OPERONS

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1. The lac operon (lacZ, lacY, lacA) is transcribed as a single polycistronic mRNA, enabling coordinated expression of genes involved in lactose metabolism (Jacob & Monod, 1961).
2. trp operon (tryptophan biosynthesis) trpE – trpD – trpC – trpB – trpA (Co-transcribed biosynthetic genes) (Alberts et al., 2002)
3. ara operon (arabinose utilization) araB – araA – araD (+ regulatory araC separately transcribed) (Alberts et al., 2002)
4. his operon (histidine biosynthesis) hisG – hisD – hisC – hisB – hisH – hisA – hisF – hisI – hisE - hisL (Alberts et al., 2002).
5. ilv operon (branched-chain amino acids) ilvG, ilvM, ilvE, ilvA, ilvD (Chen, Bennett, & Umbarger, 1991), (Lawther, 1989).
6. ilvBN operon - ilvN, ilvB(Wek, Hauser, & Hatfield, 1985), (Tarleton, Malakooti, & Ely, 1994).
7. thr operon (threonine biosynthesis) thrA – thrB – thrC (Alberts et al., 2002)
8. phe operon (phenylalanine biosynthesis) pheA (often monocistronic but regulated like an operon with attenuation) (Alberts et al., 2002).
9. gal operon (galactose metabolism) galE – galT – galK – galM (Bouffard, Rudd, & Adhya, 1994), (Alberts et al., 2002).
10. mal operon(s) (maltose system; multiple operons) malE, malF, malG (transport) malK-lamB-malM, malQ, malP, malT.
11. tna operon (tryptophan degradation) tnaA – tnaB - tnaC(Gish & Yanofsky, 1993).

12. S10 operon rpsJ – rplC – rplD – rplW – rplB – rpsS – rplV – rpsC – rplP – rpmC – rpsQ (Zurawski & Zurawski, 1985).

13. spc operon rplN – rplX – rplE – rpsN – rpsH – rplF – rplR – rpsE – rpmD – rplO – secY – adk – map – rpsB – tsf (Alberts et al., 2002).

14. alpha operon rpsM – rpsK – rpsD – rpoA – rplQ (Meek & Hayward, 1984).

15. atp operon (ATP synthase) atpI, atpB, atpE, atpF, atpH, atpA, atpG, atpD, atpC.

16. cyo operon (cytochrome bo oxidase) cyoA, cyoB, cyoC, cyoD, cyoE (Cotter & Gunsalus, 1992).

17. nuo operon (NADH dehydrogenase) nuoA, nuoB, nuoC, nuoE, nuoF, nuoG, nuoH, nuoI, nuoJ, nuoK, nuoL, nuoM, nuoN (Alberts et al., 2002).

18. rpoH operon (often monocistronic but part of stress regulons (Alberts et al., 2002).

19. groESL operon groES – groEL (Fayet, Ziegelhoffer, & Georgopoulos, 1989).

20. dnaK operon dnaK – dnaJ – grpE (Alberts et al., 2002).

21. kdpA/B operon kdpA,kdpB gene (Laimins, Rhoads, Altendorf, & Epstein, 1978).

22. bcsA/B operon- bcsB, bcsA (Omadjela et al., 2013).

23. rpoB/C operon- rpoB, rpoC (Clark, Baumann, & Baumann, 1992).

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