Virulence factors, antimicrobial resistance and phylogeny of bovine mastitis-associated *Streptococcus dysgalactiae.*

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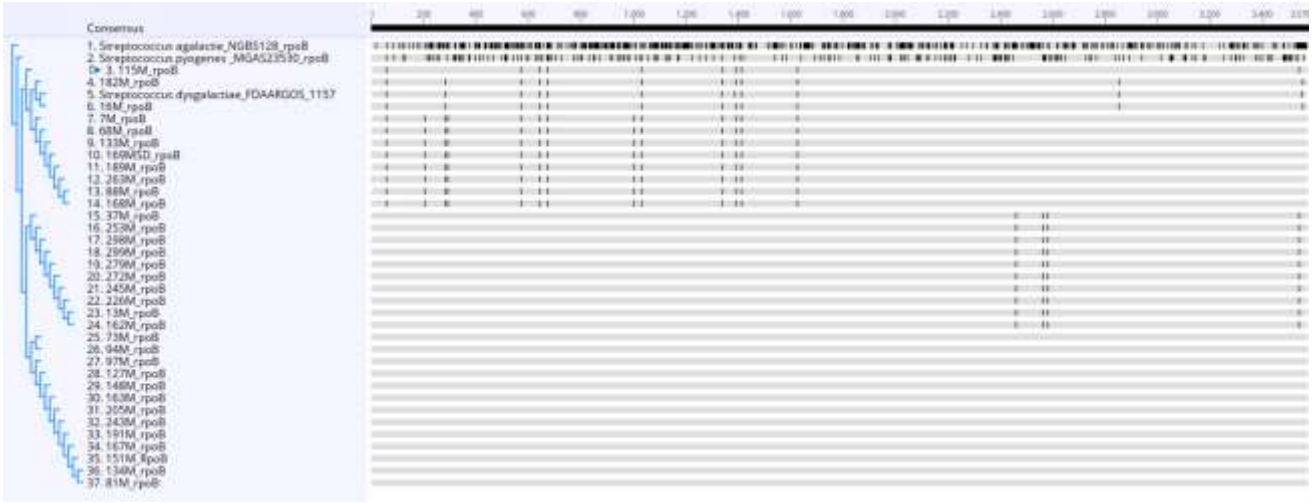
SUPPLEMENTARY FILE

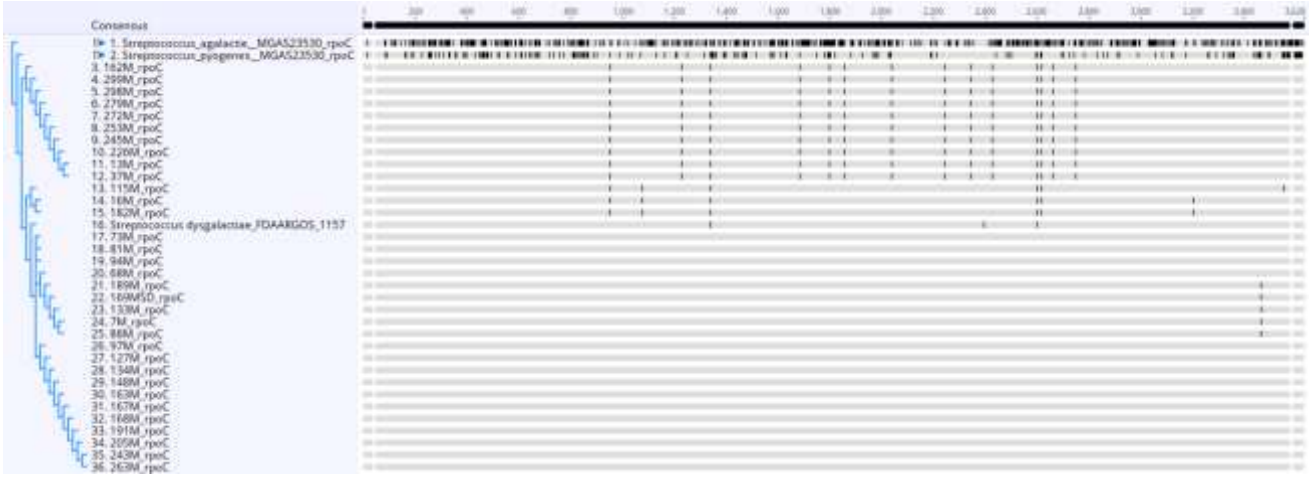
Supplementary Table 1: Products encoding antimicrobial resistance (AMR) genes and genes with the potential to cause resistance after mutation observed among 35 strains of *Streptococcus dysgalactiae* isolated from cows with mastitis.

