

**Table S1. Biochemical characterization of the isolated dental caries bacteria.**

Isolates	Morphological characteristics and Biochemical tests											
	Morphology & Arrange	Motility	Gram stain	blood hemolysis	Oxidase	Catalase	Gelatinase	Coagulase	Indole	Nitrate	Mannitol	glucose
<b><i>Staph. aureus</i> strain EG-AE3</b>	Coccus in clusters	-	+	Beta hemolysis	-	+	+	+	-	+	+	+ <sup>a</sup>
<b><i>E. faecalis</i> EF01</b>	Cocci in singles and sometimes in pairs	-	+	alpha hemolysis	-	-	-	NA	-	-	+	+

<sup>a</sup> denotes for Glucose fermentation with gas production, not tested (NA), Negative result (-), and Positive result (+).

**Table S2. Bacterial strains used in this study.**

<b>Species</b>	<b>Strain ID number</b>	<b>Source</b>
<b><i>Staph. aureus</i></b>	EG-AE3 (vB_SauM-EG-AE3)	This study <sup>1</sup>
	EG-AE1	FSCBU <sup>2</sup>
	EG-AE2	FSCBU
	SA101	FSCBU
	SA1E	FSCBU
	BUH	BUH <sup>3</sup>
<b><i>Enterococcus faecalis</i></b>	EF01 (vB_EfaP-EF01)	This study
	Etfc1	FSCBU
	Etfc2	FSCBU
	Etfc3	FSCBU
<b><i>Enterococcus faecium</i></b>	1	FSCBU
	2	FSCBU
	3	FSCBU
<b><i>Acinetobacter baumannii</i></b>	Acint1	FSCBU
	Acint2	FSCBU
	Acint3	FSCBU
<b><i>E. coli</i></b>	BE1	FSCBU
	BE2	FSCBU
	BE3	FSCBU
<b><i>Proteus spp.</i></b>	Pr1	FSCBU
<b><i>Salmonella spp.</i></b>	Sa1	FSCBU
<b><i>Shigella spp.</i></b>	Sh1	FSCBU

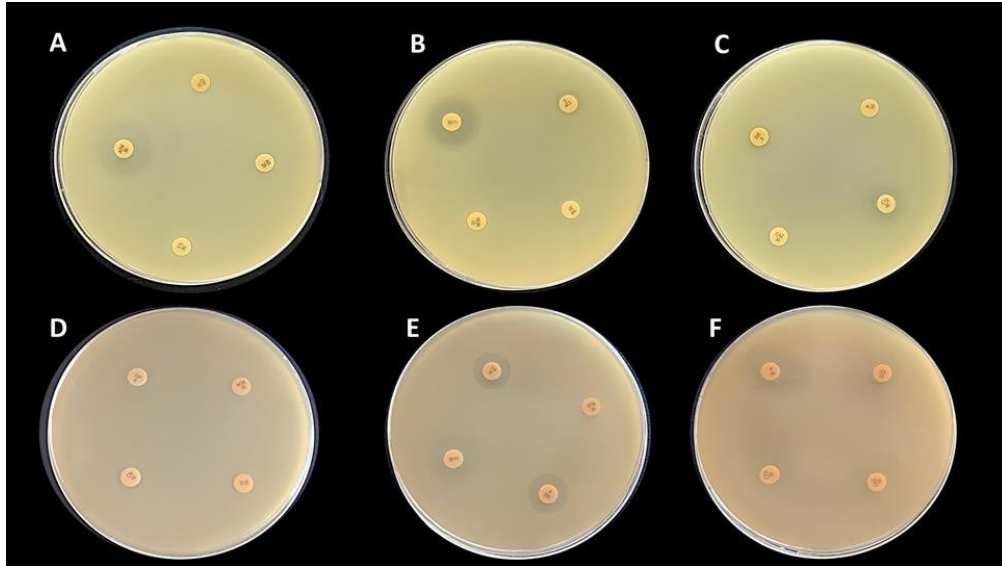
<sup>1</sup> This study (from patients with dental caries).

<sup>2</sup> FSCBU (Microbiology lab, Botany and Microbiology Dept., Faculty of Science, Benha Univ.).

