## PEPTIDOGLYCAN BIOSYNTHESIS C<sup>600043</sup>JDP-N-acetylglucosamine Aminosugar metabolism UDP-N-acetylglucosamine enolpyruvate °**ॐ**°UDP-N-acetylmuramate JDP-MurNAc-L-Ala '\_UDP-MurNAc-L-Ala-D-Glu D-Alanine D-Alanine metabolism UDP-MurNAc-L-Alac JUDP-MurNAc-L-Ala-y-D-Gluy-D-Glu-L-Lys r≽<mark>X</mark>,D-Ala-D-Ala meso-2,6- diaminopimelate Undecaprenol 🍑 UDP-MurNAc-L-Ala-J y-D-Glu-L-Lys-D-Ala-D-Ala Undecaprenyl-P Pf 🗪 **₩**©UMP UMP®4 ♥ Und-PP-MurNAc-L-Ala-°♥️7-D-Glu-meso-2,6-diaminopimeloyl-D-Ala-D-Ala Und-PP-MurNAc-L-Ala- y-D-Glu-L-Lys-D-Ala-D-Ala UDP-GlcNAc UDP-GlcNAd Undecapreny-PP K02563 Und-PP-MurNAc-Und-PP-MurNAc-(GlcNAc)L-Ala-y-D-Glu-meso2,6-diaminopimeloyl-D-Ala-D-Ala (GlcNAc)- L-Ala-y-D-Glu-∞ L-Lys-D-Ala-D-Ala Und-PP-MurNAc-(GlcNAc)- L-Ala-D-isoglutaminylo L-Lys-D-Ala-D-Ala Und-PP-MurNAc-(GlcNAc)-Und-PP-MurNAc-(GlcNAc)-L-Ala-D-isoglutaminyl-L-Lys-(Gly)-D-Ala-D-Ala L-Ala-y-D-Glu-L-Lys-(L-Ala)-D-Ala-D-Ala Und-PP-MurNAc-(GlcNAc)- L-Ala-D-isoglutaminyl-L-Lysc (Gly)3-D-Ala-D-Ala Und-PP-MurNAc-(GlcNAc)-L-Ala-y-D-Glu-L-Lys-(L-Ala)2-D-Ala-D-Ala flippase Und-PP-MurNAc-(GlcNAc)-L-Ala-D-isoglutaminyl-L-Lys-(Gly)5-D-Ala-D-Ala D-Alanine \*\* D-Alanine 🗪 💇 D-Alanine Peptidoglycan Peptidoglycan Peptidoglycan 00550 5/28/15 (c) Kanehisa Laboratories