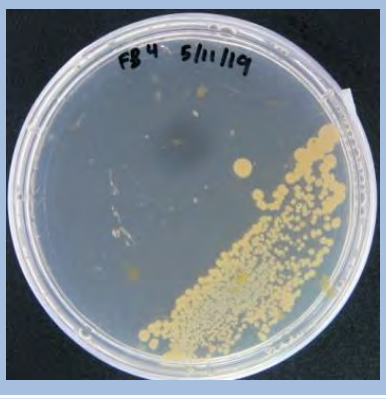
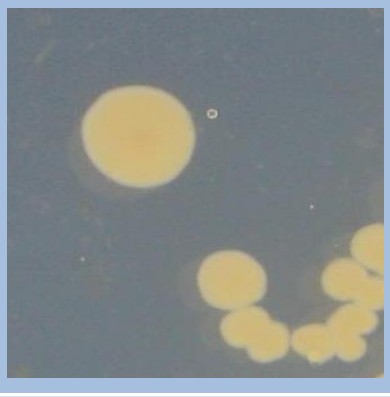
***Alloalcanivorax* sp. CCB-CTB327**		
Colony morphology	White; 1-2 mm; circular; entire; raised; glistening; transparent  	
Gram-stain	Positive rod	
Isolation medium	Marine agar (MA); Marine Broth (MB)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2016; CEMACS Teluk Bahang, N05º28.100' E100º12.011'; Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Alloalcanivorax dieselolei***
	Top-hit strain	B-5(T)
	Similarity (%)	99.85%
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Oceanospirillales;Alcanivoracaceae;Alloalcanivorax
Publication	No	
Date of Blast	19/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

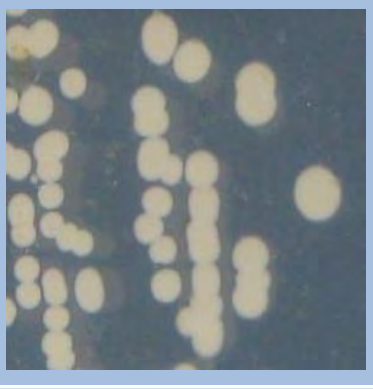
***Arenibacter amylolyticus sp.* CCB-PB310**		
Colony morphology	Brown beige colony; 1 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Negative, rod	
Isolation medium	Marine agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	11 May 2016; Pulau Betong, Penang (N05°18.761' E111°13.8'); Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Arenibacter amylolyticus***
	Top-hit strain	AK53(T)
	Similarity (%)	99.93%
	Top-hit taxonomy	Bacteria;Bacteroidetes;Flavobacteriia;Flavobacteriales;Flavobacteriaceae;Arenibacter
Publication	No	
Date of Blast	17/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

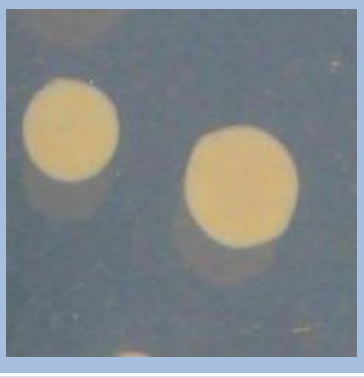
***Arenibacter latericius* sp. CCB-CTB328**		
Colony morphology	 	
Gram-stain	Negative rod	
Isolation medium	Marine agar (MA); Marine broth (MB)	
Growth condition	Aerobic; pH7; 28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2016; CEMACS Teluk Bahang, N05º28.100' E100º12.011'; Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Arenibacter latericius***
	Top-hit strain	KMM 426(T)
	Similarity (%)	99.78%
	Top-hit taxonomy	Bacteria;Bacteroidetes;Flavobacteriia;Flavobacteriales;Flavobacteriaceae;Arenibacter
Publication	No	
Date of Blast	19/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

***Rossellomorea oryzaecorticis* sp. CCB-KSK209**		
Colony morphology	Beige colony; 2-3 mm; circular; entire; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Rossellomorea oryzaecorticis***
	Top-hit strain	R1(T)
	Similarity (%)	99.05%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea
Publication	No	
Date of Blast	25/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

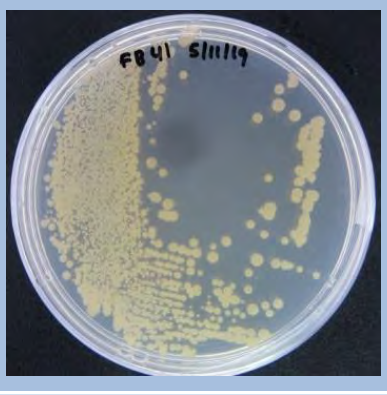
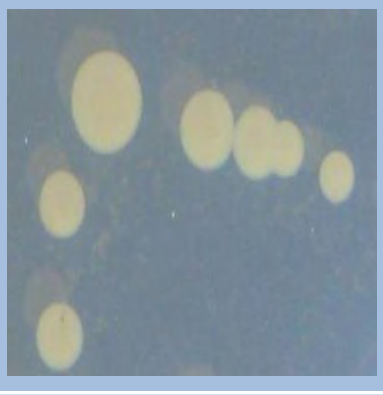
***Rossellomorea arthrocnemi* sp. CCB-KSK210**		
Colony morphology	Beige; 2-3 mm; circular; entire; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marina Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Rossellomorea arthrocnemi*.**
	Top-hit strain	EAR8(T)
	Similarity (%)	99.24%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea
Publication	No	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***Rossellomorea vietnamensis* sp. CCB-KSK211**		
Colony morphology	Dark beige; 4 mm size; circular; entire; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Rossellomorea vietnamensis***
	Top-hit strain	15-1(T)
	Similarity (%)	96.45%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea
Publication	No	
Date of Blast	26/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***Bacillus* altitudinis. CCB-KSK234**		
Colony morphology	White; 2-3 mm; circular; entire; raised; dry; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus altitudinis***
	Top-hit strain	41KF2b(T)
	Similarity (%)	100%
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus*
Publication	No	
Date of Blast	07/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***PDIY_s* sp. CCB-KSK235**		
Colony morphology	Beige; 2-3 mm size; circular; entire; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***PDIY_s***
	Top-hit strain	es.034
	Similarity (%)	99.75%
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea*
Publication	No	
Date of Blast	07/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

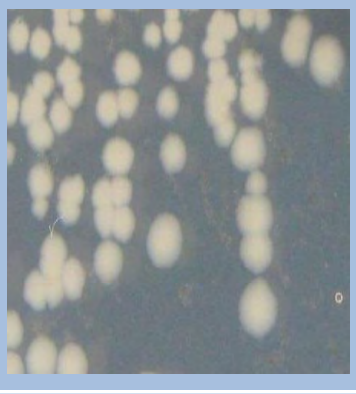
Rossellomorea arthrocnemi sp. CCB-KSK236

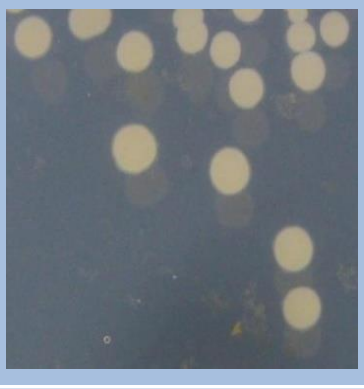
Colony morphology	Light Beige; 2-3 mm size; circular; entire; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Rossellomorea arthrocnemi***
	Top-hit strain	EAR8(T)
	Similarity (%)	99.25%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea
Publication	No	
Date of Blast	07/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

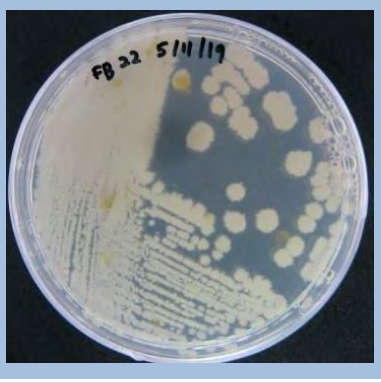
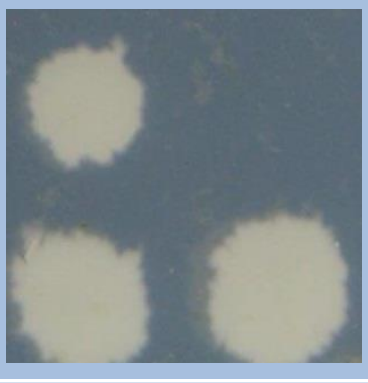
***PDIY_s* CCB-MMP213**		
Colony morphology	Light beige; 1-2 mm size; circular; entire; raised; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496°E, 100.73495°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***PDIY_s***
	Top-hit strain	es.034
	Similarity (%)	99.20%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea
Publication	No	
Date of Blast	26/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

Bacillus cereus sp. CCB-MMP216

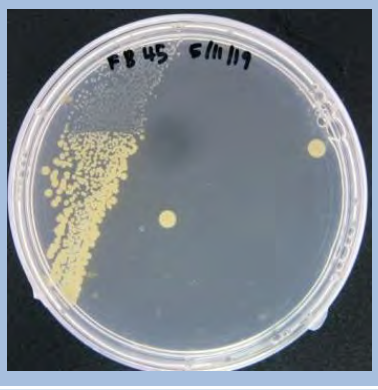
Colony morphology	Light orange; 4-5 mm; circular; entire; flat; dry; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496°E, 100.73495°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus cereus***
	Top-hit strain	ATCC 14579(T)
	Similarity (%)	100.00%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus
Publication	No	
Date of Blast	26/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	2	
Additional information		

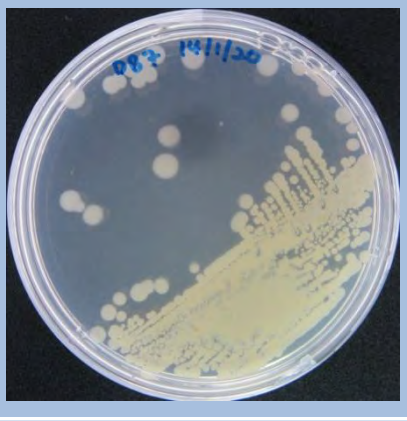
***Bacillus cereus* sp. CCB-MMP218**		
Colony morphology	White; 4-5 mm; circular; entire; flat; dry; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496°E, 100.73495°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus cereus***
	Top-hit strain	ATCC 14579(T)
	Similarity (%)	100.00%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus
Publication	No	
Date of Blast	26/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	2	
Additional information		

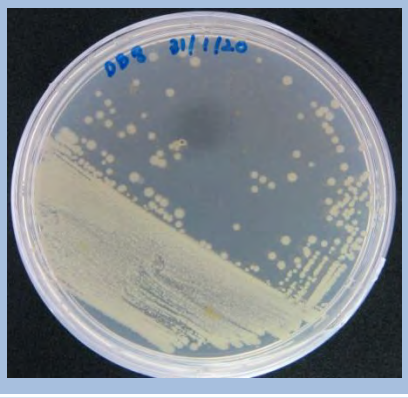
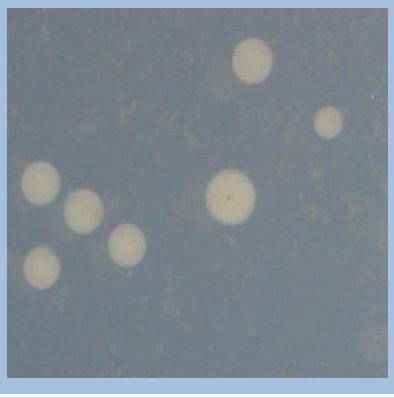
***Bacillus altitudinis* sp. CCB-MMP226**		
Colony morphology	White; 2-3 mm; circular; flat; entire; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496°E, 100.73495°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus altitudinis***
	Top-hit strain	41KF2b(T)
	Similarity (%)	100%
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus*
Publication	No	
Date of Blast	27/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***Bacillus cereus* sp. CCB-MMP227**		
Colony morphology	White; 4-5 mm; irregular; undulate; flat; dry; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496°E, 100.73495°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus cereus***
	Top-hit strain	ATCC 14579(T)
	Similarity (%)	100%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus
Publication	No	
Date of Blast	27/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	2	
Additional information		

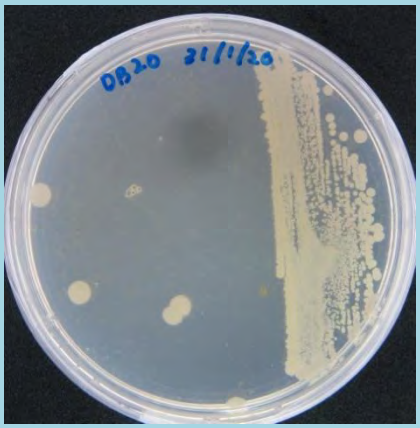
Rossellomorea arthrocnemi sp. CCB-MMP239

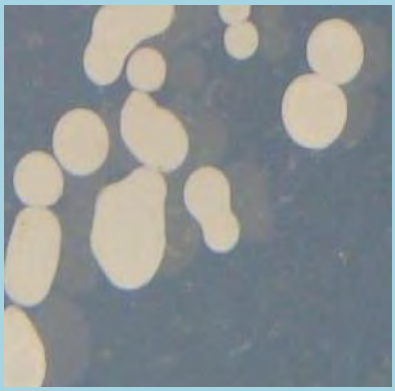
Colony morphology	Light beige; 1-3 mm; circular; entire; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496°E, 100.73495°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Rossellomorea arthrocnemi***
	Top-hit strain	EAR8(T)
	Similarity (%)	99.43%
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea*
Publication	No	
Date of Blast	07/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

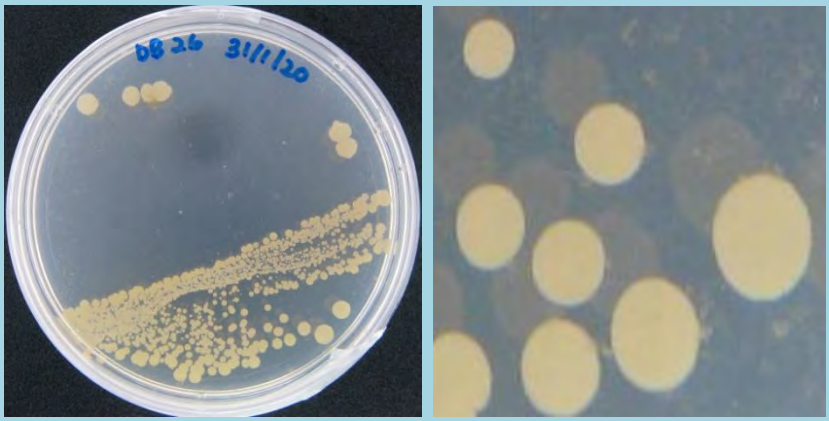
***Priestia aryabhattai* sp. CCB-PB305**		
Colony morphology	Light beige; 3-4 mm; circular; entire; flat; dry; opaque  	
Gram-stain	Gram-positive	
Isolation medium	Marine agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	11 May 2016; Pulau Betong, N05°18.761' E111°13.8'; Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	*Priestia aryabhattai*
	Top-hit strain	B8W22(T)
	Similarity (%)	99.86%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Priestia
Publication	No	
Date of Blast	17/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

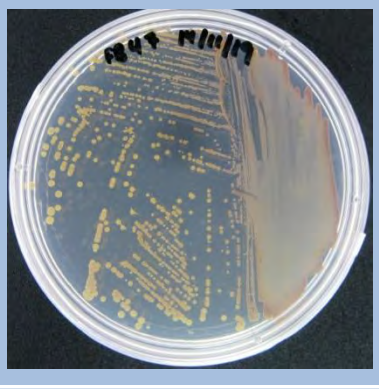
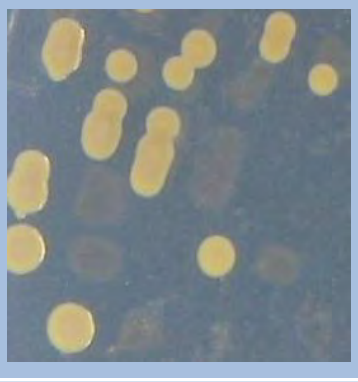
***Bacillus xiamenensis* sp. CCB-PB306**		
Colony morphology	White colony; 2-3mm; circular; entire; round; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine agar (MA); Marine broth (MB)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	11 May 2016; Pulau Betong, Penang (N05°18.761' E111°13.8'); Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus xiamenensis***
	Top-hit strain	HYC-10(T)
	Similarity (%)	99.93%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus
Publication	No	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

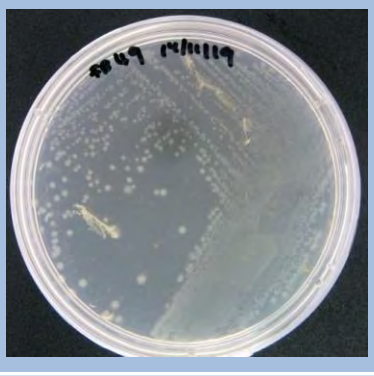
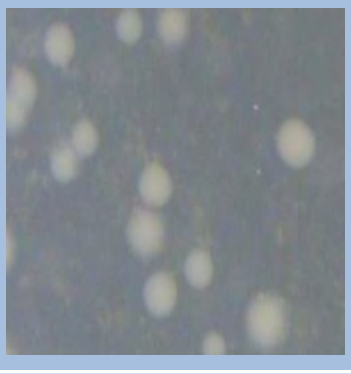
***Bacillus infantis* sp. CCB-PB309**		
Colony morphology	Peach colony; 3-4 mm; circular; entire; flat; glistening; opaque	
Gram-stain	Positive rod	
Isolation medium	Marine agar (MA); Marine Broth (MB)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	11 May 2016; Pulau Betong, Penang (N05°18.761' E111°13.8'); Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus infantis***
	Top-hit strain	NRRL B-14911
	Similarity (%)	99.72%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Cytobacillus
Publication	No	
Date of blast	17/03/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	2	
Additional information		

***Bacillus* sp. CCB-PB315**		
Colony morphology	White colony; 3-4 mm; circular; entire; flat; dry; opaque  	
Gram-stain	Positive, rod	
Isolation medium	Marine agar (MA); Marine broth (MB)	
Growth condition	Aerobic; pH7; 28±2°C; 24-48hrs	
Sampling date, location, source	11 May 2016; Pulau Betong, Penang (N05°18.761' E111°13.8'); Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus megaterium***
	Top-hit strain	NBRC 15308(T)
	Similarity (%)	100%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Priestia
Publication	No	
Date of blast	17/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

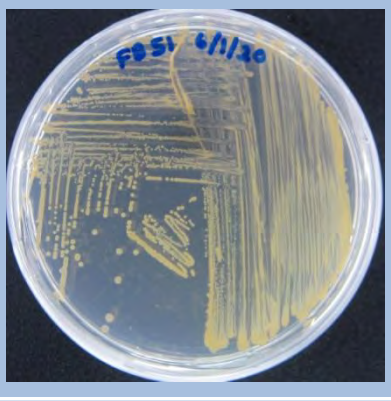
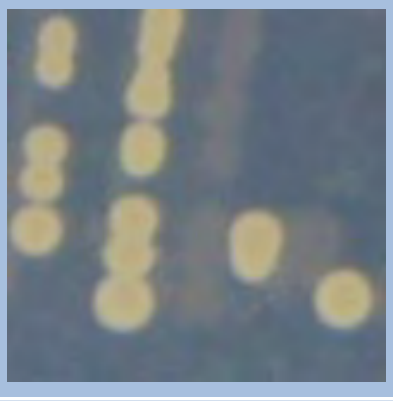
***Bacillus tequilensis sp.* CCB-PB316**		
Colony morphology	White colony; 2-3 mm; circular; entire; flat; dry; opaque  	
Gram-stain	Positive, bacilli	
Isolation medium	Marine agar (MA); Marine broth (MB)	
Growth condition	Aerobic; pH7; 28±2°C; 24-48hrs	
Sampling date, location, source	11 May 2016; Pulau Betong, Penang (N05°18.761' E111°13.8'); Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus tequilensis***
	Top-hit strain	KCTC 13622(T)
	Similarity (%)	99.70%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus
Publication	No	
Date of Blast	17/3/2025	
Application	No	
Isolated by	Diyana tarmizi	
Risk group	1	
Additional information		

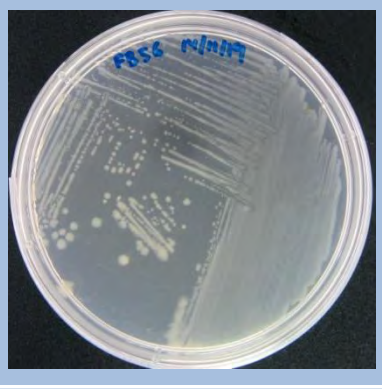
***Priestia aryabhattai sp.* CCB-PB319**		
Colony morphology	Light beige colony; 3-4 mm; circular; entire; flat; dry; opaque 	
Gram-stain	Positive, bacilli	
Isolation medium	Marine agar (MA); Marine broth (MB)	
Growth condition	Aerobic; pH7; 28±2°C; 24-48hrs	
Sampling date, location, source	11 May 2016; Pulau Betong, Penang (N05°18.761' E111°13.8'); Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Priestia aryabhattai***
	Top-hit strain	B8W22(T)
	Similarity (%)	99.65%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Priestia
Publication	No	
Date of Blast	17/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

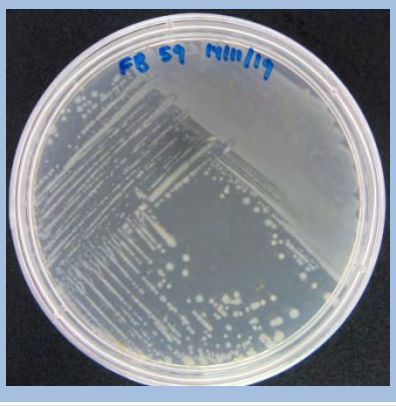
***Bacillus altitudinis* sp. CCB-SMP241**		
Colony morphology	Yellow brown; 1-3 mm; circular; entire; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus altitudinis***
	Top-hit strain	41KF2b(T)
	Similarity (%)	100%
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus*
Publication	No	
Date of Blast	07/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

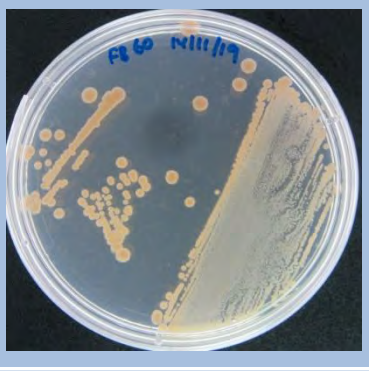
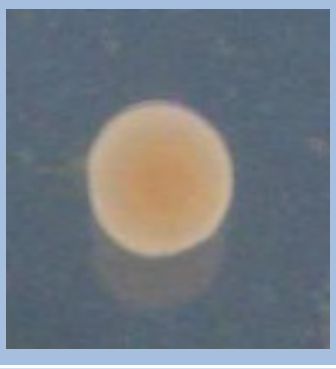
Marinobacter mobilis sp. CCB-SMP243		
Colony morphology	White; 2-3 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Marinobacter mobilis***
	Top-hit strain	CN46(T)
	Similarity (%)	98.72%
	Top-hit taxonomy	*Bacteria;Proteobacteria;Gammaproteobacteria;Pseudomonadales;Marinobacteraceae;Marinobacter*
Publication	No	
Date of Blast	07/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	2	
Additional information		

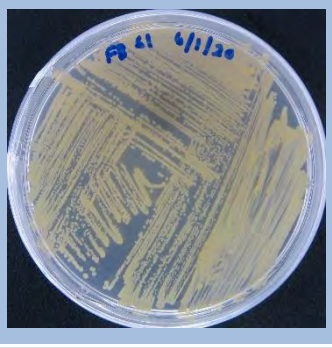
***Bacillus pacificus* sp. CCB-SMP244**		
Colony morphology	Light brown; 2-3 mm; circular; entire; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus pacificus***
	Top-hit strain	EB422(T)
	Similarity (%)	100%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus
Publication	No	
Date of Blast	07/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

PDIY_s sp. CCB-SMP245		
Colony morphology	Beige; 2-3 mm; circular; entire; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***PDIY_s***
	Top-hit strain	es.034
	Similarity (%)	99.38%
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea*
Publication	No	
Date of Blast	07/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

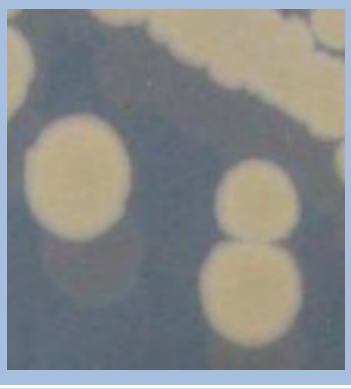
***Bacillus siamensis* sp. CCB-SMP249**		
Colony morphology	White; 2-3 mm; circular; entire; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus siamensis***
	Top-hit strain	KCTC 13613(T)
	Similarity (%)	99.85%
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus*
Publication	No	
Date of Blast	07/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

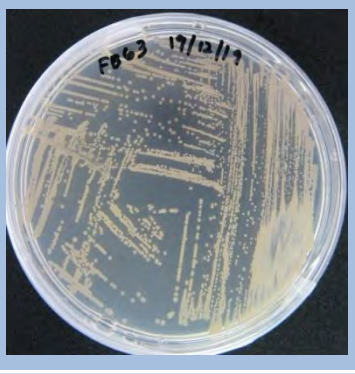
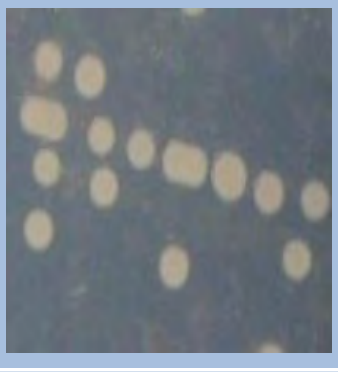
***Bacillus altitudinis* sp. CCB-SMP252**		
Colony morphology	White; 2-3 mm size; circular; entire; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus altitudinis***
	Top-hit strain	41KF2b(T)
	Similarity (%)	100%
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus*
Publication	No	
Date of Blast	07/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

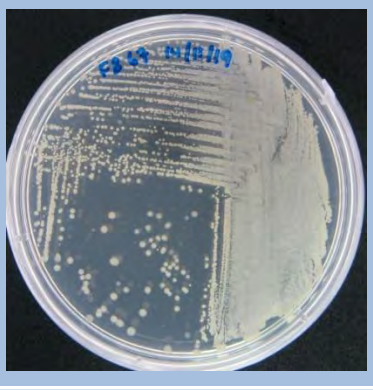
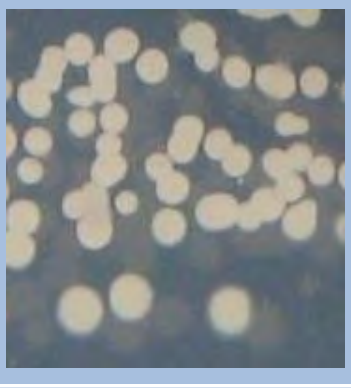
Rossellomorea oryzaecorticis . CCB-SMP253		
Colony morphology	Peach; 2-3 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Rossellomorea oryzaecorticis***
	Top-hit strain	R1(T)
	Similarity (%)	99.50 %
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea*
Publication	No	
Date of Blast	07/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

Pseudalkalibacillus hwajinpoensis sp. CCB-SMP254		
Colony morphology	Peach; 2-3 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Pseudalkalibacillus hwajinpoensis***
	Top-hit strain	SW-72(T)
	Similarity (%)	99.92 %
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Pseudalkalibacillus*
Publication	No	
Date of Blast	08/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