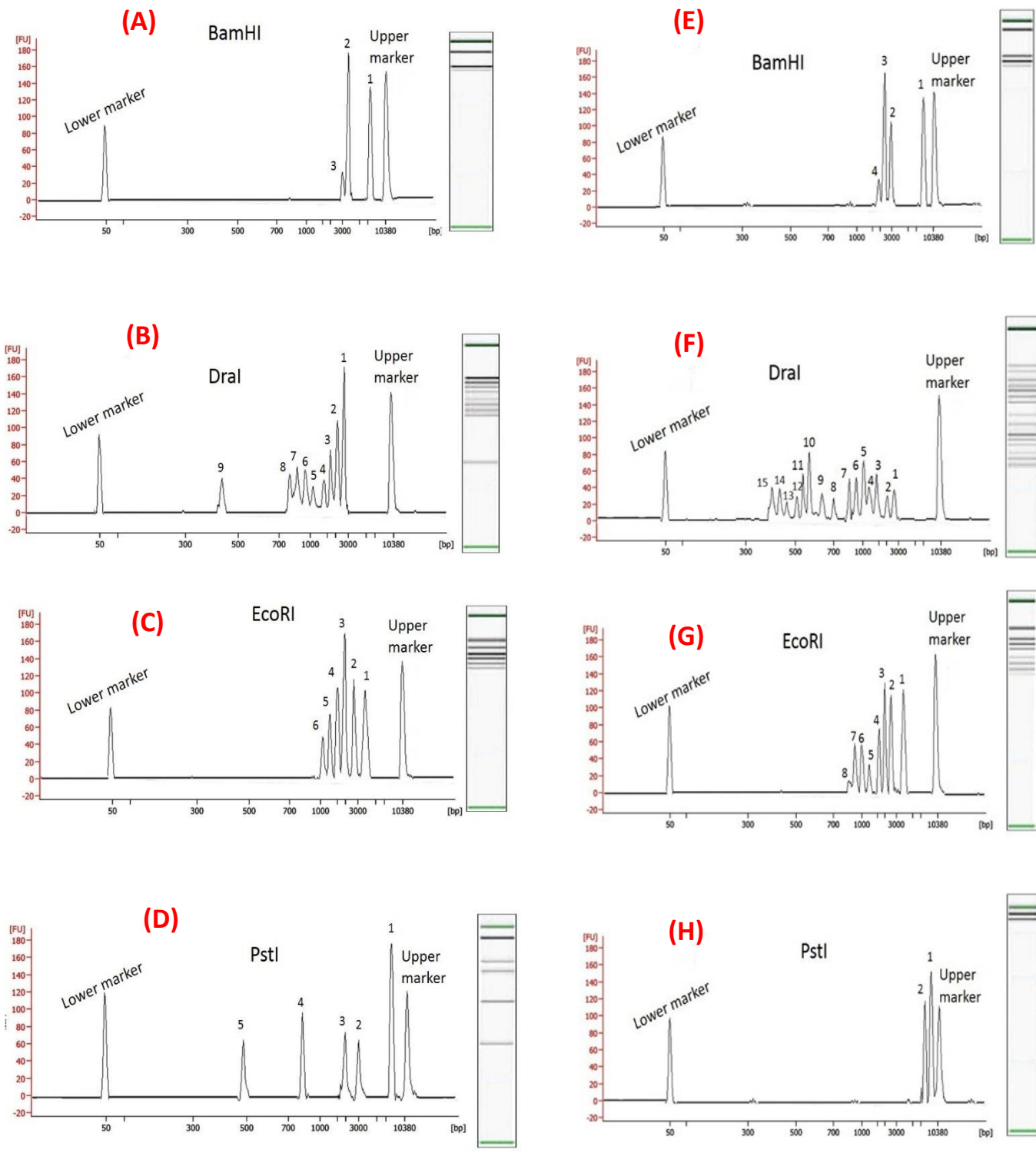
<sup>3</sup> BUH (Benha University Hospital)

**Table S3. Average fragment size (bp) of phages vB\_SauM-EGAE3 and vB\_EfaP-EF01 generated by various restriction enzymes.**

Restriction Enzyme	Peak No.	MW (bp) of the formed DNA fragments	
		Phage vB_SauM-EG-AE3	Phage vB_EfaP-EF01
<b>BamHI</b>	1.	7040	7798
	2.	3293	3069
	3.	3020	2554
	4.	-	2179
<b>EcoRI</b>	1.	3602	3884
	2.	2716	2761
	3.	2162	2288
	4.	1498	1978
	5.	1377	1512
	6.	1000	1238
	7.	-	1043
	8.	-	903
<b>DraI</b>	1.	2854	2854
	2.	2383	2363
	3.	2010	1755
	4.	1728	1454
	5.	1116	1267
	6.	1098	1101
	7.	916	890
	8.	779	700
	9.	463	693
	10.	-	584
	11.	-	546
	12.	-	500
	13.	-	494
	14.	-	410
<b>PstI</b>	1.	6916	8498
	2.	2989	7135
	3.	2144	-
	4.	807	-
	5.	500	-



**Fig.S1.** Antibiotic susceptibility test showing zones of clearance surrounding Antibiotic Discs: Multidrug resistance *Staph. aureus* EGAE3 (A-C), and *E. faecalis* EF01 (D-F) against a selection of 12 antibiotics.



**Fig.S2.** Agilent bioanalyzer electropherograms of phages vB\_SauM-EG-AE3 (A-D), and vB\_EfaP-EGAE1 (E-H) DNA digested with restriction enzymes BamHI, EcoRI, Dral and PstI. Related molecular weights of each band fragments formed by the above-mentioned restriction enzymes are shown in Sup Table S3.