AMR genes	Total of positive strains (%)	Product	Antibiotic Class
lsa(C)	8/35 (22,8%)	ABC-F type ribosomal protection protein => Lsa(C)	Streptogramins, Lincosamides, Pleuromutilins
*mef*E	6/35 (17,1%)	Uncharacterized MFS-type transporter	Macrolides
tet(M)	6/35 (17,1%)	Tetracycline resistance, ribosomal protection type => Tet(M)	Tetracyclines
lnu(C)	2/35 (5,7%)	Lincosamide nucleotidyltransferase => Lnu(C)	lincomycin,clindamycin
EF-G	-	Translation elongation factor G	Fusidic acid
Imp	-	Multidrug resistance protein ErmB	daunomycin
*rpo*B	-	DNA-directed RNA polymerase beta subunit	Rifamycins, Peptide antibioticsc (daptomycin, rifabutin, rifampin)
*rpo*C	-	DNA-directed RNA polymerase beta' subunit	Myxopyronins Corallopyronins, Peptide antibiotics (daptomycin)
*pgs*A	-	CDP-diacylglycerol--glycerol-3-phosphate 3-phosphatidyltransferase	Peptide antibiotics (daptomycin)
S10p	-	SSU ribosomal protein S10p (S20e)	Tetracyclines, Glycylcyclines (tetracycline,tigecycline)
S12p	-	SSU ribosomal protein S12p (S23e)	Aminoglycosides (streptomycin)
*gid*B	-	16S rRNA (guanine(527)-N(7))-methyltransferase	Aminoglycosides (streptomycin)
*lia*F	-	Membrane protein LiaF(VraT), specific inhibitor of LiaRS(VraRS) signaling	Peptide antibiotics (daptomycin)
liaR	-	Cell envelope stress response system LiaFSR, response regulator LiaR(VraR)	Peptide antibiotics (daptomycin)
*lia*S	-	Cell envelope stress response system LiaFSR, sensor histidine kinase LiaS(VraS)	Peptide antibiotics (daptomycin)
Alr	-	Alanine racemase	Cycloserine (D-cycloserine)
*fab*K	-	Enoyl-[acyl-carrier-protein] reductase [FMN, NADH]	Triclosan
*kas*A	-	3-oxoacyl-[acyl-carrier-protein] synthase, KASII	Isoniazid, Triclosan
iso-tRNA	-	Isoleucyl-tRNA synthetase	Mupirocin
*mur*A	-	UDP-N-acetylglucosamine 1-carboxyvinyltransferase	Fosfomycin
Ddl	-	D-alanine--D-alanine ligase	Cycloserine (D-cycloserine)
EF-Tu	-	Translation elongation factor Tu	Elfamycins (kirromycin,enacyloxin IIa,pulvomycin)
*gyr*B	-	DNA gyrase subunit B	Novobiocin
folA, dfr	-	Dihydrofolate reductase	Diaminopyrimidines
*fol*P	-	Dihydropteroate synthase	Sulfonamides
*gyr*A	-	DNA gyrase subunit A	Ciprofloxacin

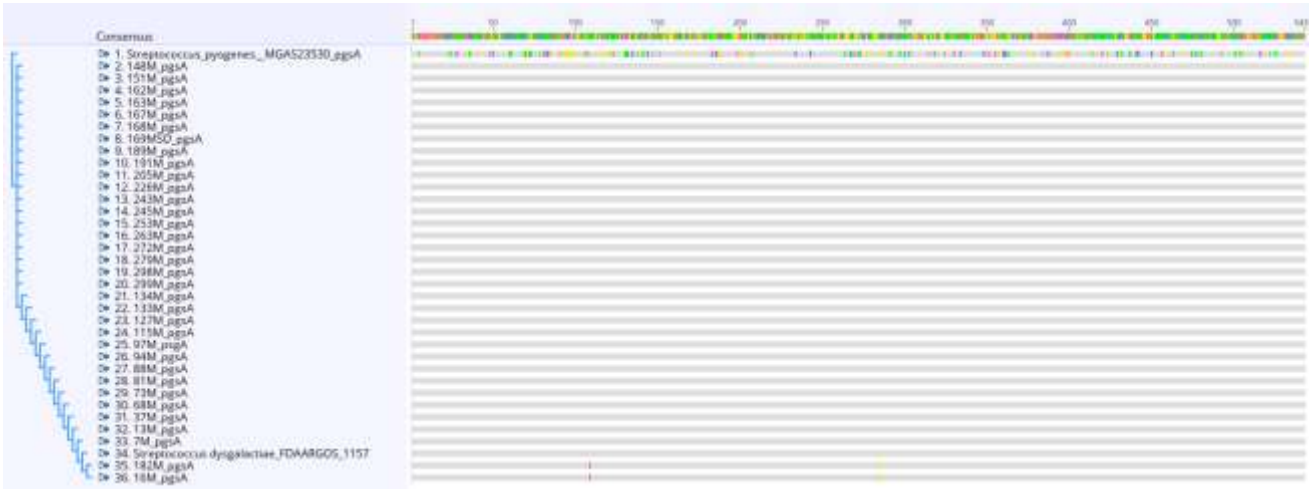
Supplementary Figure S1: Alignment of the of 35 *Streptococcus dysgalactiae* strains in relation to the *rpo*B gene using as reference the sequences: *S. dysgalactiae* FDAARGOS 1157, *S. pyogenes* MGAS23530, S. agalactie, NGBS128.