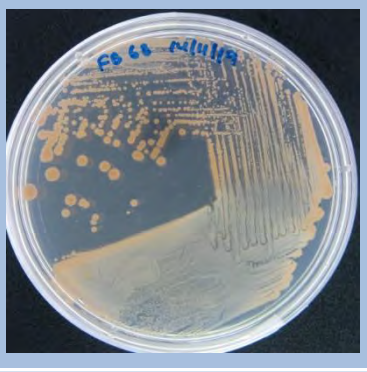
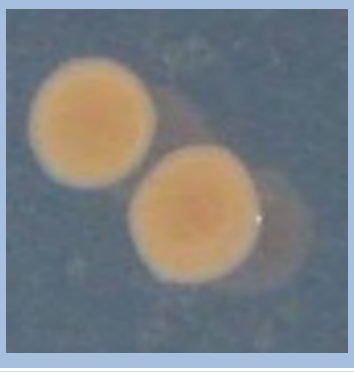
Rossellomorea oryzaecorticis sp. CCB-SMP255

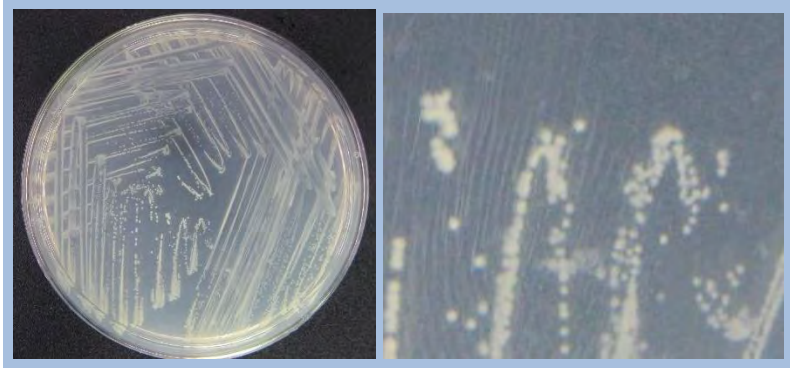
Colony morphology	Light beige; 4-5 mm; circular; entire; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Rossellomorea oryzaecorticis***
	Top-hit strain	R1(T)
	Similarity (%)	99.56%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea
Publication	No	
Date of Blast	08/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***Rossellomorea oryzaecorticis* sp. CCB-SMP256**		
Colony morphology	Peach; 1-2 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Rossellomorea oryzaecorticis***
	Top-hit strain	R1(T)
	Similarity (%)	99.56%
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea*
Publication	No	
Date of Blast	08/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

Bacillus altitudinis sp. CCB-SMP260		
Colony morphology	White; 2-3 mm size; circular; entire; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus altitudinis***
	Top-hit strain	41KF2b(T)
	Similarity (%)	100.00%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus
Publication	No	
Date of Blast	08/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

Bacillus haikouensis sp. CCB-SMP261

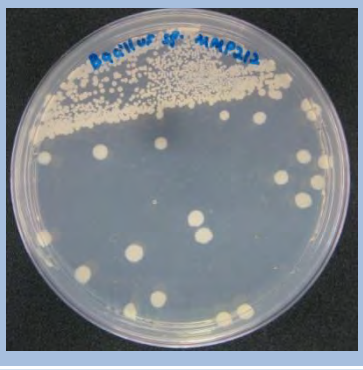
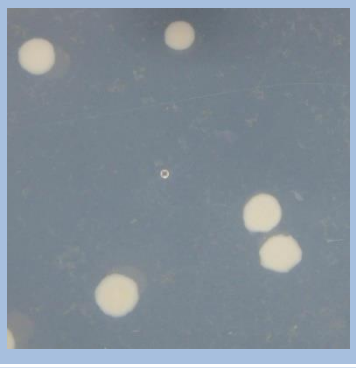
Colony morphology	Peach; 2-3 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus haikouensis***
	Top-hit strain	C-89(T)
	Similarity (%)	99.66%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea
Publication	No	
Date of Blast	08/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

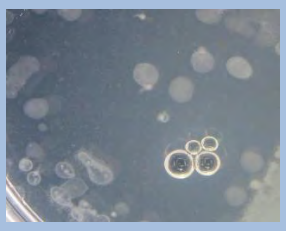
***Bacillus* sp. CCB-ST2L44**		
Colony morphology	Beige; 2-3 mm; circular; entire; flat; glistening; opaque 	
Gram-stain	Positive rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 October 2014; Matang Mangrove Forest (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	Tryptone + 50% Artificial sea water (ASW) agar	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus altitudinis***
	Top-hit strain	41KF2b(T)
	Similarity (%)	99.02%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus
Date of blast	12/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	GGGGCCGCCAAATACATGCAAGTCGAGCGGACAGAAGGGAGCTTGCTCCCGGATGTTAGCGGCGGACGGGTGAGTAACACGTGGGTAACCTGCCTGTAAGACTGGGATAACTCCGGGAAACCGGAGCTAATACCGGATAGTTCCTTGAACCGCATGGTTCAAGGATGAAAGACGGTTTCGGCTGTCACTTACAGATGGACCCGCGGCGCATTAGCTAGTTGGTGAGGTAACGGCTCACCA	

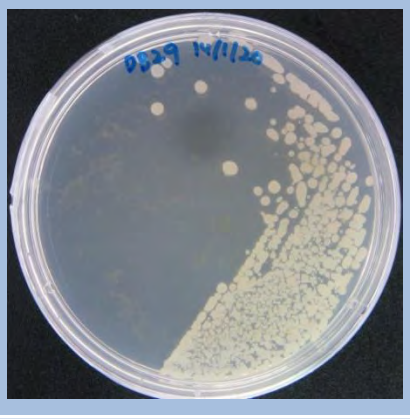
	AGGCGACGATGCGTAGCCGACCTGAGAGGGTGATCGGCCACACTGGGA CTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTAGGGAATCTTC CGCAATGGACGAAAGTCTGACGGAGCAACGCCGCGTGAGTGATGAAGG TTTTCGGATCGTAAAGCTCTGTTGTTAGGGAAGAACAAGTGCAAGAGT AACTGCTTGCACCTTGACGGTACCTAACCAGAAAGCCACGGCTAACTA CGTGCCAGCAGCCGCGGTAATACGTAGGTGGCAAGCGTTGTCCGGAAT TATTGGGCGTAAAGGGCTCGCAGGCGGTTTCTTAAGTCTGATGTGAAA GCCCCCGGCTCAACCGGGGAGGGTCATTGGAAACTGGGAAACTTGAGT GCAGAAGAGGAGAGTGGAATTCCACGTGTAGCGGTGAAATGCGTAGAG ATGTGGAGGAACACCAGTGGCGAAGGCGACTCTCTGGTCTGTAACTGA CGCTGAGGAGCGAAAGCGTGGGGAGCGAACAGGATTAGATACCCTGGT AGTCCACGCCGTAAACGATGAGTGCTAAGTGTTAGGGGGTTTCCGCCC CTTAGTGCTGCAGCTAACGCATTAAGCACTCCGCCTGGGGAGTACGGT CGCAAGACTGAAACTCAAAGGAATTGACGGGGGCCCGCACAAGCGGTG GAGCATGTGGTTTAATTCGAAGCAACGCGAAGAACCTTACCAGGTCTT GACATCCTCTGACAACCCTAGAGATAGGGCTTTCCCTTCGGGGACAGA GTGACAGGTGGTGCATGGTTGTCGTCAGCTCGTGTCGTGAGATGTTGG GTTAAGTCCCGCAACGAGCGCAACCCTTGATCTTAGTTGCCAGCATTC AGTTGGGCACTCTAAGGTGACTGCCGGTGACAAACCGGAGGAAGGTGG GGATGACGTCAAATCATCATGCCCCTTATGACCTGGGCTACACACGTG CTACAATGGACAGAACAAAGGGCTGCGAGACCGCAAGGTTTAGCCAAT CCCACAAATCTGTTCTCAGTTCGGATCGCAGTCTGCAACTCGACTGCG TGAAGCTGGAATCGCTAGTAATCGCGGATCAGCATGCCGCGGTGAATA CGTTCCCGGGCCTTGTACACACCGCCCGTCACACCACGAGAGTTTGCA ACACCCGAAGTCGGTGAGGTAACCTTTATGAGCCAGCCGCCGATTGGG TC

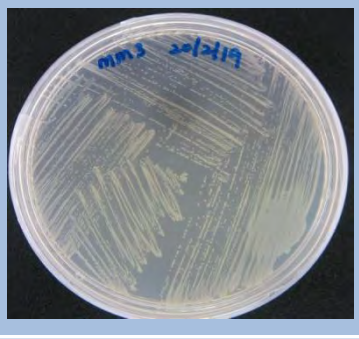
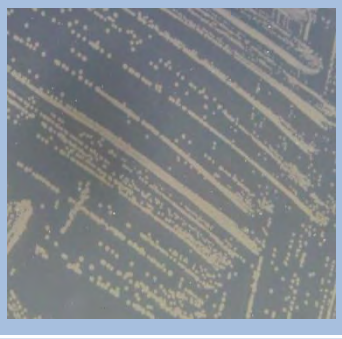
Bacillus sp. CCB-ST3L23

Colony morphology	Beige; 1-2 mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-positive	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar;	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus algicola***
	Top-hit strain	KMM 3737(T)
	Similarity (%)	99.70
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus_g21
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information		

***Bacillus cereus* sp. CCB-MMP212**		
Colony morphology	White colony; 2-5 mm size; circular; curled; flat; rough; dry; opaque  	
Gram-stain	Gram-positive	
Isolation medium	Nutrient agar (NA) + 50% Artificial sea water (ASW)/Marine agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496°E, 100.73495°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus cereus***
	Top-hit strain	ATCC 14579(T)
	Similarity (%)	100.00
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus
Publication	No	
Date of Blast	26/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	2	
Additional information		

***Bacillus lichenniformis* sp. CCB-CTB324**		
Colony morphology	 	
Gram-stain	Positive curved rod	
Isolation medium	Marine agar (MA); Marine broth (MB)	
Growth condition	Aerobic; pH7; 28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2016; CEMACS Teluk Bahang, N05°28.100' E100°12.011'; Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	*Bacillus lichenniformis*
	Top-hit strain	ATCC 14580(T)
	Similarity (%)	99.71%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus
Publication	No	
Date of Blast	19/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

***Bacillus tequilensis* sp. CCB-TA322**		
Colony morphology	White; 2-3 mm; circular; entire; flat; dry; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine agar (MA); Marine broth (MB)	
Growth condition	Aerobic; pH7; 28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2016; Teluk Aling, N05º28.538' E100º12.014'; Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Bacillus tequilensis***
	Top-hit strain	KCTC 13622(T)
	Similarity (%)	99.93%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus
Publication	No	
Date of Blast	17/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

CPO14596_s CCB-MM3		
Colony morphology	Pale yellow; 1 mm size; circular; entire; raised; glistening; opaque  	
Gram-stain	Gram-negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	CP014596_s
	Top-hit strain	CCB-MM3
	Similarity (%)	100%
	Top-hit taxonomy	Bacteria;Proteobacteria;Alphaproteobacteria;Rhodobacterales;Rhodobacteraceae;Yangia
Date of blast	10/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	GAGTAACGCGTGGGAACGTGCCCTTCTCTACGGAACAGTCCCGGGAAA CTGGGTTTAATACCGTATACGCCCTTCGGGGGAAAGATTTATCGGAGA AGGATCGGCCCGCGTTAGATTAGGTAGTTGGTGGGGTAATGGCCTACC AAGCCTACGATCTATAGCTGGTTTGAGAGGATGATCAGCCACACTGGG ACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATCTT AGACAATGGGGGCAACCCTGATCTAGCCATGCCGCGTGAGTGATGAAG GCCTTAGGGTCGTAAAGCTCTTTCGCTGGGGAAGATAATGACTGTACC CAGTAAAGAAACCCCGGCTAACTCCGTGCCAGCAGCCGCGGTAATACG	

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CCTCCAAAACTCCTGGTCTTGAGTTCGAGAGAGGTGAGTGGAACTCCG
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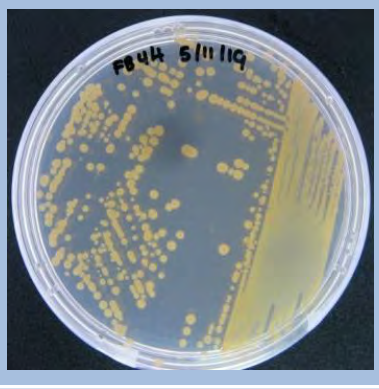
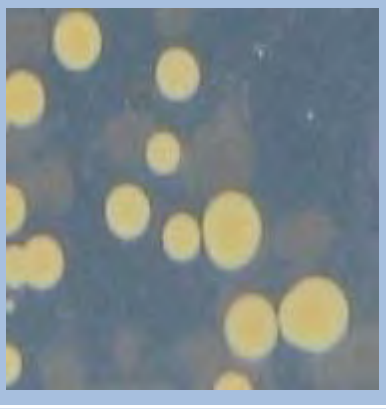
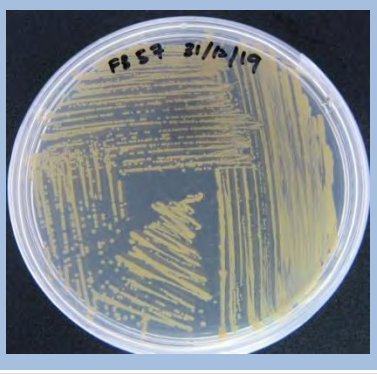
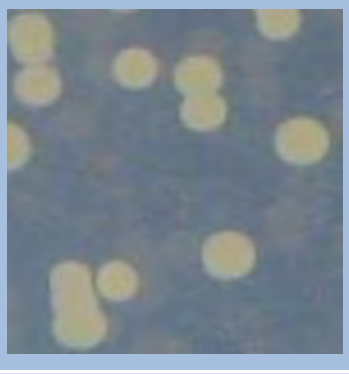
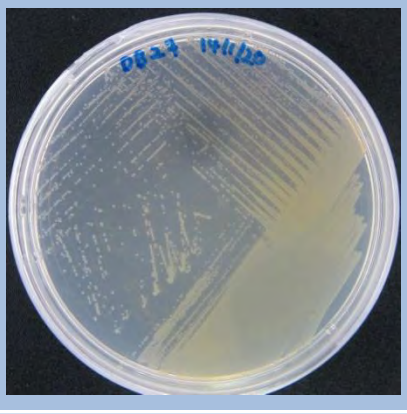
ACGTTCCCGGGCCTTGTACACACCGCCCGTCACACCATGGGAGTTGGT
TCT

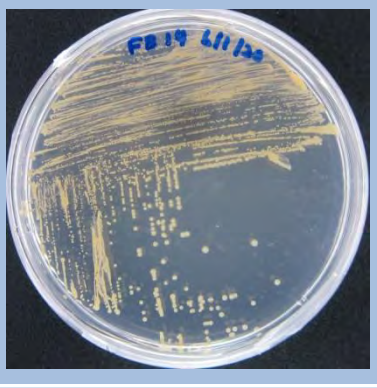
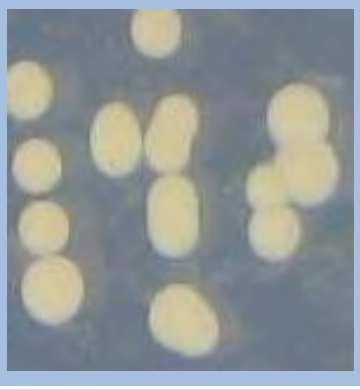
***Exiguobacterium qingdaonense* sp. CCB-MMP220**		
Colony morphology	Light beige; 2-3 mm; circular; entire; flat; glistening; opaque  	
Gram-stain	Gram-positive	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496°E, 100.73495°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Exiguobacterium qingdaonense***
	Top-hit strain	S82(T)
	Similarity (%)	99.92%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Exiguobacterium_f;Exiguobacterium
Publication	No	
Date of Blast	26/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

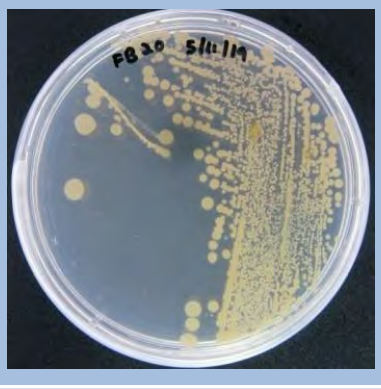
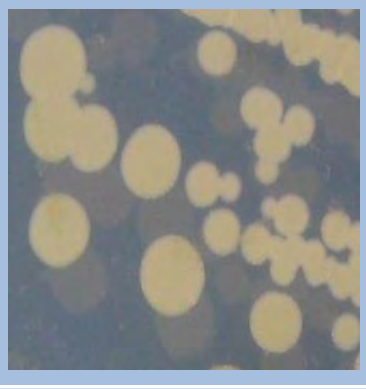
***Exiguobacterium qingdaonense* sp. CCB-MMP238**		
Colony morphology	Beige; 2-3 mm; circular; entire; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496°E, 100.73495°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Exiguobacterium qingdaonense***
	Top-hit strain	S82(T)
	Similarity (%)	99.92%
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Exiguobacterium_f;Exiguobacterium*
Publication	No	
Date of Blast	07/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***Exiguobacterium profundum* sp. CCB-SMP246**		
Colony morphology	Beige; 2-3 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Gram-positive	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Exiguobacterium profundum***
	Top-hit strain	10C
	Similarity (%)	100%
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Exiguobacterium_f;Exiguobacterium*
Publication	No	
Date of Blast	07/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***Exiguobacterium aestuarii* sp. CCB-SMP250**		
Colony morphology	Dark beige; 2-3 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Gram-positive	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Exiguobacterium aestuarii***
	Top-hit strain	TF-16(T)
	Similarity (%)	99.77%
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Exiguobacterium_f;Exiguobacterium*
Publication	No	
Date of Blast	07/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***Exiguobacterium profundum* sp.CCB-TA320**		
Colony morphology	Light beige; 1-2 mm; circular; entire; raised; glistening; transparent  	
Gram-stain	Positive rod	
Isolation medium	Marine agar (MA); Marine broth (MB)	
Growth condition	Aerobic; pH7; 28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2016; Teluk Aling, N05º28.538' E100º12.014'; Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Exiguobacterium profundum***
	Top-hit strain	10C(T)
	Similarity (%)	99.93%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Exiguobacterium_f;Exiguobacterium
Publication	No	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

***Halobacillus mangrovi* sp. CCB-MMP219**		
Colony morphology	Beige; 2-3 mm size; circular; entire; flat; glistening; opaque  	
Gram-stain	Gram-positive	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496°E, 100.73495°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Halobacillus mangrovi***
	Top-hit strain	MS10(T)
	Similarity (%)	99.35%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Halobacillus
Publication	No	
Date of Blast	26/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***Halobacillus mangrovi* sp. CCB-MMP225**		
Colony morphology	Light beige; 3-5 mm; circular; flat; entire; dry; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496°E, 100.73495°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Halobacillus mangrovi***
	Top-hit strain	MS10(T)
	Similarity (%)	99.13%
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Halobacillus*
Publication	No	
Date of Blast	27/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***Halobacillus* sp. CCB-ST3H30**		
Colony morphology	Beige; 1 mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-Positive	
Isolation medium	Tryptone + Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Halobacillus fulvus***
	Top-hit strain	SKP4-6(T)
	Similarity (%)	98.67%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Halobacillus
Date of blast	11/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	TGACGCTCGTGGAACGAGCGGCGGACGGGTGAGTAACACGTGGGCAAC CTGCCTGTAAGATCGGAATAACCCCGGGAAACCGGAGCTAATGCCGGG TAATACTTTTCTTCGCATGAAGGAAAGTTGAAAGATGGCTTCTCGCTA TCACTTACAGATGGGCCCGCGGCGCATTAGCTAGTTGGTGAGGTAACG GCTCACCAAGGCAACGATGCGTAGCCGACCTGAGAGGGTGATCGGCCA CACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTAGG GAATCTTCCGCAATGGACGAAAGTCTGACGGAGCAACGCCGCGTGAAC GATGAAGGTTTTCGGATCGTAAAGTTCTGTTGTTAGGGAAGAACAAGT ACCGTGCGAATAGAGCGGTACCTTGACGGTACCTAACGAGAAAGCCCC	

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GAGTTG

***Halobacillus* sp. CCB-TPBH5**		
Colony morphology	Beige; 1 mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-Positive	
Isolation medium	Tryptone + Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	25 September 2014; Taman Paya Bakau (4.21335 N, 100.64709 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Halobacillus mangrovi***
	Top-hit strain	MS10
	Similarity (%)	99.58%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Halobacillus
Date of blast	12/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	CCGTNATACTGCAAGTCGAGCGCGGGAAGCGAGCGGATCCCCTTCGGG GGTGAAGCTCGTGGAACGAGCGGCGGACGGGTGAGTAACACGTGGGCA ACCTGCCTGTAAGACCGGAATAACCCCGGGAAACCGGGGCTAATGCCG GGTAACACTTTCCTCCGCATGGAGGAGAGTTGAAAGATGGCTTCTAGC TATCACTTACAGATGGGCCCGCGGCGCATTAGCTAGTTGGTGAGGTAA CGGCTCACCAAGGCGACGATGCGTAGCCGACCTGAGAGGGTGATCGGC CACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTA GGGAATCTTCCGCAATGGACGAAAGTCTGACGGAGCAACGCCGCGTGA ACGATGAAGGTCTTCGGATCGTAAAGTTCTGTTGTTAGGGAAGAACAA	

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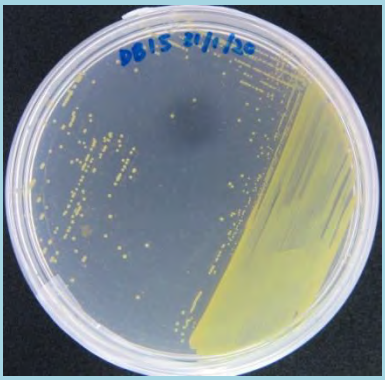
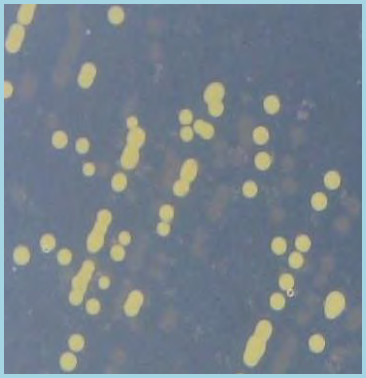
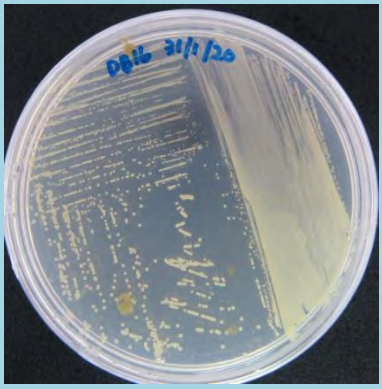
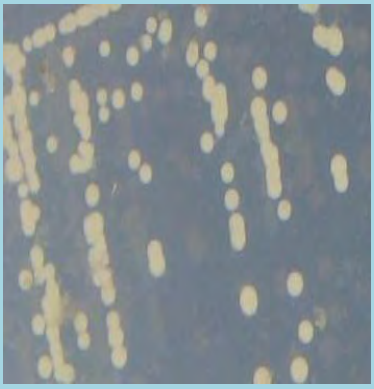
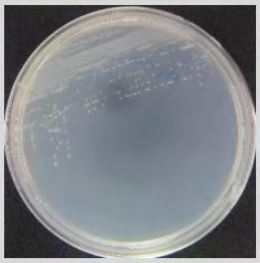
GCNNC

***Kocuria indica sp.* CCB-PB311**		
Colony morphology	Yellow colony; 1 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Positive, coccoid	
Isolation medium	Marine agar (MA); Marine broth (MB)	
Growth condition	Aerobic; pH7; 28±2°C; 24-48hrs	
Sampling date, location, source	11 May 2016; Pulau Betong, Penang (N05°18.761' E111°13.8'); Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis (EzBioCloud/NCBI)	Top-hit taxon	***Kocuria indica***
	Top-hit strain	NIO-1021(T)
	Similarity (%)	99.93%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Micrococcales;Micrococcaceae;Kocuria
Publication	No	
Date of Blast	17/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

***Kocuria palustris sp.* CCB-PB312**		
Colony morphology	White colony; 1-2mm size; circular; entire; raised; glistening; opaque  	
Gram-stain	Positive, coccoid	
Isolation medium	Marine agar (MA); Marine broth (MB)	
Growth condition	Aerobic; pH7; 28±2°C; 24-48hrs	
Sampling date, location, source	11 May 2016; Pulau Betong, Penang (N05°18.761' E111°13.8'); Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Kocuria palustris***
	Top-hit strain	DSM 11925(T)
	Similarity (%)	99.93
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Micrococcales;Micrococcaceae;Kocuria
Publication	No	
Date of Blast	17/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

LRRR_s CCB-KSK210		
Colony morphology	White colony; 1-2 mm size; circular; entire; raised; glistening; opaque  	
Gram-stain	Gram Negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 October 2014; Matang Mangrove Forest (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	LRRR_s
	Top-hit strain	CCB-MM2
	Similarity (%)	99.04%
	Top-hit taxonomy	Bacteria;Proteobacteria;Alphaproteobacteria;Rhodobacterales;Rhodobacteraceae;Pararhodobacter
Date of blast	11/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	ANGTACGGTAACATGCAAGTCGAGCGAAGCCTTCGGGCTTAGCGGCGG ACGGGTGAGTAACGCGTGGGAACGTGCCCTTTGCTTCGGAATAGCCCC GGGAAACTGGGAGTAATACCGAATGTGCCCTACGGGGGAAAGATTTAT CGGCAAAGGATCGGCCCGCGTTGGATTAGGTAGTTGGTGGGGTAATGG CCTACCAAGCCGACGATCCATAGCTGGTTTGAGAGGATGATCAGCCAC ACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGG AATCTTAGACAATGGGCGCAAGCCTGATCTAGCCATGCCGCGTGATCG ATGAAGGCCTTAGGGTTGTAAAGATCTTTCAGCTGGGAAGATAATGAC	

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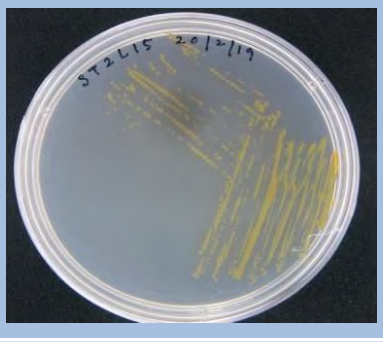
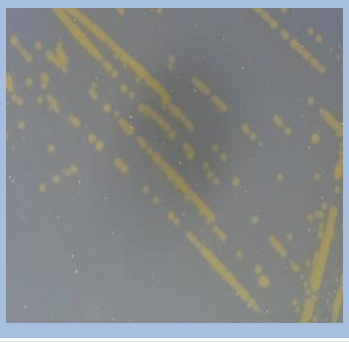
***Mangrivimonas* sp. CCB-ST2L15**		
Colony morphology	Beige colony; 1 mm size; circular; entire; raised; glistening; opaque  	
Gram-stain	Gram-negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar;	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Mangrovimonas futianensis***
	Top-hit strain	AS18
	Similarity (%)	99.92%
	Top-hit taxonomy	Bacteria;Bacteroidetes;Flavobacteria;Flavobacteriales;Flavobacteriaceae;Mangrovimonas
Date of blast	10/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	GGCGCACGGGTGCGTAACGCGTATGCAACCTACCTCTTACAGGGGAAT AGCCCAGGGAAACTTGGATTAATGCCCCATAATATATAGGAATGGCAT CATTTTTATATTAAAGTTCCGGCGGTAAGAGATGGGCATGCGTTCTAT TAGCTAGTAGGTGTGGTAACGGCACACCTAGGCTACGATAGATAGGGG CCCTGAGAGGGGGATCCCCCACACTGGTACTGAGACACGGACCAGACT CCTACGGGAGGCAGCAGTGAGGAATATTGGACAATGGGCGAGAGCCTG ATCCAGCCATGCCGCGTGCAGGAAGACTGCCCTATGGGTTGTAAACTG CTTTTATACGGGAAGAAACCTCCCCTCGTGAGGGGAGCTGACGGTACC	