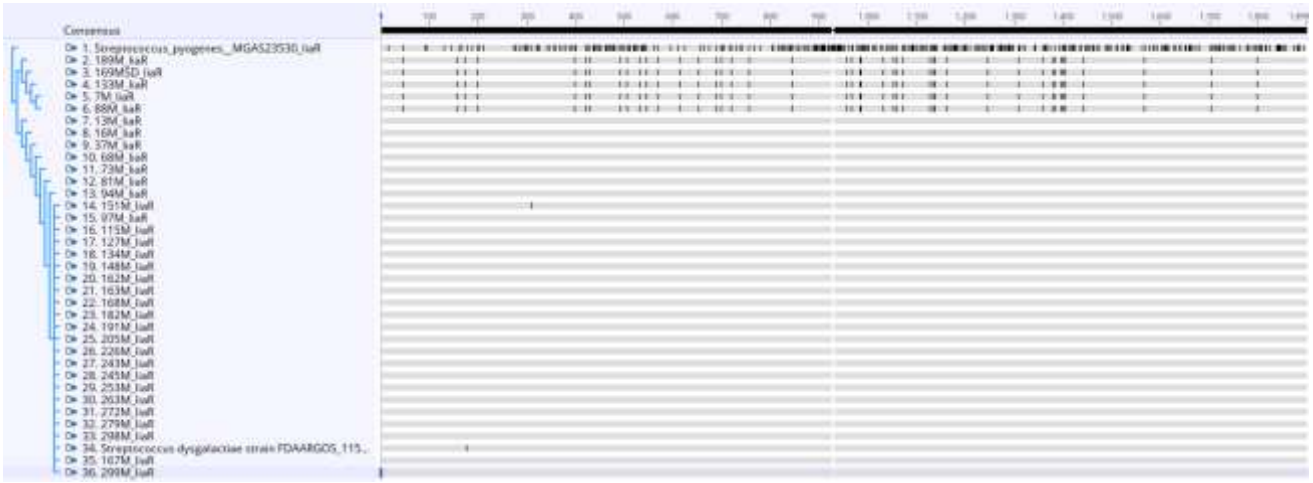
Supplementary Figure S2: Alignment of the of 35 *Streptococcus dysgalactiae* strains in relation to the *rpo*C gene using as reference the sequences: *S. dysgalactiae* FDAARGOS 1157, *S. pyogenes* MGAS23530, *S. agalactiae* NGBS128.



Supplementary Figure S3: Alignment of the of 35 *Streptococcus dysgalactiae* strains in relation to the *pgs*A gene using as reference the sequences: *S. dysgalactiae* FDAARGOS 1157, *S. pyogenes* MGAS23530.