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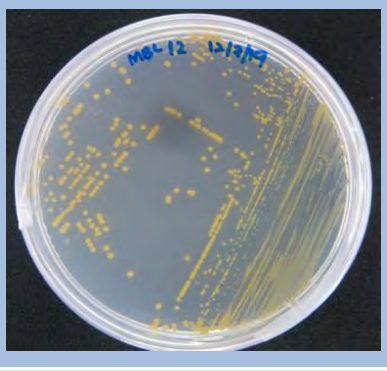
CAAGCCATGGAAG

***Mangrovimonas* sp. CCB-TPBH4**		
Colony morphology	Beige colony ; 1-2 mm size; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-Negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic; pH7.6; 28±2°C; 24-48hrs	
Sampling date, location, source	25 September 2014; Taman Paya Bakau (4.21335 N, 100.64709 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Mangrovimonas xylaniphaga***
	Top-hit strain	ST2L12
	Similarity (%)	99.24
	Top-hit taxonomy	Bacteria;Bacteroidetes;Flavobacteria;Flavobacteriales;Flavobacteriaceae;Mangrovimonas
Date of blast	10/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	GCCGGCGAGTGGCGCACGGGTGCGTAACGCGTATGCAACCTACCTCTT ACAGGGGGATAGCCCAGAGAAATTTGGATTAATACCCCGTAGTATACC GATGTGGCATCACGATGGTATTAAAGTTTTGGCGGTAAGAGATGGGCA TGCGTTCTATTAGCTAGTAGGTGTGGTAACGGCACACCTAGGCGACGA TAGATAGGGGCCCTGAGAGGGGGATCCCCCACACTGGTACTGAGACAC GGACCAGACTCCTACGGGAGGCAGCAGTGAGGAATATTGGACAATGGG CGGGAGCCTGATCCAGCCATGCCGCGTGCAGGAAGACTGCCCTATGGG	

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GGCCCTTACGTCCTGGGCTACACACGTGCTACAATGGTAGGTACAGAG
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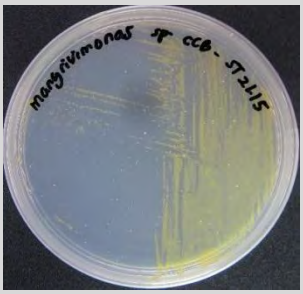
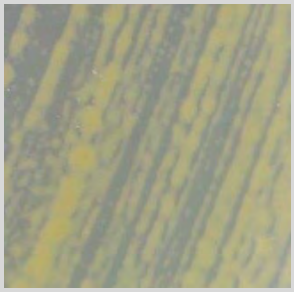
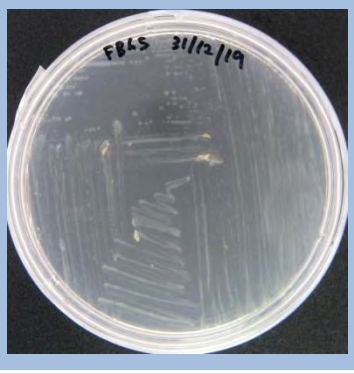
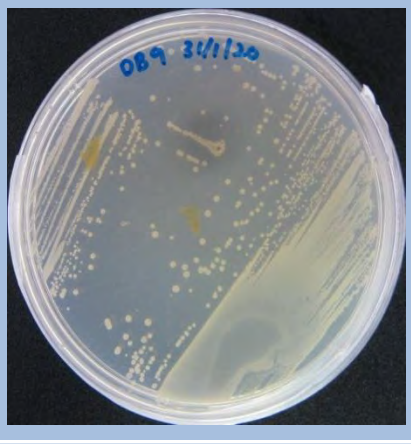
ACCGCCCGTCAAGCCATGGA

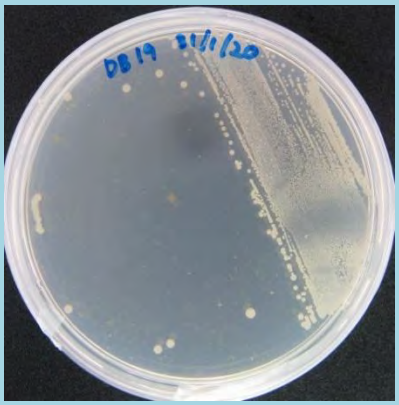
Mangrovimonas sp. ST2L12

Colony morphology	Yellow colony; 1 mm size; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic; pH7.6; 28±2°C; 24-48hrs	
Sampling date, location, source	2 October 2014; Matang Mangrove Forest (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Mangrovimonas* sp.**
	Top-hit strain	LBIP_s
	Similarity (%)	100.00
	Top-hit taxonomy	Bacteria;Bacteroidetes;Flavobacteria;Flavobacteriales; Flavobacteriaceae;Mangrovimonas
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information		

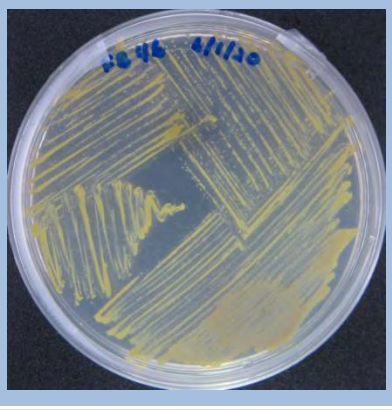
Marinobacter mobilis sp. CCB-SMP258		
Colony morphology	White; 1-2 mm; circular; entire; flat; glistening; transparent  	
Gram-stain	Gram-negative	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Marinobacter mobilis***
	Top-hit strain	CN46(T)
	Similarity (%)	99.03%
	Top-hit taxonomy	*Bacteria;Proteobacteria;Gammaproteobacteria;Pseudomonadales;Marinobacteraceae;Marinobacter*
Publication	No	
Date of Blast	08/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	2	
Additional information		

Metabacillus sp. CCB-PB307

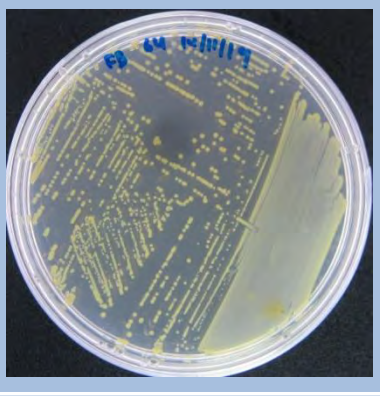
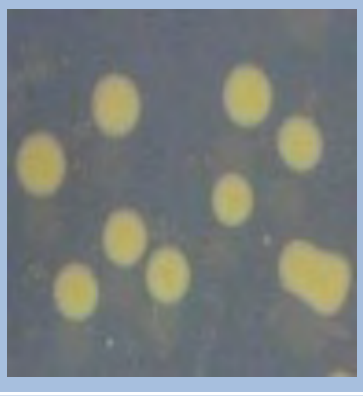
Colony morphology	White colony; 1-2 mm size; circular; entire; raised; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine agar (MA); Marine broth (MB)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	11 May 2016; Pulau Betong, Penang (N05°18.761' E111°13.8'); Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Metabacillus schmidteae***
	Top-hit strain	Marseille-P9898(T)
	Similarity (%)	99.51%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Metabacillus
Publication	No	
Date of Blast	17/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

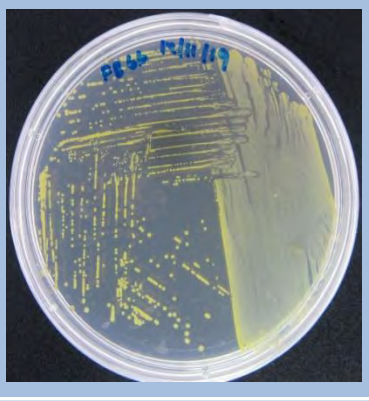
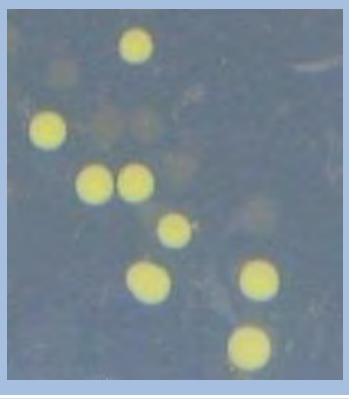
***Metabacillus halosaccharovorans sp.* CCB-PB314**		
Colony morphology	White colony; 1-2 mm size; circular; entire; flat; dry; opaque  	
Gram-stain	Positive, rod bacilli	
Isolation medium	Marine agar (MA); Marine broth (MB)	
Growth condition	Aerobic; pH7; 28±2°C; 24-48hrs	
Sampling date, location, source	11 May 2016; Pulau Betong, Penang (N05°18.761' E111°13.8'); Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Metabacillus halosaccharovorans***
	Top-hit strain	E33(T)
	Similarity (%)	98.01%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Metabacillus
Publication	No	
Date of Blast	17/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

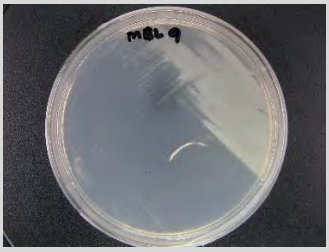
KE150457_s sp. CCB-MMP240

Colony morphology	Yellow; 1-2 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Gram-positive	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496°E, 100.73495°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***KE150457_s***
	Top-hit strain	F0373
	Similarity (%)	98.25%
	Top-hit taxonomy	*Bacteria;Actinobacteria;Actinomycetia;Microbacteriales;Microbacteriaceae;Microbacterium*
Publication	No	
Date of Blast	07/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

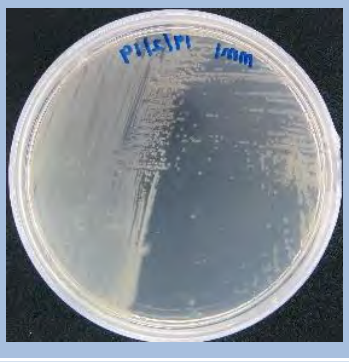
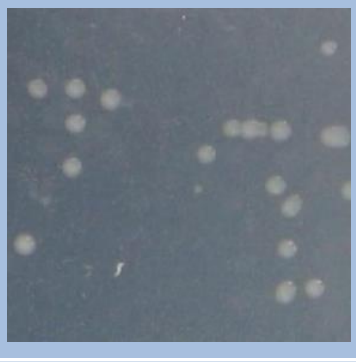
Microbacterium esteraromaticum sp. CCB-SMP257

Colony morphology	Yellow; 2-3 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Gram-positive	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbacterium esteraromaticum***
	Top-hit strain	DSM 8609(T)
	Similarity (%)	99.70%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Microbacteriales;Microbacteriaceae;Microbacterium
Publication	No	
Date of Blast	08/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

Microbacterium thalassium sp. CCB-SMP259		
Colony morphology	Yellow; 1-2 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Gram-positive	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbacterium thalassium***
	Top-hit strain	IFO 16060(T)
	Similarity (%)	99.77%
	Top-hit taxonomy	*Bacteria;Actinobacteria;Actinomycetia;Microbacteriales;Microbacteriaceae;Microbacterium*
Publication	No	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

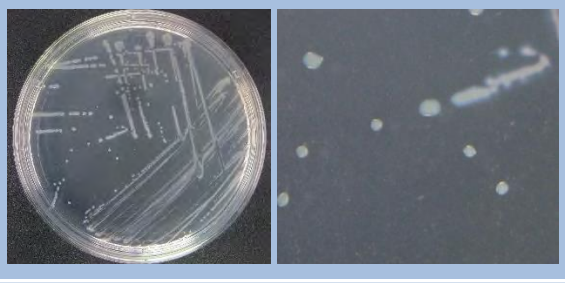
***Microbulbifer variabilis* sp. CCB-TPBL10**		
Colony morphology	White colony; 1-2 mm; filamentous; flat; filiform; glistering; transparent  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	25 Sep 2014; Matang Mangrove Forest, Perak (4.21335 N, 100.64709 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer variabilis***
	Top-hit strain	Ni-2088(T)
	Similarity (%)	98.94
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Publication	No	
Date of Blast	12/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information	NNNNNNNNNNCNGNTANACATGCAGTCGAGCGCGAACGTTCCTTCGGGAACAAGTAGAGCGGCGGACGGGTGAGTAACGCGTGGGAAATTGCCCAGTAGTGGGGGACAACATTCGGAAACGGATGCTAATACCGCATACGCCCTACGGGGGAAAGCAGGGGATCTTCGGACCTTGTGCTATTGGATATGCCCGCGTCGGATTAGCTAGTTGGTGAGGTAATGGCTCACCAAGGCAACGATCCGTAGCTGGTCTGAGAGGATGATCAGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGA	

	GGCAGCAGTGGGGAATATTGGACAATGGGCGCAAGCCT GATCCAGCCATGCCGCGTGTGTGAAGAAGGCCCTAGGGT TGTAAAGCACTTTCAGTAGGGAGGAAGGCCTTAAAGTTA ATACCTTTGAGGATTGACGTTACCTACAGAAGAAGCACC GGCTAACTCCGTGCCAGCAGCCGCGGTAATACGGAGGG TGCAAGCGTTAATCGGAATTACTGGGCGTAAAGCGCGCG TAGGCGGTTAGTTAAGCTGGATGTGAAAGCCCCGGGCTC AACCTGGGAACTGCATTCAGAACTGGCTGGCTAGAGTAC GAGAGAGGGTAGTGGAATTTCCTGTGTAGCGGTGAAAT GCGTAGATATAGGAAGGAACATCAGTGGCGAAGGCGAC TGCCTGGCTCGATACTGACGCTGAGGTGCGAAAGCGTGG GGAGCAAACAGGATTAGATACCCTGGTAGTCCACGCCGT AAACGATGTCTACTAGTCGTAGGGTTCCTTGAGGACTTT GTGACGCAGCTAACGCAATAAGTAGACCGCCTGGGGAG TACGGCCGCAAGGTTAAAACTCAAATGAATTGACGGGG GCCCGCACAAGCGGTGGAGCATGTGGTTTAATTCGAAGC AACGCGAAGAACCTTACCAGGGCTTGACATCCTCGGAA GTCTGCAGAGATGCGGATGTGCCTTCGGGAACCGAGTGA CAGGTGCTGCATGGCTGTCGTCAGCTCGTGTCGTGAGAT GTTGGGTTAAGTCCCGTAACGAGCGCAACCCTTGTCCTT AGTTGCTAGCAGGTAATGCTGAGAACTCTAGGGAGACTG CCGGTGACAAACCGGAGGAAGGTGGGGACGACGTCAAG TCATCATGGCCCTTACGTCCTGGGCTACACACGTGCTAC AATGGTTGGTACAGACGGTCGCTAAGCCGCGAGGTGGA GCTAATCCGAAAAAACCAATCGTAGTCCGGATTGGAGTC TGCAACTCGACTCCATGAAGTCGGAATCGCTAGTAATCG TGAATCAGAATGTCACGGTGAATACGTTCCCGGGCCTTG TACACACCGCCCGTCACACCATGGGAGTGGGTTGCTCCA GAAGTGGCTAGTCTAACCTTCGGGGGGACGGTCACCNN GGANTNNNNNNNNN

***Microbulbifer sp.* CCB-MM1**		
Colony morphology	White colony; 1 mm size; circular; raised; entire; glistening; opaque  	
Gram-stain	Negative rod and coccoid	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer aggregans***
	Top-hit strain	CCB-MM1(T)
	Similarity (%)	100%
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Date of blast	10/03/2025	
Publication	Moh, T.-H., Lau, N.-S., Furusawa, G., & Amirul, A. A.-A. (2017). Complete genome sequence of *Microbulbifer* sp. CCB-MM1, a halophile isolated from Matang Mangrove Forest, Malaysia. *Standards in Genomic Sciences, 12*(1), 1–9. http://doi.org/10.1186/s40793-017-0248-0 Moh, T.-H., Furusawa, G., &Amirul, A. A.-A. (2017). *Microbulbiferaggregans* sp. nov., isolated from estuarine sediment from a mangrove forest. *International Journal of Systematic and Evolutionary Microbiology, 67*(10), 4089–4094. http://doi.org/10.1099/ijsem.0.002258	
Application	No	

Isolated by	Dinesh Balachandra
Risk group	1
Additional information (Sequence)	CGGACGGGTGAGTAACGCGTGGGAAATTGCCCAGTAGTGGGGGACAAC AACCGGAAACGGTTGCTAATACCGCATACGCCCTACGGGGGAAAGCGG GGGATCTTCGGACCTCGTGCTATTGGAGATGCCCGCGTCGGATTAGCT TGTTGGTGAGGTAACGGCTCACCAAGGCAACGATCCGTAGCTGGTCTG AGAGGATGATCAGCCACACTGGGACTGAGACACGGCCCAGACTCCTAC GGGAGGCAGCAGTGGGGAATATTGGACAATGGGGGCAACCCTGATCCA GCCATGCCGCGTGTGTGAAGAAGGCCTTCGGGTTGTAAAGCACTTTCA GTAGGGAGGAAGGCCCTAAAGTTAATACCTTTAGGGATTGACGTTACC TACAGAAGAAGCACCGGCTAACTCCGTGCCAGCAGCCGCGGTAATACG GAGGGTGCAAGCGTTAATCGGAATTACTGGGCGTAAAGCGCGCGTAGG CGGTTAGTTAAGCTGGATGTGAAAGCCCCGGGCTCAACCTGGGAACTG CATTCAGAACTGGCTAGCTAGAGTACGAGAGAGGGTAGTGGAATTTCC TGTGTAGCGGTGAAATGCGTAGATATAGGAAGGAACATCAGTGGCGAA GGCGACTGCCTGGCTCGATACTGACGCTGAGGTGCGAAAGCGTGGGGA GCAAACAGGATTAGATACCCTGGTAGTCCACGCCGTAAACGATGTCTA CTAGCCGTAGGGTTCCTTGAGGACTTTGTGGCGCAGCTAACGCAATAA GTAGACCGCCTGGGGAGTACGGCCGCAAGGTTAAAACTCAAATGAATT GACGGGGGCCCGCACAAGCGGTGGAGCATGTGGTTTAATTCGAAGCAA CGCGAAGAACCTTACCAGGGCTTGACATCCAGAGAACTTTCTAGAGAT AGATTGGTGCCTTCGGGAACTCTGTGACAGGTGCTGCATGGCTGTCGT CAGCTCGTGTCGTGAGATGTTGGGTTAAGTCCCGTAACGAGCGCAACC CTTGTCCTTTGTTGCCAGCACGTAATGGTGGGAACTCAAAGGAGACTG CCGGTGACAAACCGGAGGAAGGTGGGGACGACGTCAAGTCATCATGGC CCTTACGTCCTGGGCTACACACGTGCTACAATGGCAGGTACAGACGGT TGCGAGACCGCGAGGTGGAGCTAATCCGATAAAACCTGTCGTAGTCCG GATCGGAGTCTGCAACTCGACTCCGTGAAGTCGGAATCGCTAGTAATC GTGAATCAGAATGTCACGGTGAATACGTTCCCGGGCCTTGTACACACC GCCCGTCACACCATGGGAGTGGGTT

Microbulbifer hydrolyticus sp. CCB-SMP262		
Colony morphology	Light Beige; 3-4 mm; circular; entire; flat; glistening; opaque  	
Gram-stain	Negative rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer hydrolyticus***
	Top-hit strain	DSM 11525(T)
	Similarity (%)	98.74%
	Top-hit taxonomy	*Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer*
Publication	No	
Date of Blast	08/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***Microbulbifer* sp. CCB-ST1L22**		
Colony morphology	Beige colony; 1-2 mm size; circular; undulate; raised; glistening; transparent 	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 October 2014; Matang Mangrove Forest (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer hydrolyticus***
	Top-hit strain	DSM11525(T)
	Similarity (%)	98.60%
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria; Cellvibrionales; Microbulbiferaceae;Microbulbifer
Date of blast	12/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balacandra	
Risk group	1	
Additional information (Sequence)	NGGGGCAGGCCTACCATGCAAGTCGAGCGCGAACGGTCCTTCGGGACT TATTAGAGCGGCGGACGGGTGAGTAATGCATAGGAATCTGCCCAGTAG TGGGGGATAGCCCGGGGAAACCCGGATTAATACCGCATACGTCCTACG GGAGAAAGCAGGGGATCTTCGGACCTTGCGCTATTGGATGAGCCTATG TCGGATTAGCTTGTTGGTAAGGTAACGGCTTACCAAGGCGACGATCCG TAGCTGGTCTGAGAGGATGATCAGCCACACTGGGACTGAGACACGGCC CAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGGACAATGGGGGCA ACCCTGATCCAGCCATGCCGCGTGTGTGAAGAAGGCCTTCGGGTTGTA	

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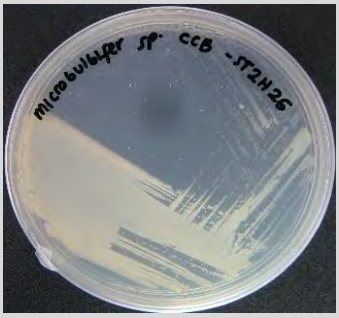
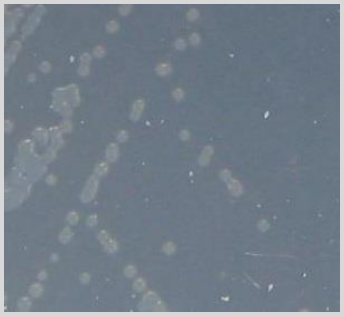
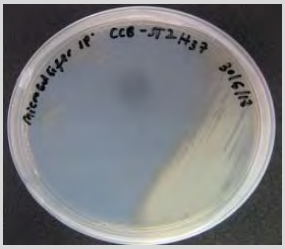
***Microbulbifer* sp. CCB-ST2H25**		
Colony morphology	Light Brown ; 0.5-1.0 mm size; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic; pH7.6; 28±2°C; 24-48hrs	
Sampling date, location, source	2 October 2014; Matang Mangrove Forest (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer hydrolyticus***
	Top-hit strain	DSM 11525
	Similarity (%)	99.01
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information		

***Microbulbifer maritimus* sp. CCB-ST2H37**		
Colony morphology	Light brown; 1 mm; circular; raised; entire; glistering; transparent  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer maritimus***
	Top-hit strain	TF-17(T)
	Similarity (%)	98.88
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Publication	No	
Date of blast	17/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information	TNNNNNNNGNNNGCAGCTACNCATGCAAGTCGAGCGCG AAAGTTCCTTCGGGAACGAGTAGAGCGGCGGACGGGTG AGTAACGCGTGGGAAATTGCCCAGTAGTGGGGGACAAC AACCGGAAACGGTTGCTAATACCGCATACGCCCTACGGG GGAAAGCGGGGGATCTTCGGACCTCGTGCTATTGGATAT GCCCGCGTCGGATTAGCTTGTTGGTGAGGTAACGGCTCA CCAAGGCGACGATCCGTAGCTGGTCTGAGAGGATGATC AGCCACACTGGGACTGAGACACGGCCCAGACTCCTACG GGAGGCAGCAGTGGGGAATATTGCACAATGGGCGCAAG	

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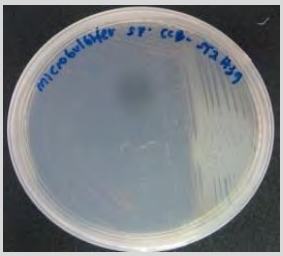
***Microbulbifer marinus* sp. CCB-ST2H39**		
Colony morphology	Brown; 1-2 mm; circular; raised; entire; glistering; opaque  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer marinus***
	Top-hit strain	Y215(T)
	Similarity (%)	98.24
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Publication	No	
Date of Blast	14/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information	CNNNNNNNGGGNNNGCTACNCATGCAGTCGAGCGCGAAAGT TCCTTCGGGAATGAGTAGAGCGGCGGACGGGTGAGTAACGCG TGGGAAATTGCCCAGTAGTGGGGGACAACAACCGGAAACGGT TGCTAATACCGCATACGCCCTACGGGGGAAAGCGGGGGATCT TCGGACCTCGTGCTATTGGATATGCCCGCGTCGGATTAGCTTG TTGGTGAGGTAATGGCTCACCAAGGCGACGATCCGTAGCTGG TCTGAGAGGATGATCAGCCACACTGGGACTGAGACACGGCCC AGACTCCTACGGGAGGCAGCAGTGGGGAATATTGGACAATGG GCGCAAGCCTGATCCAGCCATGCCGCGTGTGTGAAGAAGGCC	

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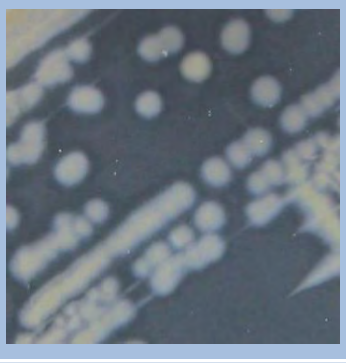
***Microbulbifer* sp. CCB-ST2L6**		
Colony morphology	Light beige; 2-3 mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-nagative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer elongatus***
	Top-hit strain	DSM 6810(T)
	Similarity (%)	98.87%
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Date of blast	10/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	AGAGCGGCGGACGGGTGAGTAATGCATAGGAATCTGCCCAGTAGTGGG GGATAGCCCGGGGAAACCCGGATTAATACCGCATACGTCCTACGGGAG AAAGCAGGGGATCTTCGGACCTTGCGCTATTGGATGAGCCTATGTCGG ATTAGCTTGTTGGTGGGGTAATGGCCCACCAAGGCGACGATCCGTAGC TGGTCTGAGAGGATGATCAGCCACACTGGGACTGAGACACGGCCCAGA CTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGGGAAACCC TGATGCAGCCATGCCGCGTGTGTGAAGAAGGCCTTCGGGTTGTAAAGC	

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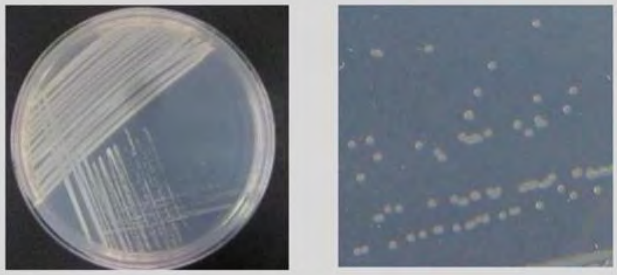
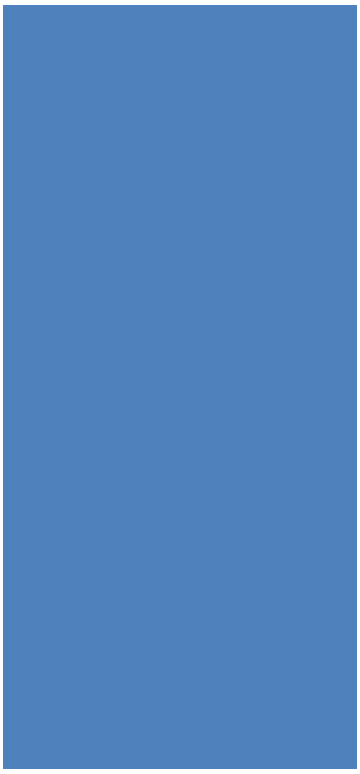
***Microbulbifer* sp. CCB-ST2L18**		
Colony morphology	Beige colony; 1-2 mm size; circular; undulate; raised; glistening; transparent 	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 October 2014; Matang Mangrove Forest (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer hydrolyticus***
	Top-hit strain	DSM 11525(T)
	Similarity (%)	97.71%
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria; Cellvibrionales; Microbulbiferaceae;Microbulbifer
Date of blast	04/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	ACCGAGGGGCGGCCAACCATGCAAGTCGAGCGCGAACGGTCCTTCGGG ACTTATTAGAGCGGCGGACGGGTGAGTAATGCATAGGAATCTGCCCAG TAGTGGGGGATAGCCCGGGGAAACCCGGATTAATACCGCATACGTCCT ACGGGAGAAAGCAGGGGATCTTCGGACCTTGCGCTATTGGATGAGCCT ATGTCGGATTAGCTTGTTGGTAAGGTAACGGCTTACCAAGGCGACGAT CCGTAGCTGGTCTGAGAGGATGATCAGCCACACTGGGACTGAGACACG GCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGGACAATGGGG	



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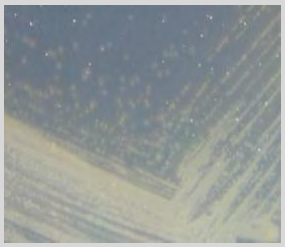
***Microbulbifer maritimus* sp. CCB-ST2L20**		
Colony morphology	Beige; 2 mm; filamentous; flat; foliform; glistering; opaque  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer maritimus***
	Top-hit strain	TF-17(T)
	Similarity (%)	99.29
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Publication	No	
Date of blast	13/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information	NNNNNANNNNGGNNGCTAACNCATGCAGTCGAGCGCGAAAGTTCCTTCGGGAACGAGTAGAGCGGCGGACGGGTGAGTAACGCGTGGGAAATTGCCCAGTAGTGGGGGACAACAACCGGAAACGGTTGCTAATACCGCATACGCCCTACGGGGGAAAGCGGGGGATCTTCGGACCTCGTGCTATTGGATATGCCCGCGTCGGATTAGCTTGTTGGTGAGGTAACGGCTCACCAAGGCGACGATCCGTAGCTGGTCTGAGAGGATGATCAGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGCAAGC	

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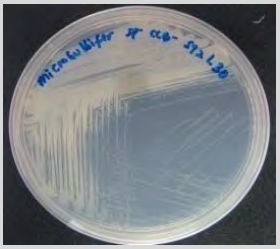
TCGTGAATCAGAATGTCACGGTGAATACGTTCCCGGGCC
TTGTACACACCGCCCGTCACACCATGGGAGTGGGTTGCT
CCAGAAGTGGCTAGTCTAACCTTCGGGAGGACGGTCACC
NNGNANNNNNNNNNN

***Microbulbifer hydrolyticus* sp. CCB-ST2L30**		
Colony morphology	Beige; 1-2 mm; circular; crateriform; entire; glistering; opaque  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer hydrolyticus***
	Top-hit strain	DSM 11525(T)
	Similarity (%)	98.73
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Date of Blast	13/3/2025	
Risk group	1	
Additional information	NNNNNNNNNTACGNNANNCATGCAGTCGAGCGCGAACG GTCCTTCGGGACTTATTAGAGCGGCGGACGGGTGAGTAA TGCATAGGAATCTGCCCAGTAGTGGGGGATAGCCCGGG GAAACCCGGATTAATACCGCATACGTCCTACGGGAGAA AGCAGGGGATCTTCGGACCTTGCGCTATTGGATGAGCCT ATGTCGGATTAGCTTGTTGGTAAGGTAACGGCTTACCAA GGCGACGATCCGTAGCTGGTCTGAGAGGATGATCAGCC ACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAG GCAGCAGTGGGGAATATTGGACAATGGGGGCAACCCTG	

	ATCCAGCCATGCCGCGTGTGTGAAGAAGGCCTTCGGGTT GTAAAGCACTTTCAGTAGGGAGGAAGGCCTGTAAGTTA ATACCTTGCAGGATTGACGTTACCTACAGAAGAAGCACC GGCTAACTCCGTGCCAGCAGCCGCGGTAATACGGAGGG TGCAAGCGTTAATCGGAATTACTGGGCGTAAAGCGCGCG TAGGCGGTTATTTAAGCTGGATGTGAAAGCCCCGGGCTC AACCTGGGAACTGCATTCAGAACTGGATGGCTAGAGTAC GAGAGAGGGTAGTGGAATTTCCTGTGTAGCGGTGAAAT GCGTAGATATAGGAAGGAACATCAGTGGCGAAGGCGAC TGCCTGGCTCGATACTGACGCTGAGGTGCGAAAGCGTGG GGAGCAAACAGGATTAGATACCCTGGTAGTCCACGCCGT AAACGATGTCTACTAGTCGTAGGGTTCCTTGAGGACTTT GTGACGCAGCTAACGCAATAAGTAGACCGCCTGGGGAG TACGGCCGCAAGGTTAAAACTCAAATGAATTGACGGGG GCCCGCACAAGCGGTGGAGCATGTGGTTTAATTCGAAGC AACGCGAAGAACCTTACCAGGGCTTGACATCCAGAGAA CTTTCCAGAGATGGATTGGTGCCTTCGGGAACTCTGTGA CAGGTGCTGCATGGCTGTCGTCAGCTCGTGTCGTGAGAT GTTGGGTTAAGTCCCGTAACGAGCGCAACCCTTGTCCTT TGTTGCCAACACGTAATGGTGGGAACTCAAAGGAGACT GCCGGTGACAAACCGGAGGAAGGTGGGGACGACGTCAA GTCATCATGGCCCTTACGTCCTGGGCTACACACGTGCTA CAATGGTTGGTACAGACGGTCGCTAAGCCGCGAGGTGG AGCTAATCCGAAAAAACCAATCGTAGTCCGGATTGGAGT CTGCAACTCGACTCCATGAAGTCGGAATCGCTAGTAATC GTGAATCAGAATGTCACGGTGAATACGTTCCCGGGCCTT GTACACACCGCCCGTCACACCATGGGAGTGGGTTGCTCC AGAAGTGGCTAGTCTAACCTTCGGGNGACGGTCACCNN AGANNNNNNCNNNNN

***Microbulbifer* sp. CCB-ST2L38**		
Colony morphology	Light beige; 1mm size, circular, raised; entire; glistening; opaque  	
Gram-stain	Gram-negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer hydrolyticus***
	Top-hit strain	DSM 11525
	Similarity (%)	99.02%
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Date of blast	10/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	GGCGGACGGGTGAGTAATGCATAGGAATCTGCCCAGTAGTGGGGGATA GCCCGGGGAAACCCGGATTAATACCGCATACGTCCTACGGGAGAAAGC AGGGGATCTTCGGACCTTGCGCTATTGGATGAGCCTATGTCGGATTAG CTTGTTGGTAAGGTAACGGCTTACCAAGGCGACGATCCGTAGCTGGTC TGAGAGGATGATCAGCCACACTGGGACTGAGACACGGCCCAGACTCCT ACGGGAGGCAGCAGTGGGGAATATTGGACAATGGGGGCAACCCTGATC CAGCCATGCCGCGTGTGTGAAGAAGGCCTTCGGGTTGTAAAGCACTTT CAGTAGGGAGGAAGGCCTGTAAGTTAATACCTTGCAGGATTGACGTTA	

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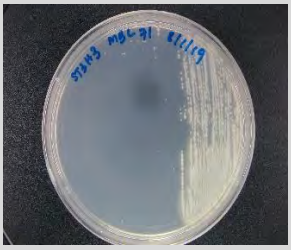
GCCCTTACGTCCTGGGCTACACACGTGCTACAATGGTTGGTACAGACG
GTCGCTAAGCCGCGAGGTGGAGCTAATCCGAAAAAACCAATCGTAGTC
CGGATTGGAGTCTGCAACTCGACTCCATGAAGTCGGAATCGCTAGTAA
TCGTGAATCAGAATGTCACGGTGAATACGTTCCCGGGCCTTGTACACA
CCGCCCGTCACACCATGGGAGTGGG

***Microbulbifer halotolerans* sp. CCB-ST3H3**		
Colony morphology	White; 1-2 mm; circular; raised; entire; glistering; transparent  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer halotolerans***
	Top-hit strain	MACL01(T)
	Similarity (%)	97.69
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Vibrionales;Vibrionaceae;Photobacterium
Publication	No	
Date of blast	17/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information	NNNNNNNNTNCGNNNNNATGCAGTCGAGCGGCAGCGACATG ACTGAACCTTCGGGGGACGTTATGGGCGGCGAGCGGCGGACG GGTGAGTAATGCCTGGGAACATGCCTTAGTGTGGGGGATAAC CATTGGAAACGATGGCTAATACCGCATAATCTCTACGGAGCA AAGCGGGGGACCTTCGGGCCTCGCGCGCTAAGATTGGCCCAG GTGGGATTAGCTAGTAGGTGGGGTAACGGCTCACCTAGGCGA CGATCCCTAGCTGGTCTGAGAGGATGATCAGCCACACTGGAA CTGAGACACGGTCCAGACTCCTACGGGAGGCAGCAGTGGGGA ATATTGCACAATGGGGGAAACCCTGATGCAGCCATGCCGCGT GTGTGAAGAAGGCCTTCGGGTTGTAAAGCACTTTCAGCAGTG	

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***Microbulbifer* sp. CCB-ST3H25**		
Colony morphology	Brown colony; 1 mm size; circular; undulate; raised; glistening; transparent  	
Gram-stain	Positive rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 October 2014; Matang Mangrove Forest (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer elongatus***
	Top-hit strain	DSM 6810 (T)
	Similarity (%)	97.85%
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria; Cellvibrionales; Microbulbiferaceae;Microbulbifer
Date of blast	04/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	CCCGAGGNGCGGCCTACCATGCAAGTCGAGCGCGAACGGTCCTTCGGG ACTTATTAGAGCGGCGGACGGGTGAGTAATGCATAGGAATCTGCCCAG TAGTGGGGGATAGCCCGGGGAAACCCGGATTAATACCGCATACGTCCT ACGGGAGAAAGCAGGGGATCTTCGGACCTTGCGCTATTGGATGAGCCT ATGTCGGATTAGCTTGTTGGTGGGGTAATGGCCCACCAAGGCGACGAT CCGTAGCTGGTCTGAGAGGATGATCAGCCACACTGGGACTGAGACACG GCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGG GAAACCCTGATGCAGCCATGCCGCGTGTGTGAAGAAGGCCTTCGGGTT	

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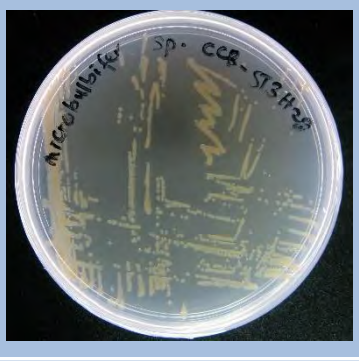
G

***Microbulbifer* sp. CCB-ST3H28**		
Colony morphology	Brown colony; 1 mm size; circular; undulate; umbonate; glistening; transparent  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 October 2014; Matang Mangrove Forest(4.85228N, 100.55777E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer elongatus***
	Top-hit strain	DSM 6810(T)
	Similarity (%)	97.98
	Top-hit taxonomy	Bacteria; Proteobacteria; Gammaproteobacteria; Cellvibrionales; Microbulbiferaceae; Microbulbifer
Date of blast	03/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balacandra	
Risk group	1	
Additional information (Sequence)	AGGGGAGGCCTACCATGCAAGTCGAGCGCGAACGGTCCTTCGGGACTT ATTAGAGCGGCGGACGGGTGAGTAATGCATAGGAATCTGCCCAGTAGT GGGGGATAGCCCGGGGAAACCCGGATTAATACCGCATACGTCCTACGG GAGAAAGCAGGGGATCTTCGGACCTTGCGCTATTGGATGAGCCTATGT CGGATTAGCTTGTTGGTGGGGTAATGGCCCACCAAGGCGACGATCCGT AGCTGGTCTGAGAGGATGATCAGCCACACTGGGACTGAGACACGGCCC	

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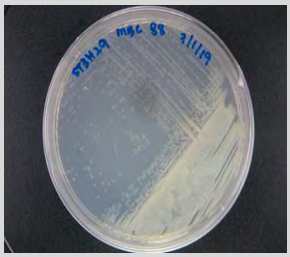
***Microbulbifer elongatus* sp. CCB-ST3H29**		
Colony morphology	Light beige; 3 mm; circular; raised; entire; glistering; transparent  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer elongatus***
	Top-hit strain	DSM 6810(T)
	Similarity (%)	98.23
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Publication	No	
Date of Blast	17/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information	NNNNAANNNNNGNNNGNNNNACATGCAGTCGAGCGCGAACG GTCCTTCGGGACTTATTAGAGCGGCGGACGGGTGAGTAATGC ATAGGAATCTGCCCAGTAGTGGGGGATAGCCCGGGGAAACCC GGATTAATACCGCATACGTCCTACGGGAGAAAGCAGGGGATC TTCGGACCTTGCGCTATTGGATGAGCCTATGTCGGATTAGCTT GTTGGTGGGGTAATGGCCCACCAAGGCGACGATCCGTAGCTG GTCTGAGAGGATGATCAGCCACACTGGGACTGAGACACGGCC CAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATG GGGGAAACCCTGATGCAGCCATGCCGCGTGTGTGAAGAAGGC	

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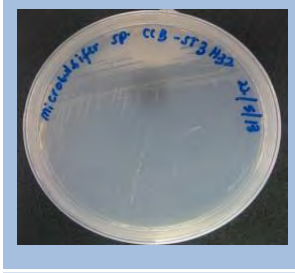
***Microbulbifer* sp. CCB-ST3H32**		
Colony morphology	Beige; <1 mm; circular; raised; entire; glistering; transparent  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer hydrolyticus***
	Top-hit strain	DSM 11525(T)
	Similarity (%)	99.01%
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Date of blast	11/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	TGACGCTCGTGGAACGAGCGGCGGACGGGTGAGTAACACGTGGGCAAC CTGCCTGTAAGATCGGAATAACCCCGGGAAACCGGAGCTAATGCCGGG TAATACTTTTCTTCGCATGAAGGAAAGTTGAAAGATGGCTTCTCGCTA TCACTTACAGATGGGCCCGCGGCGCATTAGCTAGTTGGTGAGGTAACG GCTCACCAAGGCAACGATGCGTAGCCGACCTGAGAGGGTGATCGGCCA CACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTAGG GAATCTTCCGCAATGGACGAAAGTCTGACGGAGCAACGCCGCGTGAAC GATGAAGGTTTTCGGATCGTAAAGTTCTGTTGTTAGGGAAGAACAAGT ACCGTGCGAATAGAGCGGTACCTTGACGGTACCTAACGAGAAAGCCCC GGCTAACTACGTGCCAGCAGCCGCGGTAATACGTAGGGGGCAAGCGTT	

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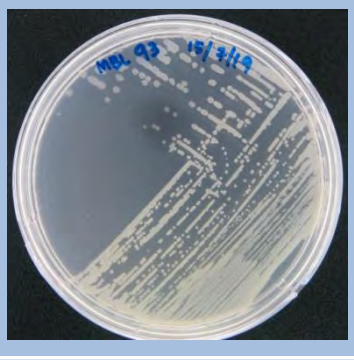
CGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACACCACGA
GAGTTG

***Microbulbifer* sp. CCB-ST3L5**		
Colony morphology	White; 1-2 mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-Negative	
Isolation medium	Tryptone + Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer variabilis***
	Top-hit strain	Ni-2088
	Similarity (%)	99.39
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Date of blast	11/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	CGGACGGGTGAGTAACGCGTGGGAAATTGCCCAGTAGTGGGGGACAAC ATTCGGAAACGGATGCTAATACCGCATACGCCCTACGGGGGAAAGCAG GGGATCTTCGGACCTTGCGCTATTGGATATGCCCGCGTCGGATTAGCT AGTTGGTGAGGTAATGGCTCACCAAGGCAACGATCCGTAGCTGGTCTG AGAGGATGATCAGCCACACTGGGACTGAGACACGGCCCAGACTCCTAC GGGAGGCAGCAGTGGGGAATATTGGACAATGGGCGCAAGCCTGATCCA	

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***Microbulbifer* sp. CCB-ST3L13**		
Colony morphology	Yellowish-brown; 1-2 mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar;	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer elongatus***
	Top-hit strain	DSM 6810(T)
	Similarity (%)	98.79
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Date of blast	10/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	AGCGGCGGACGGGTGAGTAATGCATAGGAATCTGCCCAGTAGTGGGGG ATAGCCCGGGGAAACCCGGATTAATACCGCATACGTCCTACGGGAGAA AGCAGGGGATCTTCGGACCTTGCGCTATTGGATGAGCCTATGTCGGAT TAGCTTGTTGGTGGGGTAATGGCCCACCAAGGCGACGATCCGTAGCTG GTCTGAGAGGATGATCAGCCACACTGGGACTGAGACACGGCCCAGACT CCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGGGAAACCCTG ATGCAGCCATGCCGCGTGTGTGAAGAAGGCCTTCGGGTTGTAAAGCAC TTTCAGTAGGGAGGAAGGCCTGTAAGTTAATACCTTGCAGGATTGACG	

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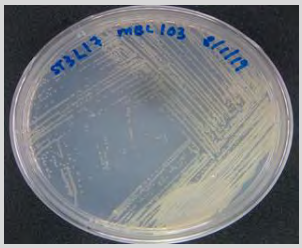
***Microbulbifer elongatus* sp. CCB-ST3L17**		
Colony morphology	Light beige; <1 mm; circular; raised; entire; glistering; transparent  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer elongatus***
	Top-hit strain	DSM 6810(T)
	Similarity (%)	98.31
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Publication	No	
Date of Blast	17/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information	NNNNNNNNNNNNNGCNAACACATGCAGTCGAGCGCGAACGGTCCTTCGGGACTTATTAGAGCGGCGGACGGGTGAGTAATGCATAGGAATCTGCCCAGTAGTGGGGGATAGCCCGGGGAAACCCGGATTAATACCGCATACGTCCTACGGGAGAAAGCAGGGGATCTTCGGACCTTGCGCTATTGGATGAGCCTATGTCGGATTAGCTTGTTGGTGGGGTAATGGCCCACCAAGGCGACGATCCGTAGCTGGTCTGAGAGGATGATCAGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGGGAAACCC	

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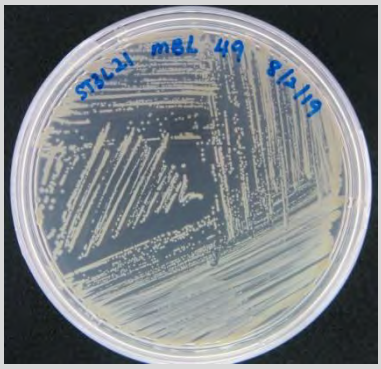
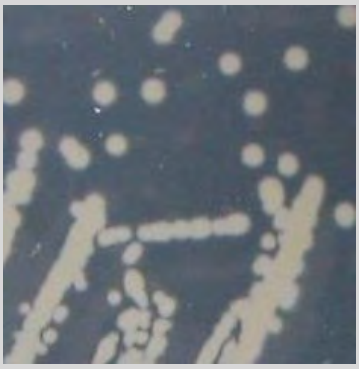
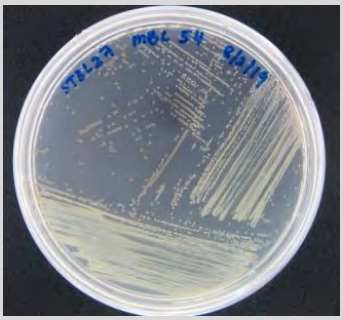
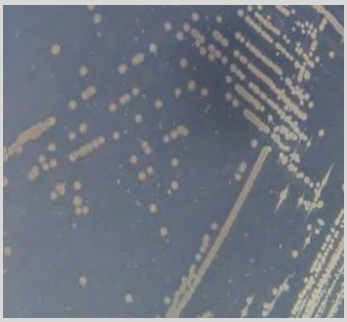
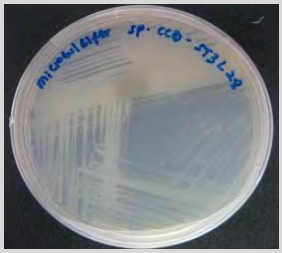
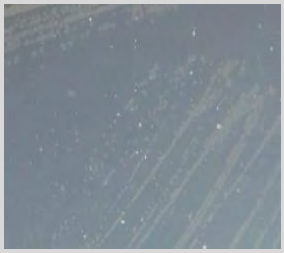
Microbulbifer sp. CCB-ST3L21

Colony morphology	Light beige; 1-2 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Gram-negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer elongatus***
	Top-hit strain	DSM 6810
	Similarity (%)	98.79
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information		

***Microbulbifer* sp. CCB-ST3L27**		
Colony morphology	Light brown; 1 mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer elongatus***
	Top-hit strain	DSM 6810
	Similarity (%)	98.80
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information		

***Microbulbifer* sp. CCB-ST3L28**		
Colony morphology	Beige; 1-2 mm; circular; raised; entire; dry; opaque  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer hydrolyticus***
	Top-hit strain	DSM 11525(T)
	Similarity (%)	98.53
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Date of Blast	13/3/2025	
Risk group	1	
Additional information	GNGNNNNNGNGGNNGCTACACATGCAAGTCGAGCGCGAACG GTCCTTCGGGACTTATTAGAGCGGCGGACGGGTGAGTAATGC ATAGGAATCTGCCCAGTAGTGGGGGATAGCCCGGGGAAACCC GGATTAATACCGCATACGTCCTACGGGAGAAAGCAGGGGATC TTCGGACCTTGCGCTATTGGATGAGCCTATGTCGGATTAGCTT GTTGGTAAGGTAACGGCTTACCAAGGCGACGATCCGTAGCTG GTCTGAGAGGATGATCAGCCACACTGGGACTGAGACACGGCC CAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGGACAATG GGGGCAACCCTGATCCAGCCATGCCGCGTGTGTGAAGAAGGC	

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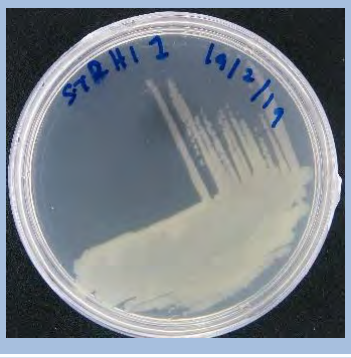
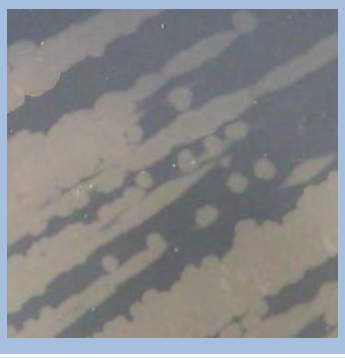
***Microbulbifer*sp. CCB-ST2H11**		
Colony morphology	White colony; 1-2 mm size; irregular; flat; entire; glistening; opaque  	
Gram-stain	Gram-negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer variabilis***
	Top-hit strain	Ni-2088
	Similarity (%)	99.40
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Date of blast	10/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	AGCGGCGGACGGGTGAGTAACGCGTGGGAAATTGCCCAGTAGTGGGGG ACAACATTCGGAAACGGATGCTAATACCGCATACGCCCTACGGGGGAA AGCAGGGGATCTTCGGACCTTGCGCTATTGGATATGCCCGCGTCGGAT TAGCTAGTTGGTGAGGTAATGGCTCACCAAGGCAACGATCCGTAGCTG GTCTGAGAGGATGATCAGCCACACTGGGACTGAGACACGGCCCAGACT CCTACGGGAGGCAGCAGTGGGGAATATTGGACAATGGGCGCAAGCCTG ATCCAGCCATGCCGCGTGTGTGAAGAAGGCCCTAGGGTTGTAAAGCAC	

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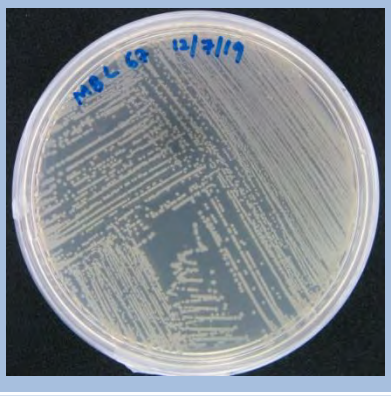
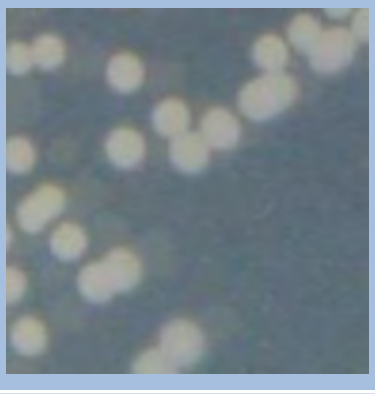
***Microbulbifer* sp. CCB-ST2H15**		
Colony morphology	White colony; 1-2 mm size; circular; entire; raised; glistening; opaque  	
Gram-stain	Gram-Negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar;	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Microbulbifer elongatus***
	Top-hit strain	DSM 6810
	Similarity (%)	98.79
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Cellvibrionales;Microbulbiferaceae;Microbulbifer
Date of blast	10/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	GCGGACGGGTGAGTAATGCATAGGAATCTGCCCAGTAGTGGGGGATAG CCCGGGGAAACCCGGATTAATACCGCATACGTCCTACGGGAGAAAGCA GGGGATCTTCGGACCTTGCGCTATTGGATGAGCCTATGTCGGATTAGC TTGTTGGTGGGGTAATGGCCCACCAAGGCGACGATCCGTAGCTGGTCT GAGAGGATGATCAGCCACACTGGGACTGAGACACGGCCCAGACTCCTA CGGGAGGCAGCAGTGGGGAATATTGCACAATGGGGGAAACCCTGATGC	

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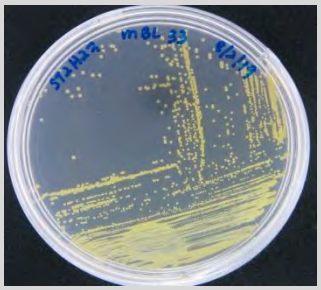
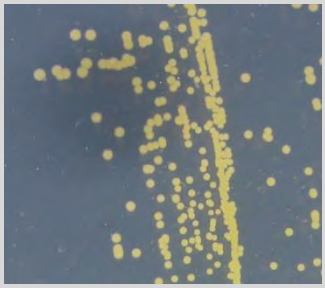
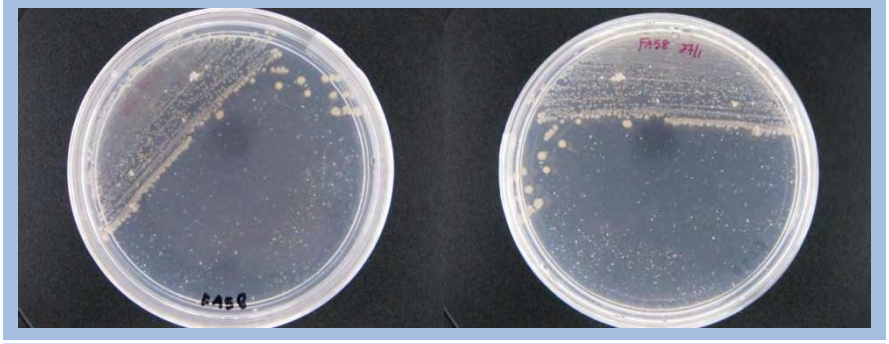
***Micrococcus* sp. CCB-ST2H27**		
Colony morphology	Yellow ; 0.5-1.0 mm size; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-Positive	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic; pH7.6; 28±2°C; 24-48hrs	
Sampling date, location, source	2 October 2014; Matang Mangrove Forest (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Micrococcus aloeverae***
	Top-hit strain	AE-6
	Similarity (%)	99.92
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinobacteria_c;Micrococcales;Micrococcaceae;Micrococcus
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information		

***Micromonospora*sp. CCB-SMP181**		
Colony morphology	Light orange; circular; entire; raised; dry; opaque; small colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Micromonospora carbonacea***
	Top-hit strain	DSM 43168(T)
	Similarity (%)	99.92%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Micromonosporales;Micromonosporaceae;Micromonospora
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	CGAACGGGTGAGTAACACGTGAGCAACCTGCCCTAGGCTTTGGGATAACCCTCGGAAACGGGGGCTAATACCGGATACAACCTTTGGTCGCATGACTGGGGGTGGAAAGTTTTTCGGCCTGGGATGGGCTCGCGGCCTATCAGCTTGTTGGTGGGGTGATGGCCTACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGGAAGCCTGATGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTTTC	