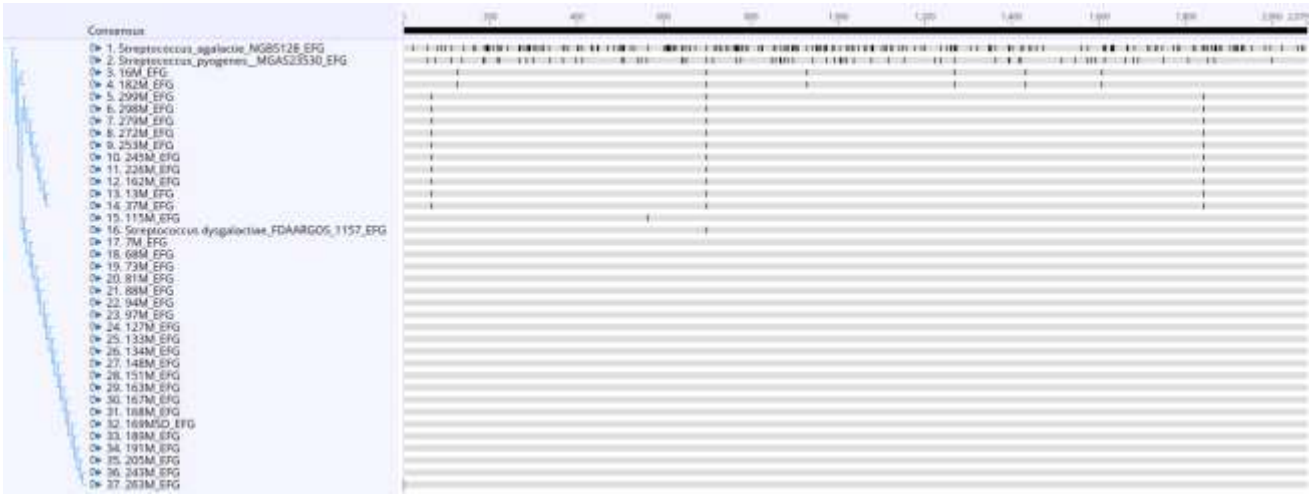


Supplementary Figure S4: Alignment of the of 35 *Streptococcus dysgalactiae* strains in relation to the *lia*R gene using as reference the sequences: *S. dysgalactiae* FDAARGOS 1157, *S. pyogenes* MGAS23530.

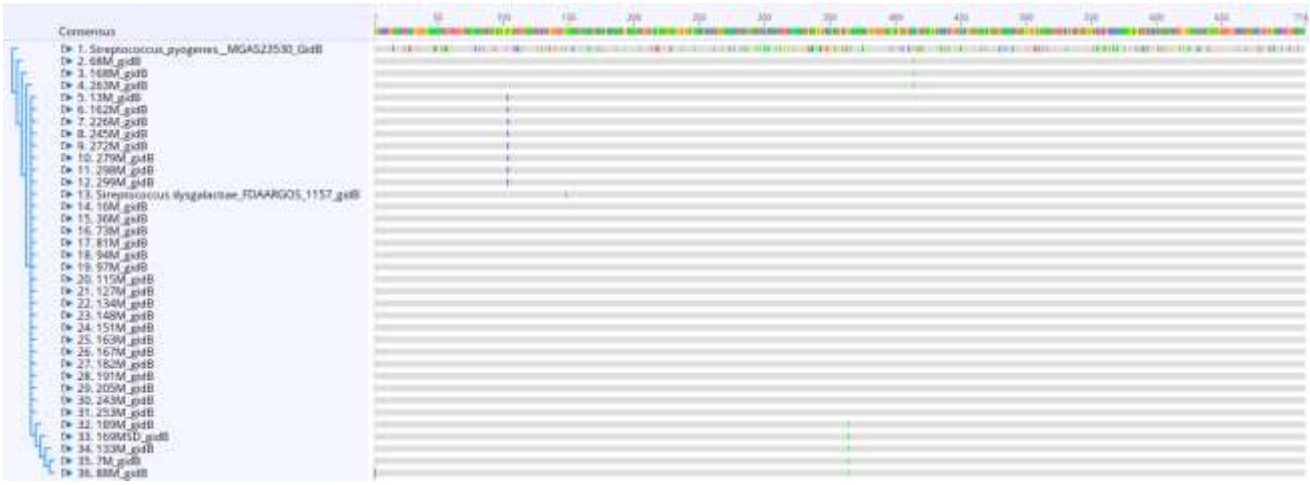


Supplementary Figure S5: Alignment of the of 35 *Streptococcus dysgalactiae* strains in relation to the *lia*S gene using as reference the sequences: *S. dysgalactiae* FDAARGOS 1157, *S. pyogenes* MGAS23530.

Supplementary Figure S6: Alignment of the of 35 *Streptococcus dysgalactiae* strains in relation to the *EF-G* gene using as reference the sequences: *S. dysgalactiae* FDAARGOS 1157, *S. pyogenes* MGAS23530, *S. agalactia e*NGBS128.



Supplementary Figure S7: Alignment of the of 35 *Streptococcus dysgalactiae* strains in relation to the *gid*B gene using as reference the sequences: *S. dysgalactiae* FDAARGOS 1157, *S. pyogenes* MGAS23530.



Supplementary Figure S8: Alignment of the of 35 *Streptococcus dysgalactiae* strains in relation to the *S10p* gene using as reference the sequences: *S. dysgalactiae* FDAARGOS 1157, *S. pyogenes* MGAS23530, *S. agalactiae* NGBS128.