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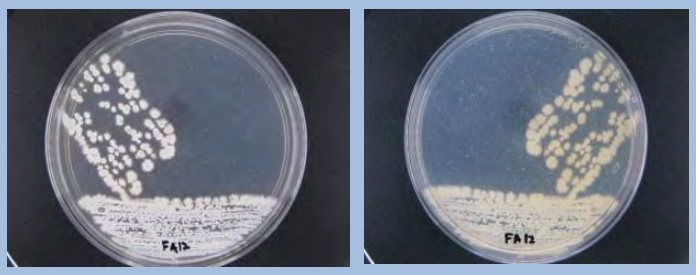
***Nocardiopsis*sp. CCB-KSK141**		
Colony morphology	White aerial mycelium; circular; undulate; crateriform; dry; non-pigmented; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Nocardiopsis alba***
	Top-hit strain	DSM 43377(T)
	Similarity (%)	100.00
	Top-hit taxonomy	Bacteria;Actinobacteria; Actinomycetia;Streptosporangiales;Nocardiopsaceae;Nocardiopsis
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	TACACGAGCGGCGAACGGGTGAGTAACACGTGAGCAACCTGCCCCTGACTCTGGGATAAGCGGTGGAAACGCCGTCTAATACCGGATACGACCTTCCGCCTCATGGTGGAGGGTGGAAAGTTTTTTCGGTCAGGGATGGGCTCGCGGCCTATCAGCTTGTTGGTGGGGTAACGGCCTACCAAGGCGATTACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTGCGGGAGGCAGCAGTGGGGAATATTGCGCAATGGGCGAAAGCCTGACGCAGCGACGCCGCGTGGGGGATGACGGCCTTCGGGTTG	

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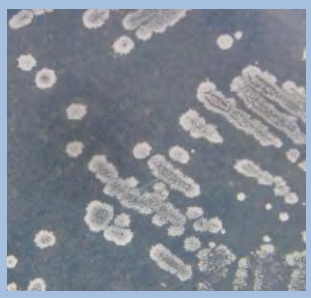
***Nocardiopsis*sp. CCB-SMP190**		
Colony morphology	Creamy aerial mycelium; creamy substate; circular; entire; raised; dry; opaque; small colony size  	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Nocardiopsis alba***
	Top-hit strain	DSM 43377(T)
	Similarity (%)	99.54
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinobacteria_c;Streptosporangiales;Nocardiopsaceae;Nocardiopsis
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	CGAACGGGTGAGTAACACGTGAGCAACCTGCCCCTGACTCTGGGATAAGCGGTGGAAACGCCGTCTAATACCGGATACGACCTTTCGGCTCATGCCGTTGGGTGGAAAGTTTTTTCGGTCAGGGATGGGCTCGCGGCCTATCAGCTTGTTGGTGGGGTAACGGCCTACCAAGGCGATTACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTGCGGGAGGCAGCAGTGGGGAATATTGCGCAATGGGCGAAAGCCTGACGCAGCGACGCCGCGTGGGGGATGACGGCCTTCGGGTTGTAAACCTCTTT	

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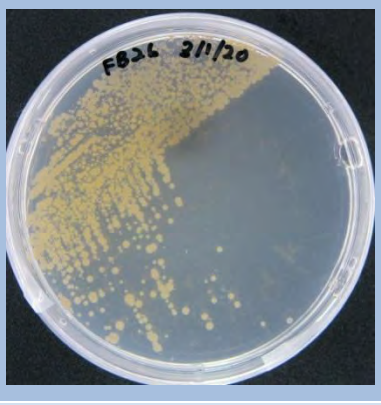
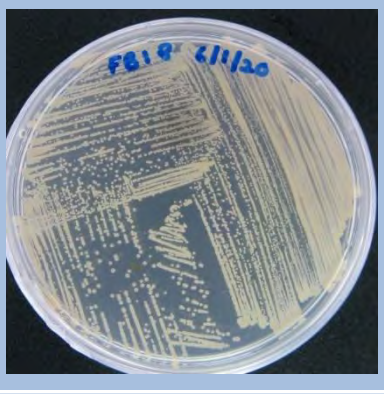
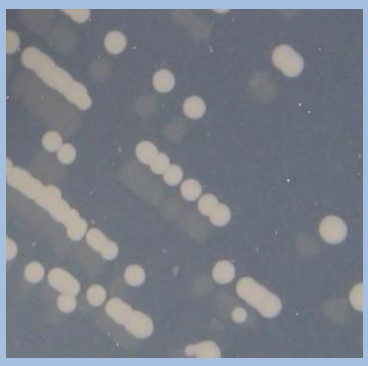
***PDIY_s*. CCB-KSK231**		
Colony morphology	Beige; 2-3 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***PDIY_s***
	Top-hit strain	es.034
	Similarity (%)	99.50%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea
Publication	No	
Date of Blast	27/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***PDIY_s* CCB-MMP223**		
Colony morphology	Light beige; 2-3 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496°E, 100.73495°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***PDIY_s***
	Top-hit strain	es.034
	Similarity (%)	99.67%
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea*
Publication	No	
Date of Blast	27/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***PDIY_s* CCB-ST3L7**		
Colony morphology	White; 2-3mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-positive	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar;	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	PDIY_s
	Top-hit strain	es.034
	Similarity (%)	99.41%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus
Date of blast	10/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	TATCAGCGGCGGACGGGTGAGTAACACGTGGGTAACCTGCCTGTAAGA CTGGGATAACTCCGGGAAACCGGGGCTAATACCGGATAATTCATTCCC TCGCATGAGGGAATGTTGAAAGGTGGCTTTTAGCTACCACTTACAGAT GGACCCGCGGCGCATTAGCTAGTTGGTGAGGTAACGGCTCACCAAGGC GACGATGCGTAGCCGACCTGAGAGGGTGATCGGCCACACTGGGACTGA GACACGGCCCAGACTCCTACGGGAGGCAGCAGTAGGGAATCTTCCGCA	

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C

***Photobacterium halotolerans* sp. CCB-ST2H9**		
Colony morphology	Light Beige; 2 mm; filamentous; flat; foliform; glistening; opaque  	
Gram-stain	Gram-negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Photobacterium halotolerans***
	Top-hit strain	MACL01(T)
	Similarity (%)	97.55
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Vibrionales;Vibrionaceae;Photobacterium
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information		

***Photobacterium halotolerans* sp. CCB-ST2H9**		
Colony morphology	Beige; 2 mm; filamentous; flat; foliform; glistering; transparent  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Photobacterium halotolerans***
	Top-hit strain	MACL01(T)
	Similarity (%)	97.55
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Vibrionales;Vibrionaceae;Photobacterium
Publication	No	
Date of blast	12/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information	NNNNNNNNNGNGCTACACATGCAAGTCGAGCGGCAGCG ACATGACTGAACCTTCGGGGGACGTTATGGGCGGCGAG CGGCGGACGGGTGAGTAATGCCTGGGAACATGCCTTAGT GTGGGGGATAACCATTGGAAACGATGGCTAATACCGCA TAATCTCTACGGAGCAAAGCGGGGGACCTTCGGGCCTCG CGCGCTAAGATTGGCCCAGGTGGGATTAGCTAGTAGGTG GGGTAACGGCTCACCTAGGCGACGATCCCTAGCTGGTCT GAGAGGATGATCAGCCACACTGGAACTGAGACACGGTC CAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCAC AATGGGGGAAACCCTGATGCAGCCATGCCGCGTGTGTG	

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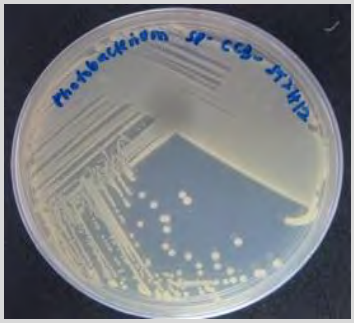
***Photobacterium gaetbulicola* sp. CCB-ST2H12**		
Colony morphology	Light beige; 1-2 mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-Negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Photobacterium gaetbulicola***
	Top-hit strain	Gung47(T)
	Similarity (%)	97.82
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Vibrionales;Vibrionaceae;Photobacterium
Publication	No	
Date of Blast	14/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information	TTCGGAAGGGACCGGTAAGCCATGCAAGTCGAGCGGCAGCGA CATGAACAATCCTTCGGGTGCGTTCATGGGCGGCGAGCGGCG GACGGGTGAGTAATGCCTGGGAATATGCCCTGATGTGGGGGA TAACCATTGGAAACGATGGCTAATACCGCATAATCTCTTCGGA GCAAAGAGGGGGACCTTCGGGCCTCTCGCGTCAGGATTAGCC CAGGTGAGATTAGCTAGTTGGTGGGGTAAGAGCTCACCAAGG CGACGATCTCTAGCTGGTCTGAGAGGATGATCAGCCACACTG GAACTGAGACACGGTCCAGACTCCTACGGGAGGCAGCAGTGG	

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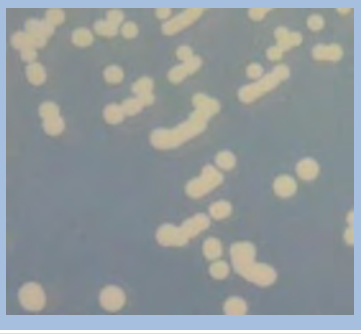
***Photobacterium* sp. CCB-ST3H1**		
Colony morphology	White; 1-2 mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-Negative	
Isolation medium	Tryptone + Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Photobacterium gaetbulicola***
	Top-hit strain	Gung47(T)
	Similarity (%)	99.63
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Vibrionales;Vibrionaceae;Photobacterium
Date of blast	11/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	GTGCGTTCATGGGCGGCGAGCGGCGGACGGGTGAGTAATGCCTGGGAA TATGCCCTGATGTGGGGGATAACCATTGGAAACGATGGCTAATACCGC ATAATCTCTTCGGAGCAAAGAGGGGGACCTTCGGGCCTCTCGCGTCAG GATTAGCCCAGGTGAGATTAGCTAGTTGGTGGGGTAAGAGCTCACCAA GGCGACGATCTCTAGCTGGTCTGAGAGGATGATCAGCCACACTGGAAC TGAGACACGGTCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGC ACAATGGGGGAAACCCTGATGCAGCCATGCCGCGTGTGTGAAGAAGGC CTTCGGGTTGTAAAGCACTTTCAGTCGTGAGGAAGGCATATGCGTTAA	

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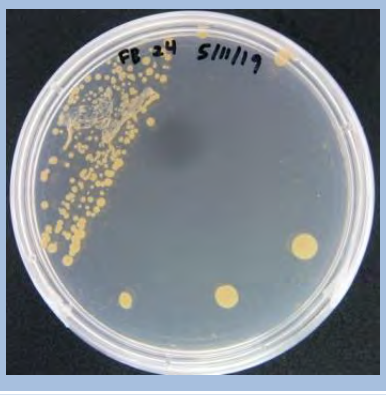
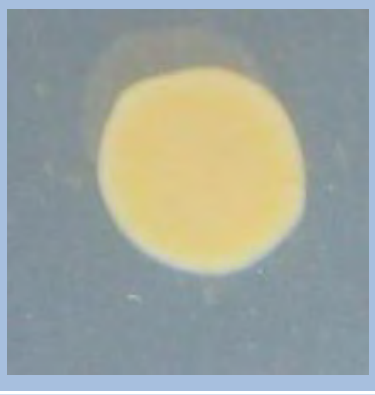
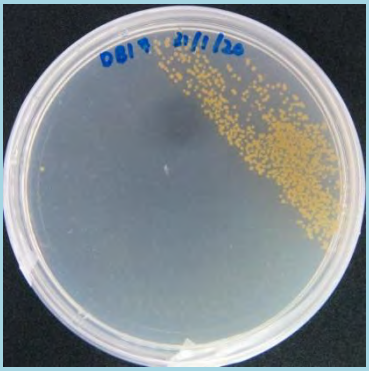
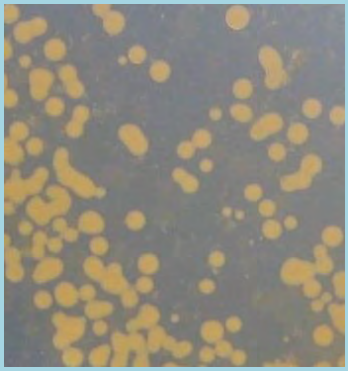
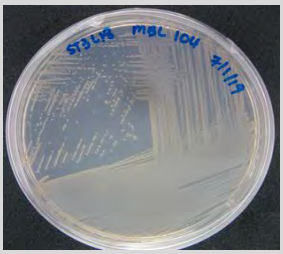
***Prestia megaterium* sp. CCB-KSK230**		
Colony morphology	Light Beige; 3-4 mm; circular; entire; flat; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Priestia megaterium***
	Top-hit strain	NBRC 15308(T)
	Similarity (%)	99.92%
	Top-hit taxonomy	*Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Priestia*
Publication	No	
Date of Blast	27/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***Priestia megaterium* sp. CCB-KSK229**		
Colony morphology	Beige; 3-4 mm; circular; flat; entire; glistening; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Priestia megaterium***
	Top-hit strain	NBRC 15308(T)
	Similarity (%)	99.92%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Priestia
Publication	No	
Date of Blast	27/3/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***Priestia megaterium* sp. CCB-PB304**		
Colony morphology	White; 2-3 mm; circular; entire; flat; dry; opaque  	
Gram-stain	Positive rod	
Isolation medium	Marine agar (MA); Marine broth (MB)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	11 May 2016; Pulau Betong, N05°18.761' E111°13.8'; Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Priestia megaterium***
	Top-hit strain	NBRC 15308(T)
	Similarity (%)	100%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;*Priestia*
Publication	No	
Date of Blast	17/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

***Qipengyuania aestuarii sp.* CCB-PB313**		
Colony morphology	Dark beige colony; 1mm size; circular; entire; raised; glistening; opaque  	
Gram-stain	Positive, rod	
Isolation medium	Marine agar (MA); Marine broth (MB)	
Growth condition	Aerobic; pH7; 28±2°C; 24-48hrs	
Sampling date, location, source	11 May 2016; Pulau Betong, Penang (N05°18.761' E111°13.8'); Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Qipengyuania aestuarii***
	Top-hit strain	GH1(T)
	Similarity (%)	99.70%
	Top-hit taxonomy	Bacteria;Proteobacteria;Alphaproteobacteria; Sphingomonadales;Erythrobacteraceae;Qipengyuania
Publication	No	
Date of Blast	17/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

***Rossellomorea oryzaecorticis* sp. CCB-ST3L18**		
Colony morphology	Pale beige; 1 mm; circular; raised; entire; glistering; transparent  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Rossellomorea oryzaecorticis***
	Top-hit strain	R1(T)
	Similarity (%)	99.51
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Bacillus
Publication	No	
Date of Blast	17/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information	NNNNANNNNNNNNGCTATACATGCAAGTCGAGCGGATCAAAGGGAGCTTGCTCCCTGAGATCAGCGGCGGACGGGTGAGTAACACGTGGGTAACCTGCCTGTAAGACTGGGATAACTCCGGGAAACCGGGGCTAATACCGGATAACTCAGTTCCTCGCATGAGGAACTGTTGAAAGGTGGCTTTTAGCTACCACTTACAGATGGACCCGCGGCGCATTAGCTAGTTGGTGAGGTAACGGCTCACCAAGGCGACGATGCGTAGCCGACCTGAGAGGGTGATCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTAGGGAATCTTCCGC	

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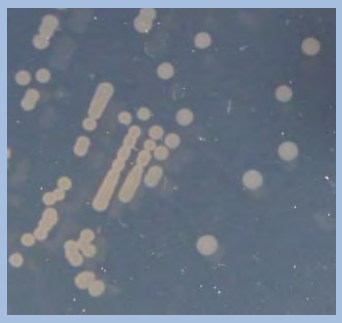
***Rossellomorea* sp. CCB-ST3H24**		
Colony morphology	Pale orange; 1-2 mm; circular; flat; entire; glistening; opaque  	
Gram-stain	Gram-Positive	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar;	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	*Rossellomorea* ***oryzaecorticis***
	Top-hit strain	R1(T)
	Similarity (%)	99.55%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea
Date of blast	10/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	CAGCGGCGGACGGGTGAGTAACACGTGGGTAACCTGCCTGTAAGACTG GGATAACTCCGGGAAACCGGGGCTAATACCGGATAACTCAGTTCCTCG CATGAGGAACTGTTGAAAGGTGGCTTTTAGCTACCACTTACAGATGGA CCCGCGGCGCATTAGCTAGTTGGTGAGGTAACGGCTCACCAAGGCGAC GATGCGTAGCCGACCTGAGAGGGTGATCGGCCACACTGGGACTGAGAC ACGGCCCAGACTCCTACGGGAGGCAGCAGTAGGGAATCTTCCGCAATG GACGAAAGTCTGACGGAGCAACGCCGCGTGAGTGAAGAAGGTTTTCGG	

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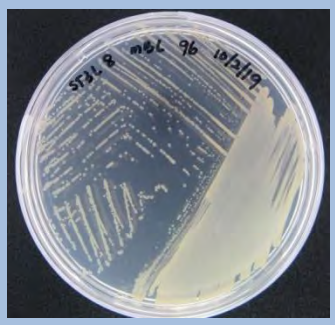
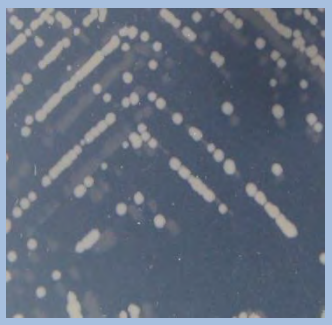
***Rossellomorea* sp. CCB-ST3L8**		
Colony morphology	White; 1-2mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-Positive	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar;	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	*Rossellomorea arthrocnemi*
	Top-hit strain	EAR8
	Similarity (%)	99.40%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea
Date of blast	10/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	GCGGCGGACGGGTGAGTAACACGTGGGTAACCTGCCTGTAAGACTGGGATAACTCCGGGAAACCGGGGCTAATACCGGATAACTCATTTCCTCGCATGAGGAAATGTTGAAAGATGGCTTCTTGCTATCACTTACAGATGGACCCGCGGCGCATTAGCTAGTTGGTGAGGTAACGGCTCACCAAGGCGACGATGCGTAGCCGACCTGAGAGGGTGATCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTAGGGAATCTTCCGCAATGGACGAAAGTCTGACGGAGCAACGCCGCGTGAGTGATGAAGGTTTTCGGAT	

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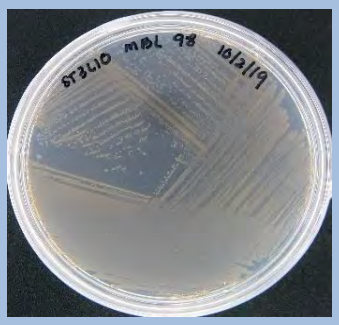
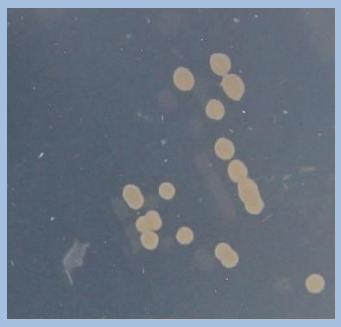
***Rossellomorea* sp. CCB-ST3L10**		
Colony morphology	Pale orange; 2-3nm; smooth; circular; flat; entire; glistening; opaque  	
Gram-stain	Gram-positive	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	*Rossellomorea oryzaecorticis*
	Top-hit strain	R1(T)
	Similarity (%)	99.55%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Rossellomorea
Date of blast	10/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	ATCAGCGGCGGACGGGTGAGTAACACGTGGGTAACCTGCCTGTAAGAC TGGGATAACTCCGGGAAACCGGGGCTAATACCGGATAACTCAGTTCCT CGCATGAGGAACTGTTGAAAGGTGGCTTTTAGCTACCACTTACAGATG GACCCGCGGCGCATTAGCTAGTTGGTGAGGTAACGGCTCACCAAGGCG ACGATGCGTAGCCGACCTGAGAGGGTGATCGGCCACACTGGGACTGAG ACACGGCCCAGACTCCTACGGGAGGCAGCAGTAGGGAATCTTCCGCAA TGGACGAAAGTCTGACGGAGCAACGCCGCGTGAGTGAAGAAGGTTTTC	

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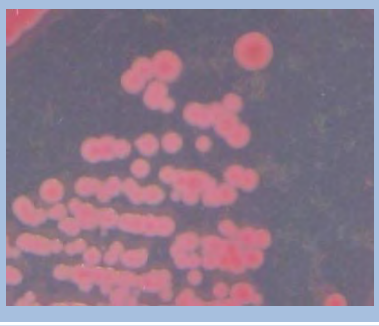
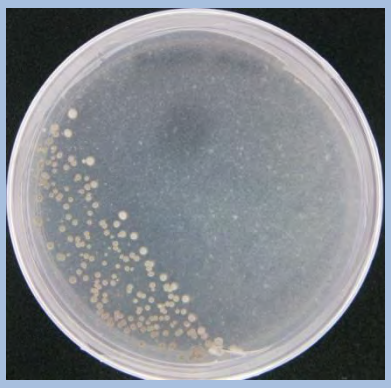
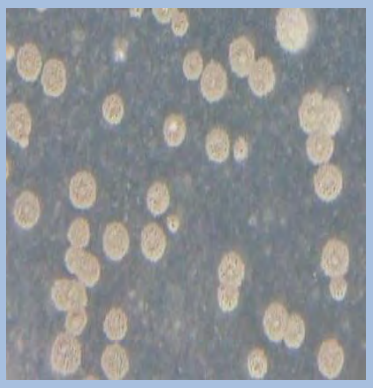
ACC

***Serratia nematodiphila* sp.CCB-CTB330**		
Colony morphology	Red; 1-3 mm; circular; entire; raised; glistening; opaque  	
Gram-stain	Gram-negative	
Isolation medium	Marine agar (MA); Marine Broth (MB)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2016; CEMACS Teluk Bahang, N05°28.100' E100°12.011'; Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Serratia nematodiphila***
	Top-hit strain	DSM 21420(T)
	Similarity (%)	99.57%
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Enterobacterales;Yersiniaceae;Serratia
Publication	No	
Date of Blast	19/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

***Streptomyces* sp. CBB-KSK145**		
Colony morphology	Greyish white aerial mycelium; circular; entire; umbonate; dry; opaque; medium colony size  	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces olivaceus***
	Top-hit strain	NRRL B-3009
	Similarity (%)	99.92
	Top-hit taxonomy	Bacteria;Actinobacteria; Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	1	
Additional information	ACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCC CTGGAAACGGGGTCTAATACCGGATATTGACCTTCACGGGCATCTGTG	

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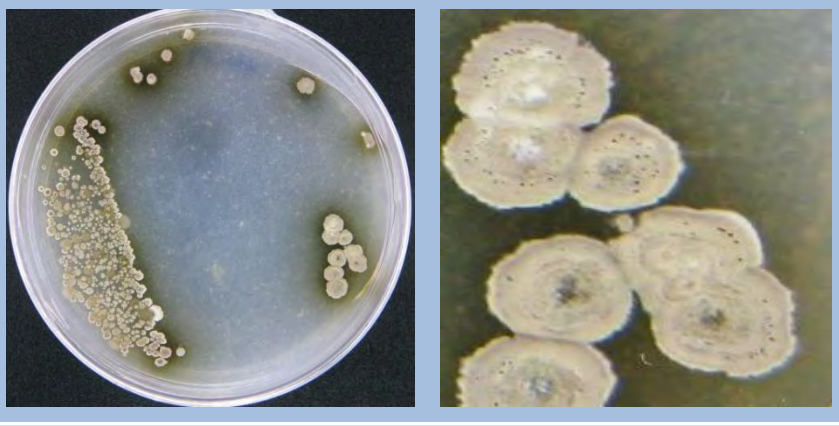
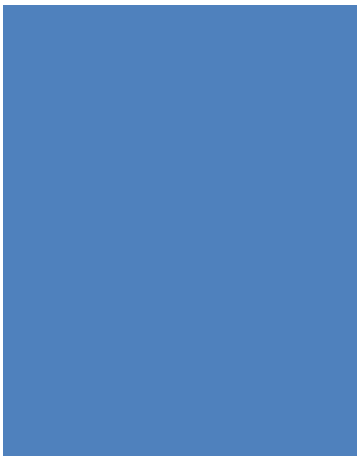
***Streptomyces* sp. CCB-KSK131**		
Colony morphology	Grey white aerial mycelium; circular; entire; flat; dry; opaque; small colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic;pH7;28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces xiamenensis***
	Top-hit strain	MCCC 1A01550
	Similarity (%)	99.69
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	1	
Additional information (Sequence)	GGCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGATAAGCCCGGGAAACTGGGTCTAATACCGGATACGACACATGAGCGCATGCTCGTGTGTGGAAAGTTCCGGCGGTGCAGGATGAGC	



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***Streptomyces* sp. CCB-KSK132**		
Colony morphology	Yellowish white aerial mycelium; brown substrate; irregular; undulate; flat; dry; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces hydrogenans***
	Top-hit strain	JCM 4771(T)
	Similarity (%)	99.62%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	CGAACGGGTGAGTAACACGTGGGCAATCTGCCCTTCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATACGAGTCTGGGAGGCATCTCCCGGGCTGGAAAGCTCCGGCGGTGAAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGGGGTAATGGCCTACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTTT	

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***Streptomyces* sp. CCB-KSK133**		
Colony morphology	Brown aerial mycelium; circular; undulate; flat; dry; brown pigment; opaque; medium colony size  	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces sundarbansensis***
	Top-hit strain	MS1/7(T)
	Similarity (%)	99.85%
	Top-hit taxonomy	Bacteria;Actinobacteria; Actinomycetia; Streptomycetales;Streptomycetaceae; Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GGCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTTCACTCTGGGAC AAGCCCTGGAAACGGGGTCTAATACCGGATACCACTTCGTCCCGCATG GGACGGGGTTGAAAGCTCCGGCGGTGAAGGATGAGCCCGCGGCCTATC AGCTTGTTGGTGGGGTAATGGCCTACCAAGGCGACGACGGGTAGCCGG CCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTC CTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGA TGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCT TTCAGCAGGGAAGAAGCGCAAGTGACGGTACCTGCAGAAGAAGCGCCG	

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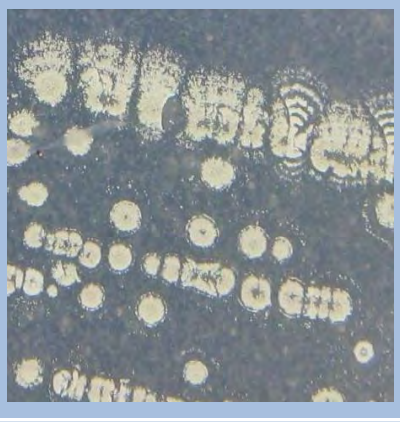
***Streptomyces* sp. CCB-KSK134**		
Colony morphology	Yellowish aerial mycelium; circular; curled; flat; dry; non-pigmented; opaque; medium colony size  	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces olivaceus***
	Top-hit strain	NRRL B-3009
	Similarity (%)	99.85%
	Top-hit taxonomy	Bacteria;Actinobacteria; Actinomycetia; Streptomycetales;Streptomycetaceae; Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	1	
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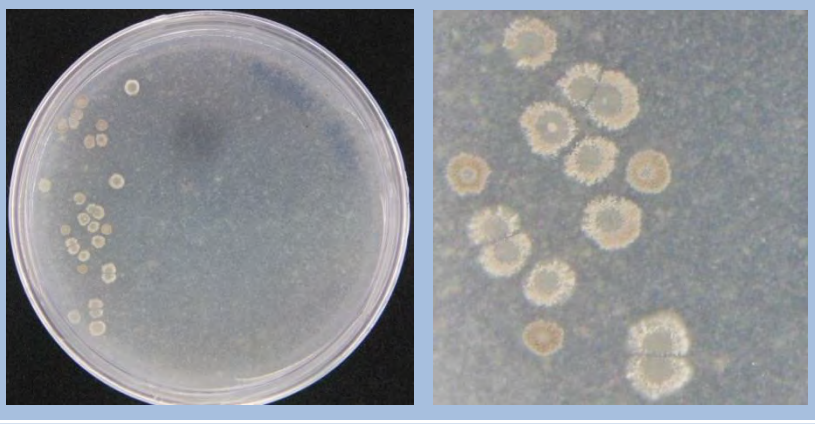
***Streptomyces* sp. CCB-KSK135**		
Colony morphology	Greyish white aerial mycelium, circular, undulate, flat, dry, non-pigmented, opaque, small colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces olivaceus***
	Top-hit strain	NRRL B-3009
	Similarity (%)	99.85%
	Top-hit taxonomy	Bacteria;Actinobacteria; Actinomycetia; Streptomycetales;Streptomycetaceae; Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	1	
Additional information (Sequence)	AACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAAACGG GGTCTAATACCGGATATTGATCTTCACGGGCATCTGTGAGGTTCGAAA GCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGAG	

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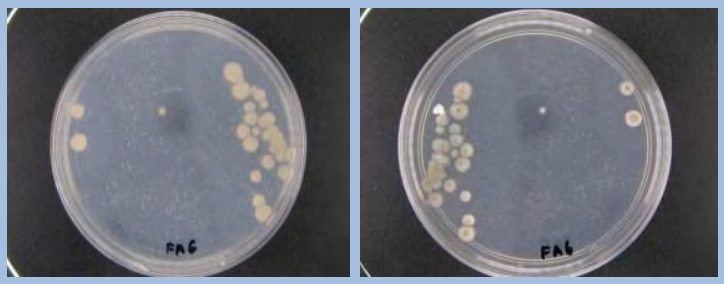
***Streptomyces* sp. CCB-KSK136**		
Colony morphology	Brownish white aerial mycelium; circular; entire; umbonate; dry; opaque; non-pigmented; medium colony size opaque 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces xiamenensis***
	Top-hit strain	MCCC 1A01550(T)
	Similarity (%)	99.85%
	Top-hit taxonomy	Bacteria;Actinobacteria; Actinomycetia; Streptomycetales;Streptomycetaceae; Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	AGTGGCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGG GATAAGCCCGGGAAACTGGGTCTAATACCGGATACGACACATGAGCGC ATGCTCGTGTGTGGAAAGTTCCGGCGGTGCAGGATGAGCCCGCGGCCT ATCAGTTTGTTGGTGGGGTAGTGGCCTACCAAGACGACGACGGGTAGC CGGCCTGAGAGGGTGACCGGCCACACTGGGACTGAGACACGGCCCAGA CTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCC TGATGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACC	

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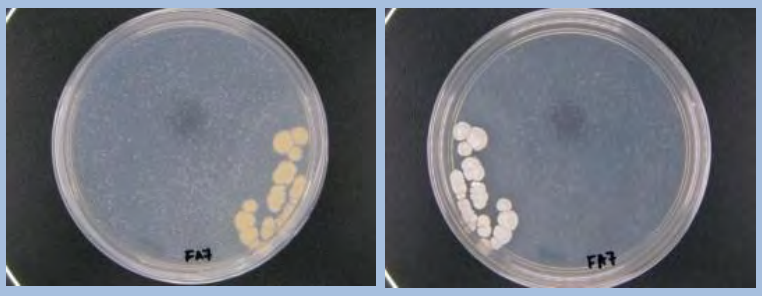
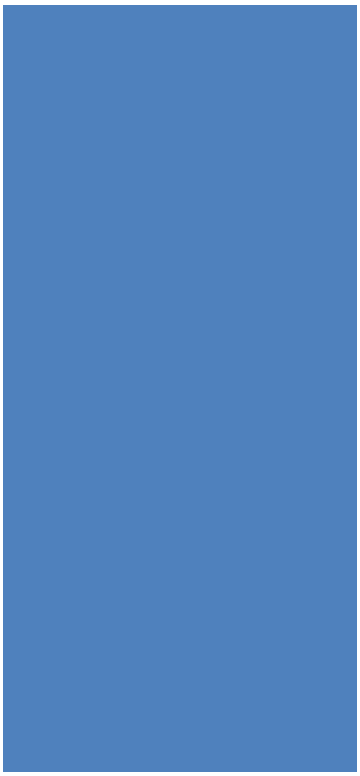
***Streptomyces* sp. CCB-KSK137**		
Colony morphology	Greyish white aerial mycelium, circular, entire, flat, dry, non-pigmented, opaque, medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces parvulus***
	Top-hit strain	NBRC 13193(T)
	Similarity (%)	99.85
	Top-hit taxonomy	Bacteria;Actinobacteria; Actinomycetia; Streptomycetales;Streptomycetaceae; Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	AACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAAACGG GGTCTAATACCGGATACTGACCTTCACGGGCATCTGTGAGGGTCGAAA GCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGAG GTAACGGCTCACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGAC CGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGC AGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCGACGCCGC	



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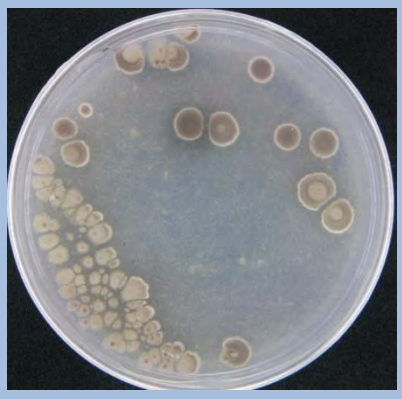
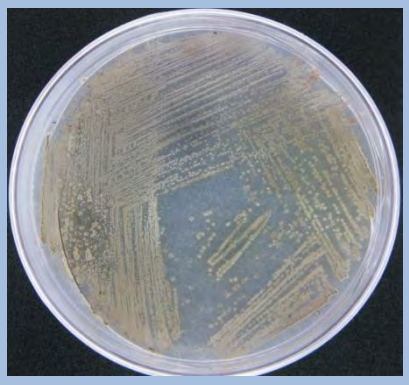
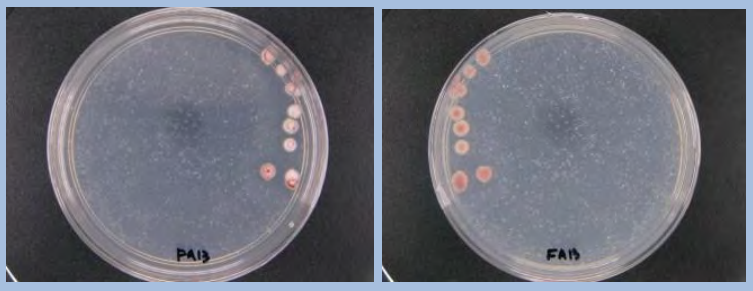
***Streptomyces* sp. CCB-KSK139**		
Colony morphology	Grey white aerial mycelium; circular; undulate; umbonate; dry; non-pigmented; opaque; medium colony size  	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces sanyensis***
	Top-hit strain	219820
	Similarity (%)	100%
	Top-hit taxonomy	Bacteria;Actinobacteria; Actinomycetia; Streptomycetales;Streptomycetaceae; Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	1	
Additional information	CGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAAACGGGGTC TAATACCGGATACGACTCGGGAGGGCATCCTTCCGGGTGGAAAGCTCC	

(Sequence)	GGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGGGGTGAT GGCCTACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCC ACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGG GGAATATTGCACAATGGGCGAAAGCCTGATGCAGCGACGCCGCGTGAG GGATGACGGCCTTCGGGTTGTAAACCTCTTTCAGCAGGGAAGAAGCGC AAGTGACGGTACCTGCAGAAGAAGCGCCGGCTAACTACGTGCCAGCAG CCGCGGTAATACGTAGGGCGCAAGCGTTGTCCGGAATTATTGGGCGTA AAGAGCTCGTAGGCGGCTTGTCGCGTCGGATGTGAAAGCTCGGGGCTT AACCCCGGGTCTGCATTCGATACGGGCAGGCTAGAGTGTGGTAGGGGA GATCGGAATTCCTGGTGTAGCGGTGAAATGCGCAGATATCAGGAGGAA CACCGGTGGCGAAGGCGGATCTCTGGGCCATTACTGACGCTGAGGAGC GAAAGCGTGGGGAGCGAACAGGATTAGATACCCTGGTAGTCCACGCCG TAAACGTTGGGAACTAGGTGTTGGCGACATTCCACGTCGTCGGTGCCG CAGCTAACGCATTAAGTTCCCCGCCTGGGGAGTACGGCCGCAAGGCTA AAACTCAAAGGAATTGACGGGGGCCCGCACAAGCAGCGGAGCATGTGG CTTAATTCGACGCAACGCGAAGAACCTTACCAAGGCTTGACATATACC GGAAAGTGCTAGAGATAGTGCCCCCCTTGTGGTCGGTATACAGGTGGT GCATGGCTGTCGTCAGCTCGTGTCGTGAGATGTTGGGTTAAGTCCCGC AACGAGCGCAACCCTTGTTCTGTGTTGCCAGCATGCCCTTCGGGGTGA TGGGGACTCACAGGAGACTGCCGGGGTCAACTCGGAGGAAGGTGGGGA CGACGTCAAGTCATCATGCCCCTTATGTCTTGGGCTGCACACGTGCTA CAATGGCCGGTACAATGAGCTGCGATGCCGTGAGGCGGAGCGAATCTC AAAAAGCCGGTCTCAGTTCGGATTGGGGTCTGCAACTCGACCCCATGA AGTCGGAGTTGCTAGTAATCGCAGATCAGCATTGCTGCGGTGAATACG TTCCCGGGCCTTGTACACACCGCCCGTCACGTCACGAAAGTCGGTAAC

***Streptomyces* sp. CCB-KSK140**		
Colony morphology	Brown white aerial mycelium; brown substrate; circular; entire; umbonate; smooth; brown pigment; opaque; small colony size  	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces xiamenensis***
	Top-hit strain	MCCC 1A01550
	Similarity (%)	99.85
	Top-hit taxonomy	Bacteria;Actinobacteria; Actinomycetia; Streptomycetales;Streptomycetaceae; Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	1	
Additional information	CGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGATAAGCCCGGGAAACTGGGTCTAATACCGGATACGACACATGAGCGCATGCT	

(Sequence)	CGTGTGTGGAAAGTTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAG TTTGTTGGTGGGGTAGTGGCCTACCAAGACGACGACGGGTAGCCGGCC TGAGAGGGTGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCT ACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATG CAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTTT CAGCAGGGAAGAAGCGAAAGTGACGGTACCTGCAGAAGAAGCACCGGC TAACTACGTGCCAGCAGCCGCGGTAATACGTAGGGTGCAAGCGTTGTC CGGAATTATTGGGCGTAAAGAGCTCGTAGGCGGCCTGTCGCGTCGATT GTGAAAGCCCAGGGCTTAACCCTGGGTCTGCAGTCGATACGGGCAGGC TAGAGTTCGGTAGGGGAGATCGGAATTCCTGGTGTAGCGGTGAAATGC GCAGATATCAGGAGGAACACCGGTGGCGAAGGCGGATCTCTGGGCCGA TACTGACGCTGAGGAGCGAAAGCGTGGGGAGCGAACAGGATTAGATAC CCTGGTAGTCCACGCCGTAAACGGTGGGCACTAGGTGTGGGCAACATT CCACGTTGTCCGTGCCGCAGCTAACGCATTAAGTGCCCCGCCTGGGGA GTACGGCCGCAAGGCTAAAACTCAAAGGAATTGACGGGGGCCCGCACA AGCGGCGGAGCATGTGGCTTAATTCGACGCAACGCGAAGAACCTTACC AAGGCTTGACATACACCGGAAACGGCCAGAGATGGTCGCCCCCTTGTG GTCGGTGTACAGGTGGTGCATGGCTGTCGTCAGCTCGTGTCGTGAGAT GTTGGGTTAAGTCCCGCAACGAGCGCAACCCTTATCCTGTGTTGCCAG CGGATCCCTTCGGGGGTGCCGGGGACTCACGGGAGACTGCCGGGGTCA ACTCGGAGGAAGGTGGGGACGACGTCAAGTCATCATGCCCCTTATGTC TTGGGCTGCACACGTGCTACAATGGCCGGTACAATGAGCTGCGATACC GCGAGGTGGAGCGAATCTCAAAAAGCCGGTCTCAGTTCGGATTGGGGT CTGCAACTCGACCCCATGAAGTCGGAGTCGCTAGTAATCGCAGATCAG CATTGCTGCGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCA CGTCATGAAAGTCGGTAA

***Streptomyces* sp. CCB-KSK142**		
Colony morphology	Pinkish aerial mycelium; circular; entire; flat; dry; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces neopeptinius***
	Top-hit strain	KNF 2047(T)
	Similarity (%)	99.85%
	Top-hit taxonomy	Bacteria;Actinobacteria; Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	TTAGTGGCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTTCACTCT GGGACAAGCCCTGGAAACGGGGTCTAATACCGGATAACACTTCCACTC TCCTGGGTGGAGGTTGAAAGCTCCGGCGGTGAAGGATGAGCCCGCGGC CTATCAGCTTGTTGGTGAGGTAATGGCTCACCAAGGCGACGACGGGTA GCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCA GACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAG CCTGATGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAA	

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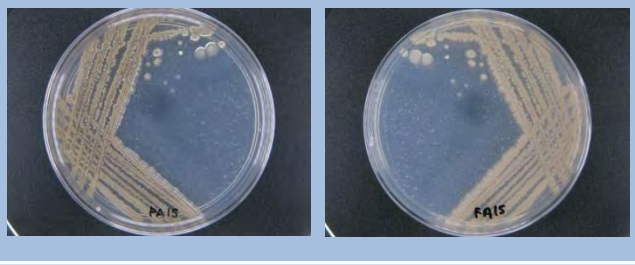
***Streptomyces* sp. CCB-KSK143**		
Colony morphology	Brown aerial mycelium; light brown substrate; circular; entire; raised; pale brown pigment; crateriform; dry; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces carpaticus***
	Top-hit strain	NBRC 15390(T)
	Similarity (%)	99.69
	Top-hit taxonomy	Bacteria;Actinobacteria; Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	CGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGATAA GCCCGGGAAACTGGGTCTAATACCGGATACGACACTCCGAGGCATCTT GGGGTGTGGAAAGTTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAG CTTGTTGGTGGGGTAATGGCCTACCAAGGCGACGACGGGTAGCCGGCC TGAGAGGGTGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCT ACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATG CAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTTT CAGCAGGGAAGAAGCGAAAGTGACGGTACCTGCAGAAGAAGCACCGGC	

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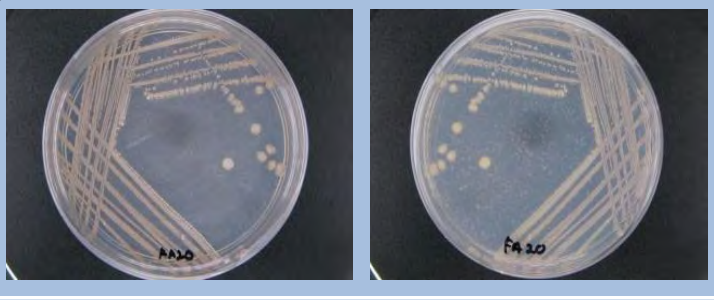
TCATGAAAGT

***Streptomyces* sp. CCB-KSK147**		
Colony morphology	Grey aerial mycelium; circular; undulate; flat; dry; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	*Streptomyces olivaceus*
	Top-hit strain	NRRL B-3009(T)
	Similarity (%)	99.85%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACA AGCCCTGGAAACGGGGTCTAATACCGGATATTGATCTTCACGGGCATC TGTGAGGTTCGAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATC AGCTTGTTGGTGAGGTAATGGCTCACCAAGGCGACGACGGGTAGCCGG CCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTC CTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGA TGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCT TTCAGCAGGGAAGAAGCGAAAGTGACGGTACCTGCAGAAGAAGCGCCG GCTAACTACGTGCCAGCAGCCGCGGTAATACGTAGGGCGCAAGCGTTG	

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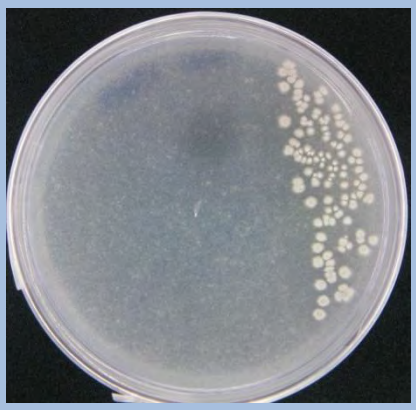
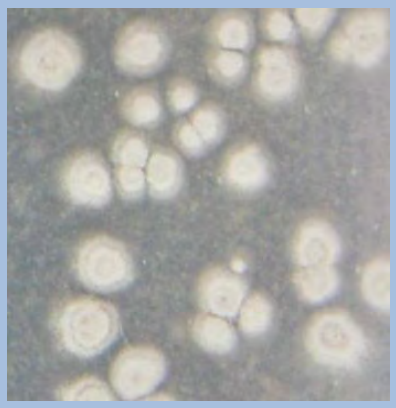
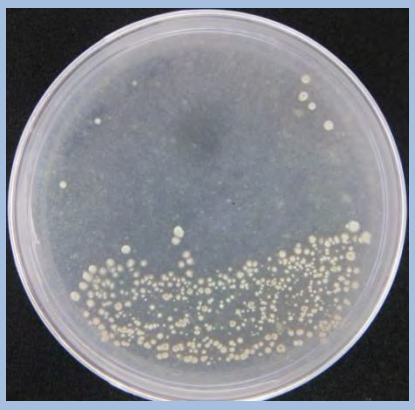
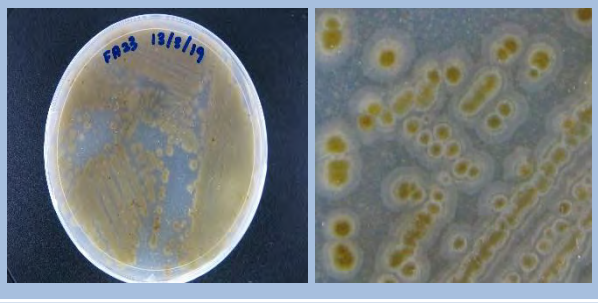
***Streptomyces* sp. CCB-KSK148**		
Colony morphology	White aerial mycelium; irregular; undulate; flat; dry; opaque; large colony size  	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces tendae***
	Top-hit strain	ATCC 19812
	Similarity (%)	99.92
	Top-hit taxonomy	Bacteria;Actinobacteria; Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	1	
Additional information	GTTACCGACTTTCGTGACGTGACGGGCGGTGTGTACAAGGCCCGGGAACGTATTCACCGCAGCAATGCTGATCTGCGATTACTAGCGACTCCGACT	

(Sequence)	TCATGGGGTCGAGTTGCAGACCCCAATCCGAACTGAGACCGGCTTTTT GAGATTCGCTCCACCTTGCGGTATCGCAGCTCATTGTACCGGCCATTG TAGCACGTGTGCAGCCCAAGACATAAGGGGCATGATGACTTGACGTCG TCCCCACCTTCCTCCGAGTTGACCCCGGCGGTCTCCCGTGAGTCCCCA GCACCACAAGGGCCTGCTGGCAACACGGGACAAGGGTTGCGCTCGTTG CGGGACTTAACCCAACATCTCACGACACGAGCTGACGACAGCCATGCA CCACCTGTACACCGACCACAAGGGGGGCACCATCTCTGATGCTTTCCG GTGTATGTCAAGCCTTGGTAAGGTTCTTCGCGTTGCGTCGAATTAAGC CACATGCTCCGCCGCTTGTGCGGGCCCCCGTCAATTCCTTTGAGTTTT AGCCTTGCGGCCGTACTCCCCAGGCGGGGCACTTAATGCGTTAGCTGC GGCACGGACAACGTGGAATGTTGCCCACACCTAGTGCCCACCGTTTAC GGCGTGGACTACCAGGGTATCTAATCCTGTTCGCTCCCCACGCTTTCG CTCCTCAGCGTCAGTATCGGCCCAGAGATCCGCCTTCGCCACCGGTGT TCCTCCTGATATCTGCGCATTTCACCGCTACACCAGGAATTCCGATCT CCCCTACCGAACTCTAGCCTGCCCGTATCGACTGCAGACCCGGGGTTA AGCCCCGGGCTTTCACAACCGACGCGACAAGCCGCCTACGAGCTCTTT ACGCCCAATAATTCCGGACAACGCTTGCGCCCTACGTATTACCGCGGC TGCTGGCACGTAGTTAGCCGGCGCTTCTTCTGCAGGTACCGTCACTTT CGCTTCTTCCCTGCTGAAAGAGGTTTACAACCCGAAGGCCGTCATCCC TCACGCGGCGTCGCTGCATCAGGCTTTCGCCCATTGTGCAATATTCCC CACTGCTGCCTCCCGTAGGAGTCTGGGCCGTGTCTCAGTCCCAGTGTG GCCGGTCGCCCTCTCAGGCCGGCTACCCGTCGTCGCCTTGGTGAGCCA TTACCTCACCAACAAGCTGATAGGCCGCGGGCTCATCCTGCACCGCCG GAGCTTTCGAACCTCGCAGATGCCTGCGAGGGTCAGTATCCGGTATTA GACCCCGTTTCCAGGGCTTGTCCCAGAGTGCAGGGCAGATTGCCCACG TGTTACTCACCCGTTC

***Streptomyces* sp. CCB-KSK149**		
Colony morphology	Grey white aerial mycelium; brown white substrate; circular; entire; umbonate; dry; no pigmentation; opaque; medium colony size  	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces xiamenensis***
	Top-hit strain	MCCC 1A01550
	Similarity (%)	99.68%
	Top-hit taxonomy	Bacteria;Actinobacteria; Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	1	
Additional information	GCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGATAAGCCCGGGAAACTGGGTCTAATACCGGATACGACACATGAGCGCATGC	

(Sequence)	TCGTGTGTGGAAAGTTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCA GTTTGTTGGTGGGGTAGTGGCCTACCAAGACGACGACGGGTAGCCGGC CTGAGAGGGTGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCC TACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGAT GCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTT TCAGCAGGGAAGAAGCGAAAGTGACGGTACCTGCAGAAGAAGCACCGG CTAACTACGTGCCAGCAGCCGCGGTAATACGTAGGGTGCAAGCGTTGT CCGGAATTATTGGGCGTAAAGAGCTCGTAGGCGGCCTGTCGCGTCGAT TGTGAAAGCCCAGGGCTTAACCCTGGGTCTGCAGTCGATACGGGCAGG CTAGAGTTCGGTAGGGGAGATCGGAATTCCTGGTGTAGCGGTGAAATG CGCAGATATCAGGAGGAACACCGGTGGCGAAGGCGGATCTCTG

***Streptomyces* sp. CCB-KSK150**		
Colony morphology	Whitish brown aerial mycelium; brown substrate; circular; entire; convex; dry; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces angustmycinicus***
	Top-hit strain	NRRL B-2347(T)
	Similarity (%)	100.00%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	TTCGGGAGGGGATTAGTGGCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTTCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATACGACCTCCGACCGCATGGTCTGGTGGTGGAAAGCTCCGGCGGTGAAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGGGGTGATGGCCTACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTTTCAGCAGGGAAGAAGCGAGAGTGA	

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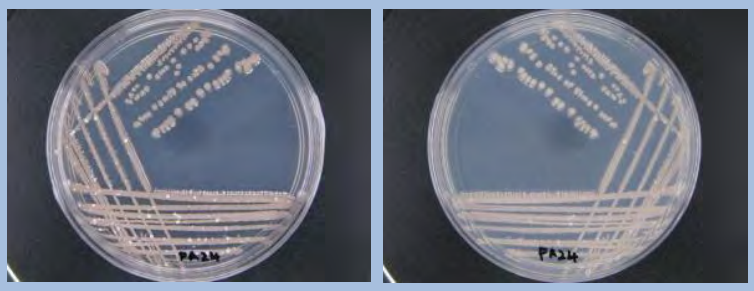
***Streptomyces* sp. CCB-KSK151**		
Colony morphology	Grey aerial mycelium; undulate; crateriform; dry; no pigmentation; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces olivaceus***
	Top-hit strain	NRRL B-3009
	Similarity (%)	99.85%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAA ACGGGGTCTAATACCGGATATTGATCTTCACGGGCATCTGTGAGGTTC GAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGG TGAGGTAATGGCTCACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGG CGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGG CAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCGACG CCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTTTCAGCAGGG	

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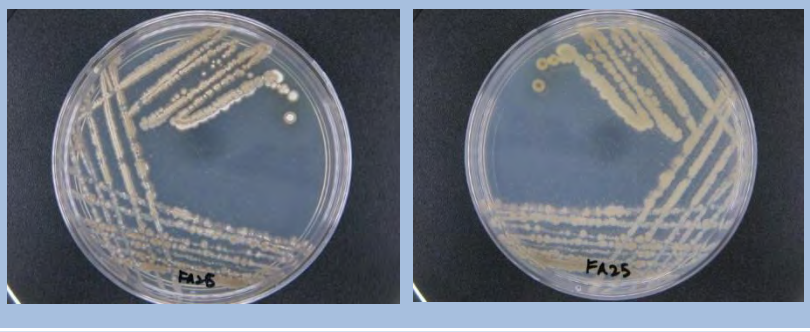
***Streptomyces* sp. CCB-KSK152**		
Colony morphology	Dark grey and white aerial mycelium; circular; entire; umbonate; dry; pale brown pigment; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces xiamenensis***
	Top-hit strain	MCCC 1A01550(T)
	Similarity (%)	99.77
	Top-hit taxonomy	Bacteria;Actinobacteria; Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGATA AGCCCGGGAAACTGGGTCTAATACCGGATACGACACATGAGCGCATGC TCGTGTGTGGAAAGTTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCA GTTTGTTGGTGGGGTAGTGGCCTACCAAGACGACGACGGGTAGCCGGC CTGAGAGGGTGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCC TACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGAT	

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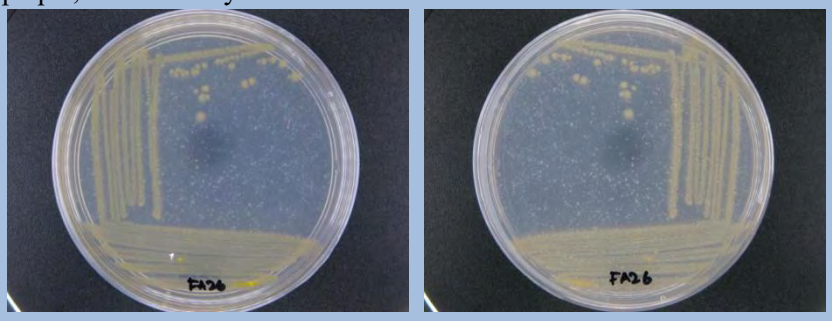
***Streptomyces* sp. CCB-KSK153**		
Colony morphology	Dark grey and yellow aerial mycelium; circular; undulate; flat; dry; opaque; small colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces olivaceus***
	Top-hit strain	NRRL B-3009(T)
	Similarity (%)	99.85%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	CGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATATTGATCTTCACGGGCATCTGTGAGGTTCGAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGAGGTAATGGCTCACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGAT	

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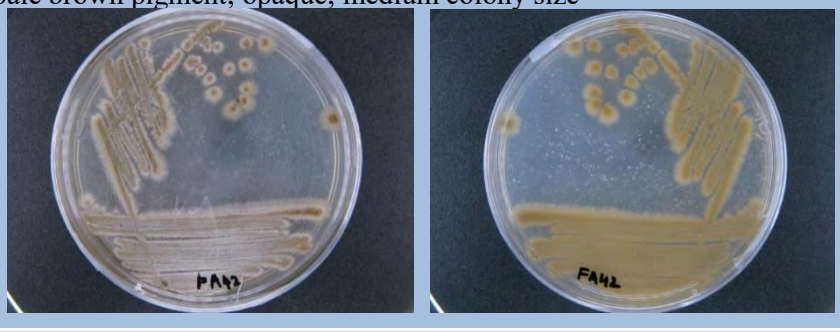
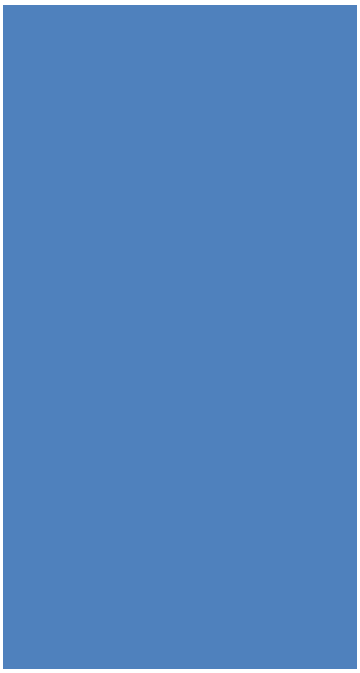
***Streptomyces* sp. CCB-KSK167**		
Colony morphology	Brown aerial mycelium; brown substrate; filamentous; entire; flat; dry; pale brown pigment; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	12 May 2014; Kuala Sala, Kedah (100.3546°E, 5.9737°N); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces sundarbansensis***
	Top-hit strain	MS1/7(T)
	Similarity (%)	99.85%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	TGGATTAGTGGCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTTCA CTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATACCACTTCG TCCCGCATGGGACGGGGTTGAAAGCTCCGGCGGTGAAGGATGAGCCCG CGGCCTATCAGCTTGTTGGTGGGGTAATGGCCTACCAAGGCGACGACG GGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGG CCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCG AAAGCCTGATGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTG TAAACCTCTTTCAGCAGGGAAGAAGCGCAAGTGACGGTACCTGCAGAA	



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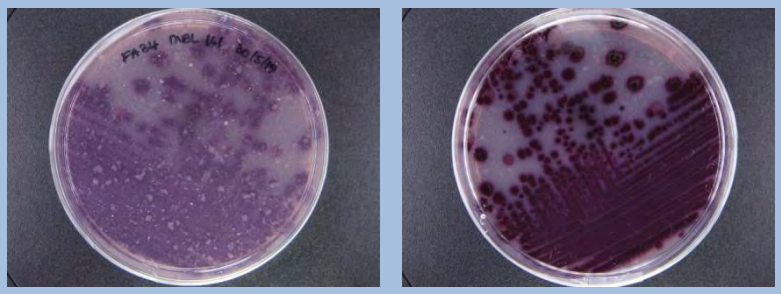
***Streptomyces* sp. CCB-MMP161**		
Colony morphology	Purple white aerial mycelium; light purple substrate; purple pigment; filamentous; undulate; crateriform; dry; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496 N, 100.73495 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces viridobrunneus***
	Top-hit strain	LMG 20317(T)
	Similarity (%)	99.85%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTTCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATACGACCTGCCGAGGCATCTCGGTGGGTGGAAAGCTCCGGCGGTGAAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGAGGTAACGGCTCACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGAT	

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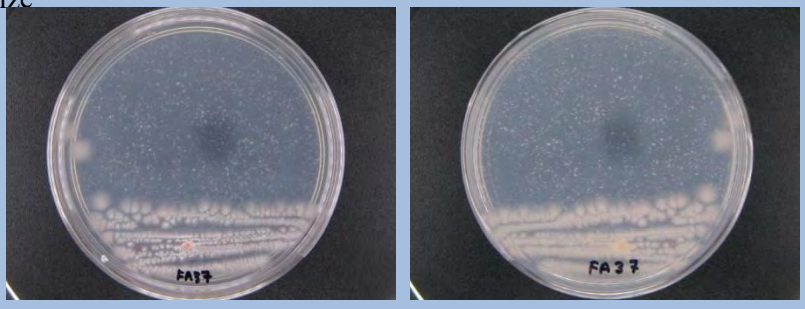
***Streptomyces* sp. CCB-MMP163**		
Colony morphology	White and light yellow and light grey aerial mycelium; light yellow substrate; irregular; undulate; flat; rough; translucent; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014; Matang Mangrove Forest, Perak (4.85496 N, 100.73495 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces sundarbansensis***
	Top-hit strain	MS1/7(T)
	Similarity (%)	99.85%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GGCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTTCACTCTGGGAC AAGCCCTGGAAACGGGGTCTAATACCGGATACCACTTCGTCCCGCATG GGACGGGGTTGAAAGCTCCGGCGGTGAAGGATGAGCCCGCGGCCTATC AGCTTGTTGGTGGGGTAATGGCCTACCAAGGCGACGACGGGTAGCCGG CCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTC CTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGA TGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCT	

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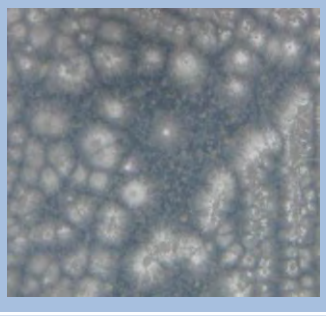
***Streptomyces* sp. CCB-PSK207**		
Colony morphology	White aerial mycelium; white substrate; irregular; filamentous; flat; dry; opaque; medium colony size  	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Pulau Songsong, Kedah; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces sundarbansensis***
	Top-hit strain	MS1/7(T)
	Similarity (%)	99.85%
	Top-hit taxonomy	Bacteria;Actinobacteria; Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	13/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GAACGGGTGAGTAACACGTGGGCAATCTGCCCTTCACTCTGGGACAAG CCCTGGAAACGGGGTCTAATACCGGATACCACTTCGTCCCGCATGGGA CGGGGTTGAAAGCTCCGGCGGTGAAGGATGAGCCCGCGGCCTATCAGC TTGTTGGTGGGGTAATGGCCTACCAAGGCGACGACGGGTAGCCGGCCT GAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTA CGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGC AGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTTTC	

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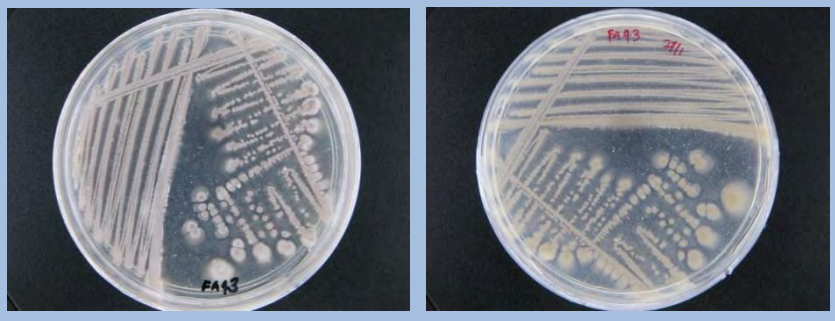
***Streptomyces* sp. CCB-SMP168**		
Colony morphology	Grey aerial mycelium; circular; undulate; raised; dry; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces sanyensis***
	Top-hit strain	219820(T)
	Similarity (%)	100.00%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATACGACTCGGGAGGGCATCCTTCCGGGTGGAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGGGGTGATGGCCTACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGAT	

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GTCACGAAAG

***Streptomyces* sp. CCB-SMP172**		
Colony morphology	Light green and white aerial mycelium; yellowish substrate; circular; entire; raised; dry; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Nocardiopsis eucommiae***
	Top-hit strain	HDS5
	Similarity (%)	100.00%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptosporangiales;Nocardiopsaceae;Nocardiopsis
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GCGAACGGGTGAGTAACACGTGAGCAACCTGCCCCTGACTCTGGGATAAGCGGTGGAAACGCCGTCTAATACCGGATACGACCCACCACCTCATGGTGGAGGGTGGAAAGTTTTATCGGTCAGGGATGGGCTCGCGGCCTATCAGCTTGTTGGTGGGGTAACGGCCTACCAAGGCGATTACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTGCGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCGACGCCGCGTGGGGGATGACGGCCTTCGGGTTGTAAACCTCTTTTACCACCAACGCAGGCTCCACGTTCTCGTGGGGTTGACGGTAGGTGG	

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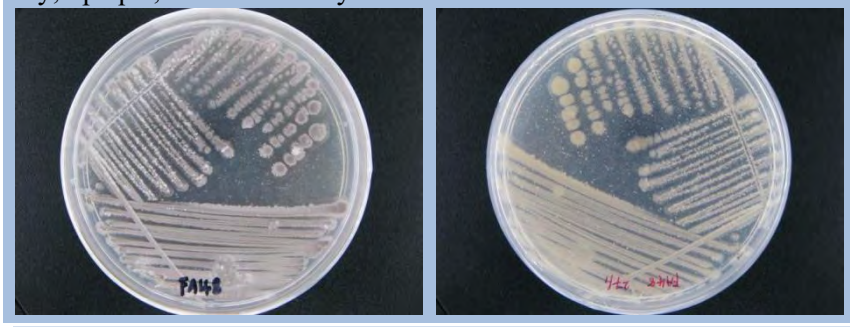
***Streptomyces* sp. CCB-SMP173**		
Colony morphology	Grey aerial mycelium; light grey substrate; circular; undulate; raised; dry; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces sanyensis***
	Top-hit strain	219820(T)
	Similarity (%)	100.00
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATACGACTCGGGAGGGCATCCTTCCGGGTGGAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGGGGTGATGGCCTACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTTTCAGCAGGGAAGAAGCGCAAGTGACGGTACCTGCAGAAGAAGCGCCGGCTAACTACGTGCCAGCAGC	

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***Streptomyces* sp. CCB-SMP174**		
Colony morphology	Grey aerial mycelium; irregular; lobate; raised; dry; opaque; large colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces sanyensis***
	Top-hit strain	219820(T)
	Similarity (%)	100.00
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	TGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATACGACTCGGGAGGGCATCCTTCCGGGTGGAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGGGGTGATGGCCTACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCGACG	

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***Streptomyces* sp. CCB-SMP176**		
Colony morphology	White aerial mycelium;irregular; undulate; raised, dry, opaque, medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces qinglanensis***
	Top-hit strain	172205(T)
	Similarity (%)	100.00
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	TGGATTAGTGGCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATATGATCACCGGCCGCATGGTCTGGTGGTGGAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGGGGTGATGGCCTACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCT	

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***Streptomyces* sp. CCB-SMP177**		
Colony morphology	Yellowish aerial mycelium; peach pigment, irregular; undulate; raised; dry; opaque; medium colony size  	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces fradiae***
	Top-hit strain	DSM 40063
	Similarity (%)	99.39%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	CGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATACGACCACTTCAGGCATCTGATGGTGGTGGAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGAGGTAACGGCTCACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGAT	

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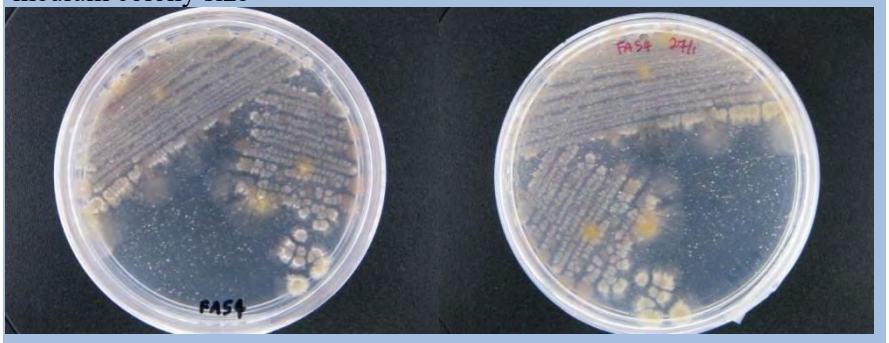
***Streptomyces* sp. CCB-SMP179**		
Colony morphology	Transparent aerial mycelium; rhizoid; undulate; raised; dry; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces ardesiacus***
	Top-hit strain	NRRL B-1773(T)
	Similarity (%)	99.70%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces;Streptomycesdiastaticus
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GGCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATACTGACCTGCCAAGGCATCTTGGCGGGTCGAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGAGGTAATGGCTCACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACT	

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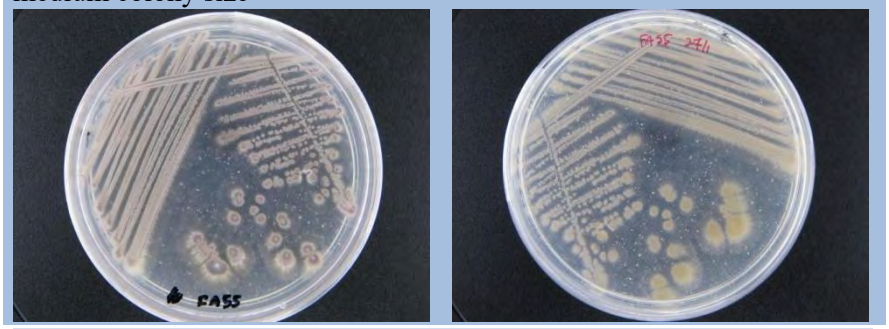
***Streptomyces* sp. CCB-SMP180**		
Colony morphology	Dark grey aerial mycelium; rhizoid; undulate; raised; dry; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces sanyensis***
	Top-hit strain	219820(T)
	Similarity (%)	99.77%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATATGACTCGGGAGGGCATCCTTCCGGGTGGAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGGGGTGATGGCCTACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTT	

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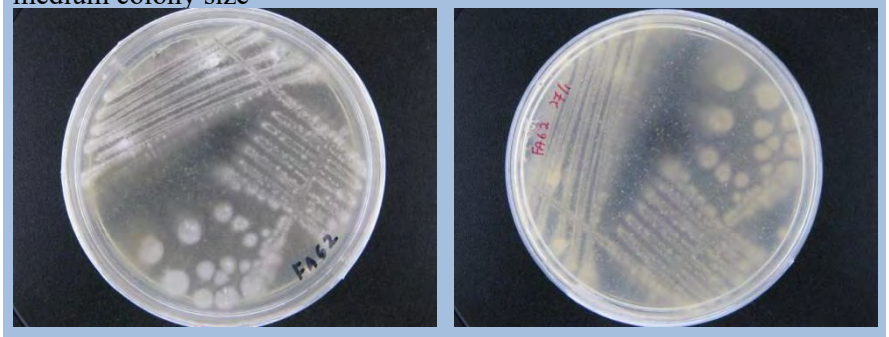
***Streptomyces* sp. CCB-SMP185**		
Colony morphology	Light grey aerial mycelium; circular; undulate; raised; dry; transparent; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces hyderabadensis***
	Top-hit strain	OU-40(T)
	Similarity (%)	98.70%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	CGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATACGACCACTTCAGGCATCTGATGGTGGTGGAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGAGGTAACGGCTCACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGAT	

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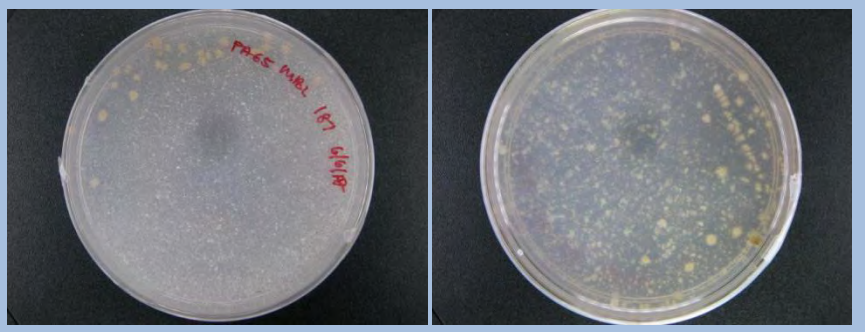
***Streptomyces* sp. CCB-SMP187**		
Colony morphology	Brown/olive aerial mycelium; circular; entire; flat; rough; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces wuyuanensis***
	Top-hit strain	CGMCC 4.7042(T)
	Similarity (%)	100.00
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	TGGCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACT CTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATACGAC CACTGAGGGCATCCTCGGTGGTGGAAAGCTCCGGCGGTGCAG GATGAGCCCGCGGCCTATCAGCTTGTTGGTGGGGTGATGGCCT ACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGG CCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGC	

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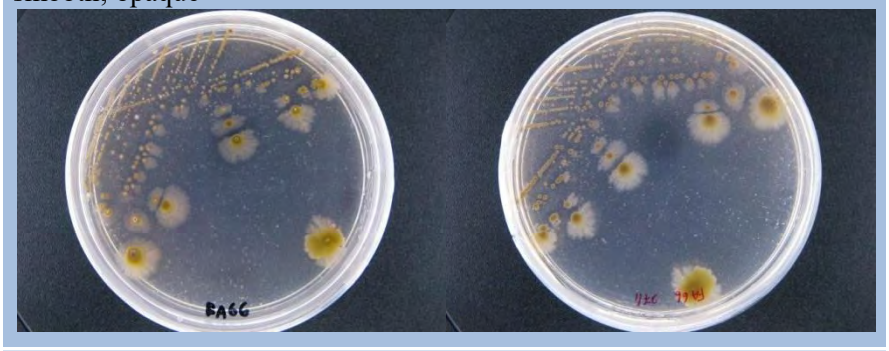
***Streptomyces* sp. CCB-SMP188**		
Colony morphology	White, yellow, brown aerial mycelium; circular; undulate; raised; smooth; opaque 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces wuyuanensis***
	Top-hit strain	CGMCC 4.7042(T)
	Similarity (%)	100.00
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	CGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATACGACCACTGAGGGCATCCTCGGTGGTGGAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGGGGTGATGGCCTACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTTT	

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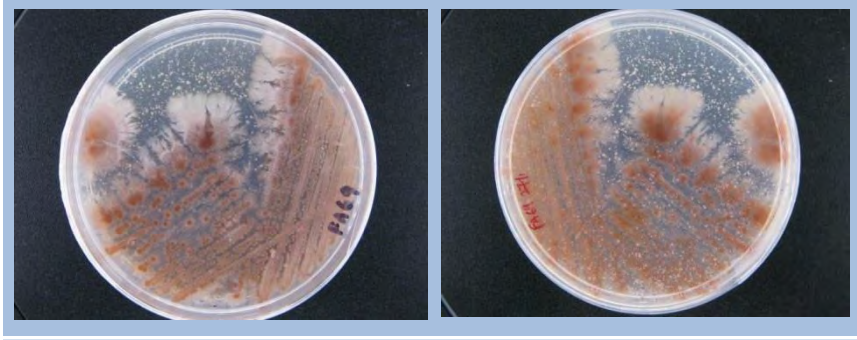
***Streptomyces* sp. CCB-SMP191**		
Colony morphology	Pink and white aerial mycelium; rhizoid; lobate; raised; dry; opaque; large colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces ardesiacus***
	Top-hit strain	NRRL B-1773(T)
	Similarity (%)	99.69
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	CGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTG GGACAAGCCCTGGAAACGGGGTCTAATACCGGATACTGACCT GCCAAGGCATCTTGGCGGGTCGAAAGCTCCGGCGGTGCAGGA TGAGCCCGCGGCCTATCAGCTTGTTGGTGAGGTAATGGCTCAC CAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCC ACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAG CAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCG	

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***Streptomyces* sp. CCB-SMP196**		
Colony morphology	Pink and red aerial mycelium; peach substrate; circular; lobate; flat; rough; translucent; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces ardesiacus***
	Top-hit strain	NRRL B-1773(T)
	Similarity (%)	99.70
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GGCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGAC AAGCCCTGGAAACGGGGTCTAATACCGGATACTGACCTGCCAAGGCAT CTTGGCGGGTCGAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTAT CAGCTTGTTGGTGAGGTAATGGCTCACCAAGGCGACGACGGGTAGCCG GCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACT CCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTG ATGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTC	

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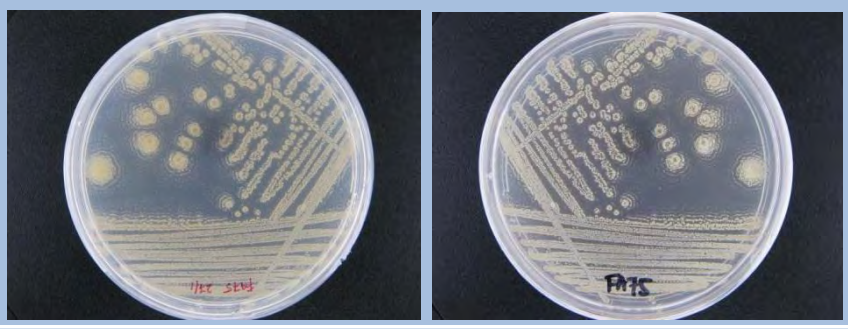
***Streptomyces* sp. CCB-SMP197**		
Colony morphology	Yellowish aerial mycelium; yellow substrate; irregular; lobate; raised; dry; no pigmentation; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces daghestanicus***
	Top-hit strain	NRRL B-5418
	Similarity (%)	100.00
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	CGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATATGACTGTCCATCGCATGGTGGATGGTGTAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGAGGTAGTGGCTCACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTTT	

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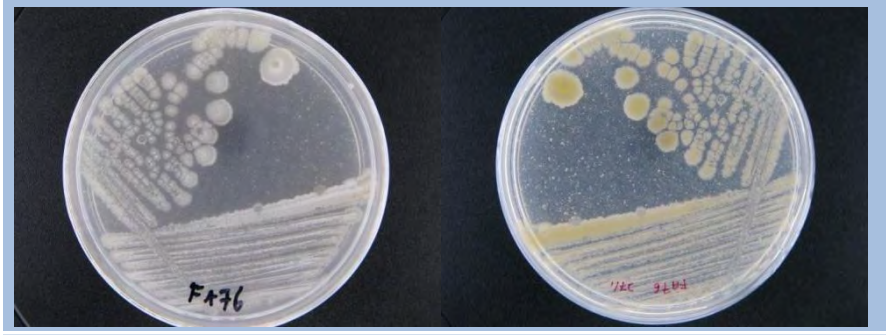
***Streptomyces* sp. CCB-SMP198**		
Colony morphology	Greyish white aerial mycelium; yellowish substrate; circular; undulate; raised; dry; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces parvulus***
	Top-hit strain	NBRC 13193(T)
	Similarity (%)	99.85
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	AACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGC CCTGGAAACGGGGTCTAATACCGGATACTGACCTTCACGGGCATCTGT GAGGGTCGAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGC TTGTTGGTGAGGTAACGGCTCACCAAGGCGACGACGGGTAGCCGGCCT GAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTA CGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGC AGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTTTC	

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***Streptomyces* sp. CCB-SMP199**		
Colony morphology	White aerial mycelium; yellowish substrate; circular; undulate; raised; dry; opaque; medium colony size  	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces hyderabadensis***
	Top-hit strain	OU-40(T)
	Similarity (%)	98.65
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GGGGGATTAGTGGCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTG CACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATACGACCA CTTCAGGCATCTGATGGTGGTGGAAAGCTCCGGCGGTGCAGGATGAGC CCGCGGCCTATCAGCTTGTTGGTGAGGTAACGGCTCACCAAGGCGACG ACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACA CGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGG GCGAAAGCCTGATGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGG	

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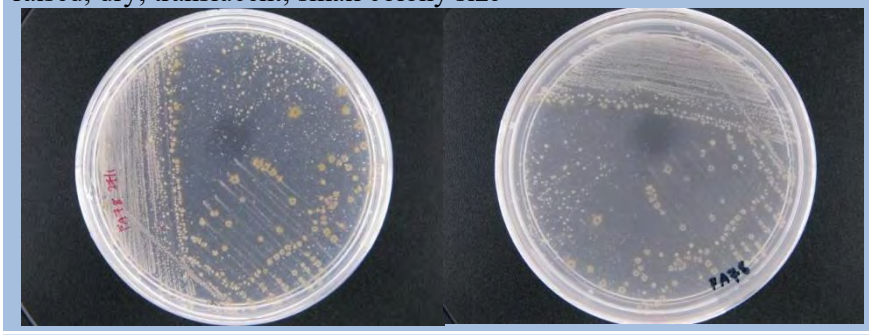
***Streptomyces* sp. CCB-SMP200**		
Colony morphology	Yellowish brown aerial mycelium; yellow substrate; circular; entire; raised; dry; translucent; small colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces albidoflavus***
	Top-hit strain	DSM 40455(T)
	Similarity (%)	98.87%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinobacteria_c;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	TGGATTAGTGGCGAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAAACGGGGTCTAATACCGGATATGACTGCCTATCGCATGGTGGGTGGTGTAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGGTGAGGTAGTGGCTTACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGCAAGCCTGATGCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTG	

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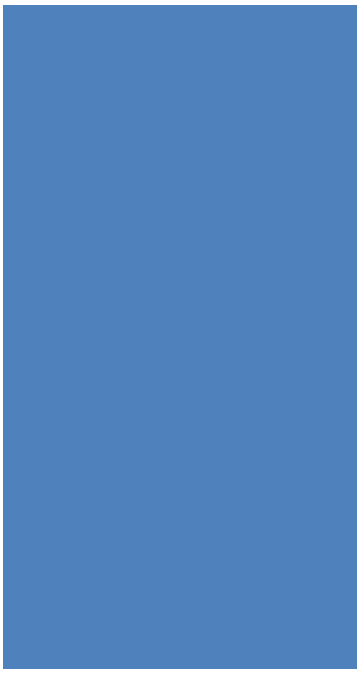
***Streptomyces* sp. CCB-SMP201**		
Colony morphology	Beige and grey aerial mycelium; beige substrate; light brown pigment; rhizoid; lobate; raised; dry; opaque large colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces pseudogriseolus***
	Top-hit strain	NRRL B-3288
	Similarity (%)	100.00
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGCCCTGGAA ACGGGGTCTAATACCGGATACTGATCATCTTGGGCATCCTTGGTGATC GAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGCTTGTTGG TGAGGTAATGGCTCACCAAGGCGACGACGGGTAGCCGGCCTGAGAGGG CGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGG CAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCGACG CCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTTTCAGCAGGG	



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***Streptomyces* sp. CCB-SMP206**		
Colony morphology	Yellowish aerial mycelium; circular; entire; flat; rough; opaque; medium colony size  	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces ardesiacus***
	Top-hit strain	NRRL B-1773(T)
	Similarity (%)	100.00%
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia; Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	AACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAGC CCTGGAAACGGGGTCTAATACCGGATACTGACCTGCCGAGGCATCTCG GCGGGTCGAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAGC TTGTTGGTGAGGTAATGGCTCACCAAGGCGACGACGGGTAGCCGGCCT GAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTA CGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGCAAGCCTGATGC	

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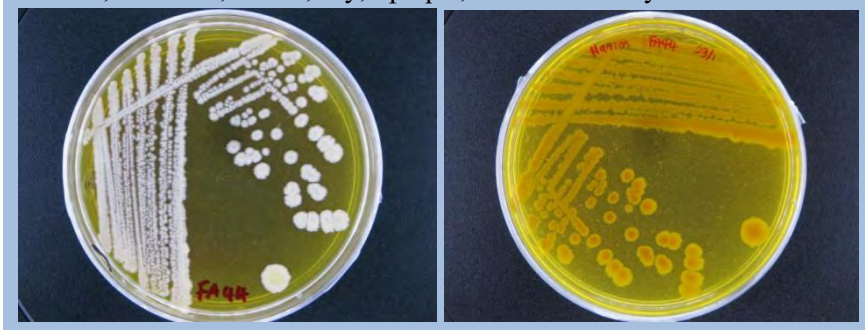
***Streptomyces* sp.CCB-SMP169**		
Colony morphology	Yellowish white aerial mycelium; yellow substrate and pigment; circular; undulate; raised; dry; opaque; medium colony size 	
Gram-stain	Positive, filamentous bacterium	
Isolation medium	Starch Casein Agar (SCA) + 50% Artificial sea water (ASW)	
Growth condition	Aerobic; pH7; 28±2°C; 7-14 days	
Sampling date, location, source	15 May 2014;Taman Paya Bakau, Perak (4.21335 N, 100.64709 E); Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Streptomyces parvulus***
	Top-hit strain	NBRC 13193(T)
	Similarity (%)	100.00
	Top-hit taxonomy	Bacteria;Actinobacteria;Actinomycetia;Streptomycetales;Streptomycetaceae;Streptomyces
Date of blast	14/03/2025	
Publication	No	
Application	No	
Isolated by	Farizah Hanim bt Lat	
Risk group	2	
Additional information (Sequence)	GAACGGGTGAGTAACACGTGGGCAATCTGCCCTGCACTCTGGGACAAG CCCTGGAAACGGGGTCTAATACCGGATACTGACCTTCACGGGCATCTG TGAAGGTCGAAAGCTCCGGCGGTGCAGGATGAGCCCGCGGCCTATCAG CTTGTTGGTGAGGTAATGGCTCACCAAGGCGACGACGGGTAGCCGGCC TGAGAGGGCGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCT ACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATG	

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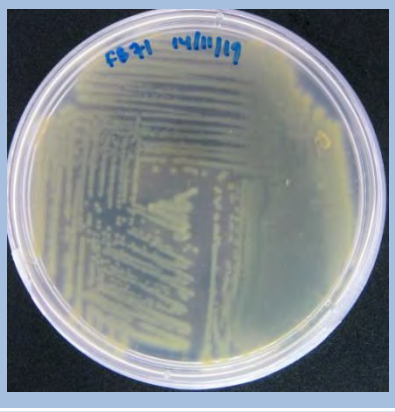
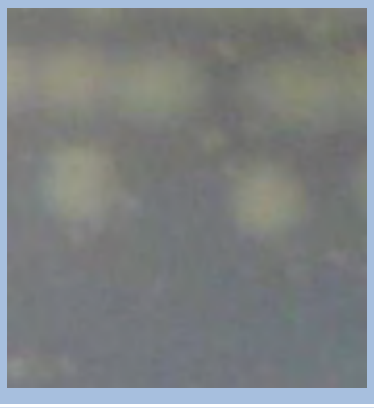
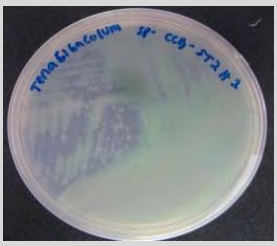
Tenacibaculum discolor sp. CCB-SMP263		
Colony morphology	Dull Yellow; 3-4 mm; circular; entire; flat; glistening; transparent  	
Gram-stain	Negative rod	
Isolation medium	Marine Agar (MA)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	15 May 2014; Seri Manjung, Perak; Sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Tenacibaculum discolor***
	Top-hit strain	DSM 18842(T)
	Similarity (%)	99.85%
	Top-hit taxonomy	Bacteria;Bacteroidetes;Flavobacteriia;Flavobacteriales;Flavobacteriaceae;Tenacibaculum
Publication	No	
Date of Blast	08/04/2025	
Application	No	
Isolated by	Siti Nur Fatin binti Ahmad Kamal	
Risk group	1	
Additional information		

***Tenacibaculum ascidiaceicola* sp. CCB-ST2H2**		
Colony morphology	Beige; 2-3 mm; irregular; flat; undulate; glistering; transparent  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar;	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Tenacibaculum ascidiaceicola***
	Top-hit strain	RSS1-6(T)
	Similarity (%)	98.72
	Top-hit taxonomy	Bacteria;Bacteroidetes;Flavobacteriia;Flavobacteriales;Flavobacteriaceae;Tenacibaculum
Publication	No	
Date of Blast	14/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	2	
Additional information	NNNNNNNGGNNGCTACACATGCAGTCGAGGGGTAACAGGGAAAAGCTTGCTTTTTTGCTGACGACCGGCGAACGGGTGCGTAACGCGTATAGAATCTGCCTTGTACAGGAGGATAGCCTTTAGAAATGAAGATTAATACTCCATAATGTTGAGAGATGGCATCATCTTTTAATTAAAGATTTATCGGTACAAGATGACTATGCGTCCTATTAGCTAGATGGTAAGGTAACGGCTTACCATGGCAACGATAGGTAGGGGGTCTGAGAGGATTATCCCCCACACTGGTACTGAGACACGGACCAGACTCCTACGGGAGGCAGCAGTGAGGAATATTGGTCAATGGAGGCAACTCTGAACCAGCCATGCCGCGTGCAGGAAGACTGCCCT	

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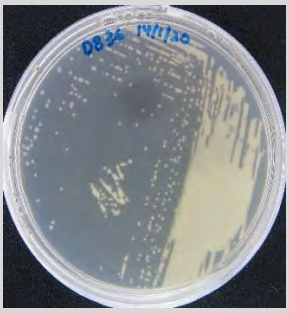
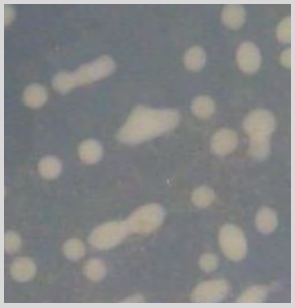
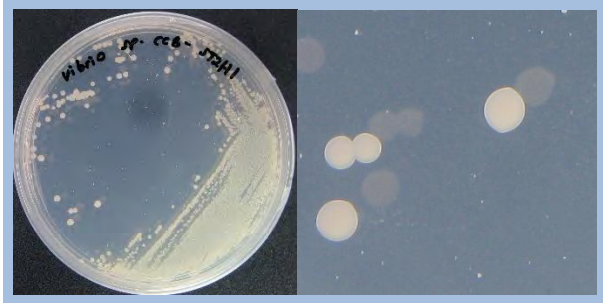
***Vibrio sp.*CCB-CTB329**		
Colony morphology	Milky white colony; 2mm; circular; entire; convex; smooth; glistening; opaque  	
Gram-stain	Negative, rod	
Isolation medium	Marine agar (MA); Marine Broth (MB)	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	12 May 2016; CEMACS Teluk Bahang, (N05º28.100' E100º12.011'); Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Vibrio alginolyticus***
	Top-hit strain	NBRC 15630 (T)
	Similarity (%)	99.71
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Vibrionales;Vibrionaceae;Vibrio
Publication	No	
Date of Blast	19/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

***Vibrio sp.* CCB-ST2H1**		
Colony morphology	White colony; 1 mm size; circular; undulate; raised; glistening; opaque 	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 October 2014; Matang Mangrove Forest (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Vibrio alginolyticus***
	Top-hit strain	NBRC 15630(T)
	Similarity (%)	99.70%
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Vibrionales;Vibrionaceae;Vibrio
Date of blast	10/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	2	
Additional information (Sequence)	GATAACGGCGTCGAGCGGCGGACGGGTGAGTAATGCCTAGGAAATTGCCCTGATGTGGGGGATAACCATTGGAAACGATGGCTAATACCGCATGATGCCTACGGGCCAAAGAGGGGGACCTTCGGGCCTCTCGCGTCAGGATATGCCTAGGTGGGATTAGCTAGTTGGTGAGGTAAGGGCTCACCAAGGCAACGATCCCTAGCTGGTCTGAGAGGATGATCAGCCACACTGGAACTGAGA	

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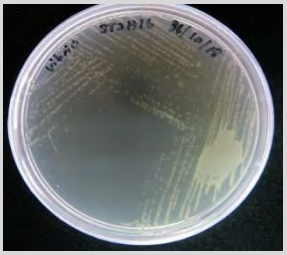
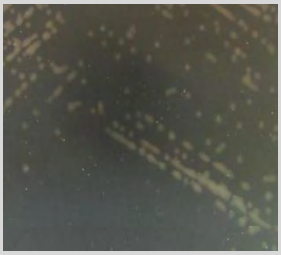
***Vibrio hyugaensis* sp. CCB-ST2H16**		
Colony morphology	White; 1 mm; circular; raised; entire; glistering; transparent  	
Gram-stain	Negative curved-rod	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Vibrio hyugaensis***
	Top-hit strain	090810a(T)
	Similarity (%)	99.57
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Vibrionales;Vibrionaceae;Vibrio
Publication	No	
Date of blast	14/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information	NNNNNNNNNNGCNGCTACACATGCAGTCGAGCGGAAC GAGTTATCTGAACCTTCGGGGAACGATAACGGCGTCGAG CGGCGGACGGGTGAGTAATGCCTAGGAAATTGCCCTGAT GTGGGGGATAACCATTGGAAACGATGGCTAATACCGCA TGATGCCTACGGGCCAAAGAGGGGGACCTTCGGGCCTCT CGCGTCAGGATATGCCTAGGTGGGATTAGCTAGTTGGTG AGGTAAGGGCTCACCAAGGCGACGATCCCTAGCTGGTCT GAGAGGATGATCAGCCACACTGGAACTGAGACACGGTC CAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCAC AATGGGCGCAAGCCTGATGCAGCCATGCCGCGTGTGTGA	

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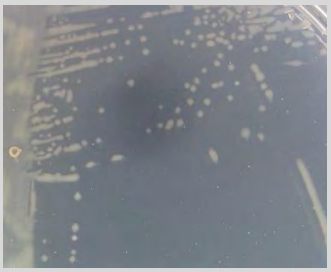
GGGGGGACGCTACCACTTGNGTNNNNNNNN

***Vibrio campbellii* sp. CCB-ST2H38**		
Colony morphology	White; 1-2 mm; circular; raised; entire; glistering; opaque  	
Gram-stain	Gram-Negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Vibrio campbellii***
	Top-hit strain	CAIM 519(T)
	Similarity (%)	99.43
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Vibrionales;Vibrionaceae;Vibrio
Publication	No	
Date of Blast	12/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information	GNGNNNNGNNNNNGCTACNCNTGCAAGTCGAGCGGCAGCGACATGACTGAACCTTCGGGGGACGTTATGGGCGGCGAGCGGCGGACGGGTGAGTAATGCCTGGGAACATGCCTTAGTGTGGGGGATAACCATTGGAAACGATGGCTAATACCGCATAATCTCTACGGAGCAAAGCGGGGGACCTTCGGGCCTCGCGCGCTAAGATTGGCCCAGGTGGGATTAGCTAGTAGGTGGGGTAACGGCTCACCTAGGCGACGATCCCTAGCTGGTCTGAGAGGATGATCAGCCACACT	

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GAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACACCATG
GGAGTGGGCTGCACCAGAAGTAGATAGCTTAACCTTCGGGAG
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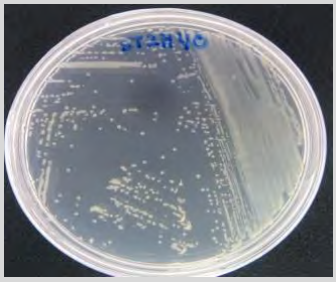
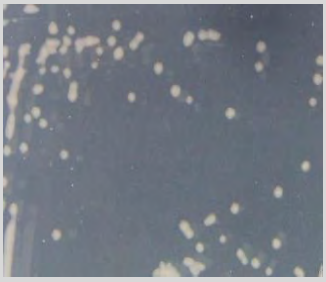
***Vibrio campbelli* sp. CCB-ST2H40**		
Colony morphology	White; 1 mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-negative	
Isolation medium	Tryptone + Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Vibrio campbelli***
	Top-hit strain	CAIM 519(T)
	Similarity (%)	99.50
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Vibrionales;Vibrionaceae;Vibrio
Publication	No	
Date of blast	14/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information	NNNNNNNGNNGNNGNNACACATGCAAGTCGAGCGGAAACG AGTTATCTGAACCTTCGGGGAACGATAACGGCGTCGAGCGGC GGACGGGTGAGTAATGCCTAGGAAATTGCCCTGATGTGGGGG ATAACCATTGGAAACGATGGCTAATACCGCATGATGCCTTTG GGCCAAAGAGGGGGACCTTCGGGCCTCTCGCGTCAGGATATG CCTAGGTGGGATTAGCTAGTTGGTGAGGTAAGGGCTCACCAA GGCGACGATCCCTAGCTGGTCTGAGAGGATGATCAGCCACAC TGGAACTGAGACACGGTCCAGACTCCTACGGGAGGCAGCAGT GGGGAATATTGCACAATGGGCGCAAGCCTGATGCAGCCATGC CGCGTGTGTGAAGAAGGCCTTCGGGTTGTAAAGCACTTTCAGT	

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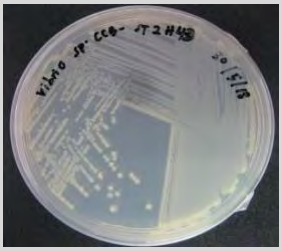
GAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACACCATG
GGAGTGGGCTGCAAAAGAAGTAGGTAGTTTAACCTTCGGGGG
GACGCTACCATNNNGTTNNNNNNNNNNN

***Vibrio campbellii* sp. CCB-ST2H43**		
Colony morphology	White; 1 mm; circular; raised; entire; glistering; opaque  	
Gram-stain	Negative curved-rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Vibrio campbellii***
	Top-hit strain	CAIM 519(T)
	Similarity (%)	99.50
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Vibrionales;Vibrionaceae;Vibrio
Publication	No	
Date of blast	17/3/2025	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information	NNNNNNNNNNNCGGCTACACATGCAAGTCGAGCGGAACGAGTTATCTGAACCTTCGGGGAACGATAACGGCGTCGAGCGGCGGACGGGTGAGTAATGCCTAGGAAATTGCCCTGATGTGGGGGATAACCATTGGAAACGATGGCTAATACCGCATGATGCCTTTGGGCCAAAGAGGGGGACCTTCGGGCCTCTCGCGTCAGGATATGCCTAGGTGGGATTAGCTAGTTGGTGAGGTAAGGGCTCACCAAGGCGACGATCCCTAGCTGGTCTGAGAGGATGATCAGCCACACTGGAACTGAGACACGGTCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGC	

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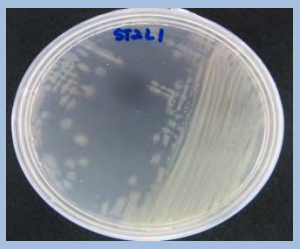
***Vibrio* sp. CCB-ST2L1**		
Colony morphology	White; 1-2 mm; irregular; flat; entire; glistering; opaque  	
Gram-stain	Negative curved-rod	
Isolation medium	Tryptone + Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Vibrio alginolyticus***
	Top-hit strain	NBRC 15630 (T)
	Similarity (%)	99.31%
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria; Vibrionales;Vibrionaceae;Vibrio
Date of blast	04/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balacandra	
Risk group	1	
Additional information (Sequence)	GAAATTGCCCTGATGTGGGGGATAACCATTGGAAACGATGGCTAATAC CGCATGATGCCTACGGGCCAAAGAGGGGGACCTTCGGGCCTCTCGCGT CAGGATATGCCTAGGTGGGATTAGCTAGTTGGTGAGGTAAGGGCTCAC CAAGGCGACGATCCCTAGCTGGTCTGAGAGGATGATCAGCCACACTGG AACTGAGACACGGTCCAGACTCCTACGGGAGGCAGCAGTGGGGAATAT TGCACAATGGGCGCAAGCCTGATGCAGCCATGCCGCGTGTATGAAGAA GGCCTTCGGGTTGTAAAGTACTTTCAGTCGTGAGGAAGGCGGCGGCGT TAATAGCGGCGTTGTTTGACGTTAGCTACAGAAGAAGCACCGGCTAAC TCCGTGCCAGCAGCCGCGGTAATACGGAGGGTGCGAGCGTTAATCGGA ATTACTGGGCGTAAAGCGCATGCAGGTGGTTTGTTAAGTCAGATGTGA	

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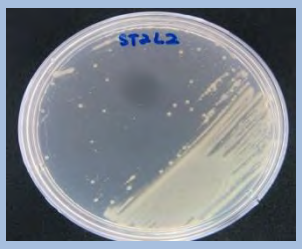
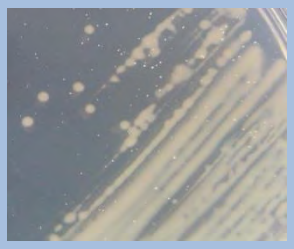
GCTGCAA

***Vibrio* sp. CCB-ST2L2**		
Colony morphology	White; 1-2 mm; circular; raised; entire; glistering; opaque  	
Gram-stain	Negative curved-rod	
Isolation medium	Tryptone + Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Vibrio alginolyticus***
	Top-hit strain	NBRC 15630 (T)
	Similarity (%)	99.31%
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria; Vibrionales;Vibrionaceae;Vibrio
Date of blast	04/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balacandra	
Risk group	1	
Additional information (Sequence)	ACGATAACGGCGTCGAGCGGCGGACGGGTGAGTAATGCCTAGGAAATT GCCCTGATGTGGGGGATAACCATTGGAAACGATGGCTAATACCGCATG ATGCCTACGGGCCAAAGAGGGGGACCTTCGGGCCTCTCGCGTCAGGAT ATGCCTAGGTGGGATTAGCTAGTTGGTGAGGTAAGGGCTCACCAAGGC GACGATCCCTAGCTGGTCTGAGAGGATGATCAGCCACACTGGAACTGA GACACGGTCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACA ATGGGCGCAAGCCTGATGCAGCCATGCCGCGTGTATGAAGAAGGCCTT CGGGTTGTAAAGTACTTTCAGTCGTGAGGAAGGCGGCGGCGTTAATAG CGGCGTTGTTTGACGTTAGCTACAGAAGAAGCACCGGCTAACTCCGTG CCAGCAGCCGCGGTAATACGGAGGGTGCGAGCGTTAATCGGAATTACT	

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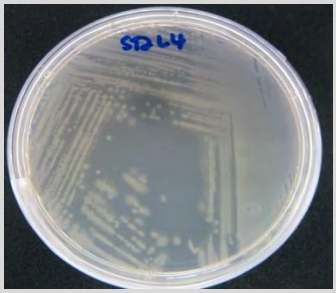
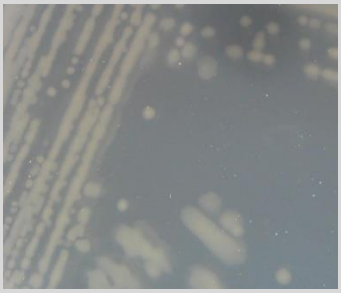
Vibrio Alginolyticus sp. ST2L4_D GO		
Colony morphology	White; 1-2 mm; circular; raised; entire; glistering; opaque  	
Gram-stain	Negative curved-rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW)	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Vibrio alginolyticus***
	Top-hit strain	NBRC 15630 (T)
	Similarity (%)	99.44
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Vibrionales;Vibrionaceae;Vibrio
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	2	
Additional information	NNNNNNNNNCNNNNNNCATGCAGTCGAGCGGAAACG AGTTATCTGAACCTTCGGGGAACGATAACGGCGTCGAGC GGCGGACGGGTGAGTAATGCCTAGGAAATTGCCCTGAT GTGGGGGATAACCATTGGAAACGATGGCTAATACCGCA TGATGCCTACGGGCCAAAGAGGGGGACCTTCGGGCCTCT CGCGTCAGGATATGCCTAGGTGGGATTAGCTAGTTGGTG AGGTAAGGGCTCACCAAGGCGACGATCCCTAGCTGGTCT GAGAGGATGATCAGCCACACTGGAACTGAGACACGGTC CAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCAC AATGGGCGCAAGCCTGATGCAGCCATGCCGCGTGTGTGA AGAAGGCCTTCGGGTTGTAAAGTACTTTCAGTCGTGAGG	

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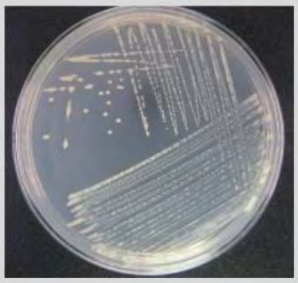
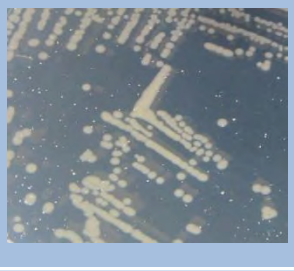
Date of Blast	10/03/2025

Vibrio neocaledonicus sp. ST2L5_Dr Go		
Colony morphology	Brown colony; 1-2 mm size; circular; entire; raised; glistening; transparent  	
Gram-stain	Negative rod	
Isolation medium	Tryptone + 50% Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7;28±2°C; 24-48hrs	
Sampling date, location, source	2 October 2014; Matang Mangrove Forest (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Vibrio neocaledonicus***
	Top-hit strain	NC470(T)
	Similarity (%)	99.01
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria;Vibrionales;Vibrionaceae;Vibrio
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	2	
Additional information		

***Vibrio* sp. CCB-ST4H6**		
Colony morphology	White; 1 mm; circular; raised; entire; glistering; opaque  	
Gram-stain	Negative curved-rod	
Isolation medium	Tryptone + Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Vibrio neocaledonicus***
	Top-hit strain	NC470 (T)
	Similarity (%)	99.78%
	Top-hit taxonomy	Bacteria;Proteobacteria;Gammaproteobacteria; Vibrionales;Vibrionaceae;Vibrio
Date of blast	04/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balacandra	
Risk group	1	
Additional information (Sequence)	ACGATAACGGCGTCGAGCGGCGGACGGGTGAGTAATGCCTAGGAAATT GCCCTGATGTGGGGGATAACCATTGGAAACGATGGCTAATACCGCATG ATGCCTACGGGCCAAAGAGGGGGACCTTCGGGCCTCTCGCGTCAGGAT ATGCCTAGGTGGGATTAGCTAGTTGGTGAGGTAAGGGCTCACCAAGGC GACGATCCCTAGCTGGTCTGAGAGGATGATCAGCCACACTGGAACTGA GACACGGTCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACA ATGGGCGCAAGCCTGATGCAGCCATGCCGCGTGTATGAAGAAGGCCTT CGGGTTGTAAAGTACTTTCAGTCGTGAGGAAGGCGGCGGCGTTAATAG CGGCGTTGTTTGACGTTAGCTACAGAAGAAGCACCGGCTAACTCCGTG CCAGCAGCCGCGGTAATACGGAGGGTGCGAGCGTTAATCGGAATTACT	

	GGGCGTAAAGCGCATGCAGGTGGTTTGTTAAGTCAGATGTGAAAGCCC GGGGCTCAACCTCGGAATAGCATTTGAAACTGGCAGACTAGAGTACTG TAGAGGGGGGTAGAATTTCAGGTGTAGCGGTGAAATGCGTAGAGATCT GAAGGAATACCGGTGGCGAAGGCGGCCCCCTGGACAGATACTGACACT CAGATGCGAAAGCGTGGGGAGCAAACAGGATTAGATACCCTGGTAGTC CACGCCGTAAACGATGTCTACTTGGAGGTTTTGTGGCCTTGAGCCGTG GCTTTCGGAGCTAACGCGTTAAGTAGACCGCCTGGGGAGTACGGTCGC AAGATTAAAACTCAAATGAATTGACGGGGGCCCGCACAAGCGGTGGAG CATGTGGTTTAATTCGATGCAACGCGAAGAACCTTACCTACTCTTGAC ATCCAGAGAACTTTCCAGAGATGGATTGGTGCCTTCGGGAACTCTGAG ACAGGTGCTGCATGGCTGTCGTCAGCTCGTGTTGTGAAATGTTGGGTT AAGTCCCGCAACGAGCGCAACCCTTATCCTTGTTTGCCAGCGAGTAAT GTCGGGAACTCCAGGGAGACTGCCGGTGATAAACCGGAGGAAGGTGGG GACGACGTCAAGTCATCATGGCCCTTACGAGTAGGGCTACACACGTGC TACAATGGCGCATACAGAGGGCGGCCAACTTGCGAAAGTGAGCGAATC CCAAAAAGTGCGTCGTAGTCCGGATTGGAGTCTGCAACTCGACTCCAT GAAGTCGGAATCGCTAGTAATCGTGGATCAGAATGCCACGGTGAATAC GTTCCCGGGCCTTGTACACACCGCCCGTCACACCATGGGAGTGGGCTG C

***Virgibacillus* sp. CCB-PB301**		
Colony morphology	Light orange colony; 1-2 mm size; circular; entire; raised; smooth; glistening; translucent. KIV PICTURE	
Gram-stain	Gram-positive	
Isolation medium	Marine Agar (MA); Marine Broth (MB)	
Growth condition	Aerobic; pH7; 28±2°C; 24-48hrs	
Sampling date, location, source	11 May 2016; Pulau Betong, Penang(N05°18.761' E111°13.8'); Seawater	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Virgibacillus halodenitrificans***
	Top-hit strain	DSM 10037(T)
	Similarity (%)	100%
	Top-hit taxonomy	Bacteria;Firmicutes;Bacilli;Bacillales;Bacillaceae;Virgibacillus
Publication	No	
Date of Blast	17/3/2025	
Application	No	
Isolated by	Diyana Tarmizi	
Risk group	1	
Additional information		

Zhouia sp. CCB-ST3H4		
Colony morphology	Beige; 1 mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-Negative	
Isolation medium	Tryptone + Artificial sea water (ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Zhouia amylolytica***
	Top-hit strain	CGMCC 1.6114(T)
	Similarity (%)	99.92
	Top-hit taxonomy	Bacteria;Bacteroidetes;Flavobacteria;Flavobacteriales;Flavobacteriaceae;Zhouia
Date of blast	11/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	TTGAGACCGGCGCACGGGTGCGTAACGCGTATGCAACCTACCTTTTAC AGGGGGATAGCCCAGAGAAATTTGGATTAATACCCCATAATACTGTTT AATGGCATCATTTGAACAGTTAAAACTACGGTGGTAAAAGATGGGCAT GCGTCCTATTAGCTAGATGGAGTGGTAACGGCACCCCATGGCGACGAT AGGTAGGGGTCCTGAGAGGGAGATCCCCCACACTGGTACTGAGACACG GACCAGACTCCTACGGGAGGCAGCAGTGAGGAATATTGGACAATGGTC GGAAGACTGATCCAGCCATGCCGCGTGCAGGAAGACTGCCCTATGGGT TGTAAACTGCTTTTATACAGGAAGAATAAGCTCTACGTGTAGAGTGAT GACGGTACTGTAAGAATAAGCATCGGCTAACTCCGTGCCAGCAGCCGC	

GGTAATACGGAGGATGCAAGCGTTATCCGGAATCATTGGGTTTAAAGG
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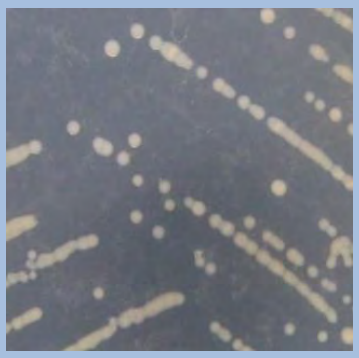
CGGATCGTAGTCTGCAACTCGACTACGTGAAGCTGGAATCGCTAGTAA
TCGGATATCAGCCATGATCCGGTGAATACGTTCCCGGGCCTTGTACAC
ACCGCCCGTCAAGCCATGG

***Zhouia* sp. CCB-ST3L6**		
Colony morphology	Yellow to pale-yellow; 1-2mm; circular; raised; entire; glistening; opaque  	
Gram-stain	Gram-negative	
Isolation medium	Tryptone + Artificial sea water (H-ASW) agar	
Growth condition	Aerobic;pH7.6;28±2°C; 24-48hrs	
Sampling date, location, source	2 Oct 2014; Matang Mangrove Forest, Perak (4.85228 N, 100.55777 E); Mangrove estuarine sediment	
Biochemistry/ Physiology	No	
16s rRNA gene analysis(EzBioCloud/NCBI)	Top-hit taxon	***Zhouia amylolytica***
	Top-hit strain	CGMCC 1.6114(T)
	Similarity (%)	99.64%
	Top-hit taxonomy	Bacteria;Bacteroidetes;Flavobacteria;Flavobacteriales;Flavobacteriaceae;Zhouia
Date of blast	10/03/2025	
Publication	No	
Application	No	
Isolated by	Dinesh Balachandra	
Risk group	1	
Additional information (Sequence)	NNNNNNNNNNNGCNACNCATGCAGTCGAGGGGTAGAGTAAGTTAGCTTGCTAACGAACTTGAGACCGGCGCACGGGTGCGTAACGCGTATGCAACCTACCTTTTACAGGGGGATAGCCCAGAGAAATTTGGATTAATACCCCATAATACTGTTTAGTGGCATCATTTGAACAGTTAAAACTACGGTGGTAAAAGATGGGCATGCGTCCTATTAGCTAGATGGAGTGGTAACGGCACCCCA	

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GACAATGGTCGGAAGACTGATCCAGCCATGCCGCGTGCAGGAAGACTG
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