## PURINE METABOLISM Pentose phosphate pathway Alanine, aspartate and glutamate metabolism Histidine metabolism Thiamine metabolism ' Ribosylamine-5P AICAR $^{\dagger}_{\nabla}$ D-Ribose-1P Ribose-5P FGAM CAIR → 5-Amino-4 imidazolecarboxyamide PRPP SAICAR ATF**®⁴** <u>-</u>:∽©Sulfate K00988... **്**0°4L-Glutamine K18447 5'-Acetylphosphoadenosine (mitochondria) °**∳**faicar 6.3.4.7 **'⊙** 3.6.1.20 5-Carboxyamino-1-(5-phospho-D-ribosyl)imidazole 3'-Phospho-adenylate 5'-Benzoylphosphoadenosine (mitochondria) \_\_\_\_\_ K08312 $\overline{\text{dIDP}}$ ADPnbose dITPK11176 ApppA©™ ී**ර**ි 3.6.1.20 3'-Phosphoadenylyl-Admylosulfate Inosine 5'-tetraphosphate succinate K13293... ്**ഠ**⁴ 3.6.1.14 **–** മൂ 3',5'-Cyclic GMP°Ф⁴ 2',3'-Cyclic AMP <del>\_</del>COPATP IDP Arginine biosynthesis ITP RNA® Adenosine 5'-tetraphosphate 3',5'-Cyclic⊚s AMP 3.6.1.14 5'-Butyrylphosphoinosine 3.6.1.20 ин₃。ѽ₁₄ 3'-AMP GMP Riboflavin K01768.. GDP metabolism IMP | RNA AMP K01518 K00892 K00527 K00892 Folate biosynthesis K00527 C04592 K01518 Gpppp@**⊙**¹ 3.2.2.12 $dADF^{c}$ DNA®\*\* **Xanthosine** Guanosine Inosine Adenosine 2.7.4.11 3.2.2.2 2.4.2.15 Deoxyadenosine Deoxyguanosine ( K03815 K10353... 2.4.2.15 3.2.2.7 K01486 Xanthine Guanine Adenine Hypoxanthine 3'-GMP Urate-3-ribonucleoside 3.5.2.-Deoxymosine Formimino-5-Amino-4-imidazole Imidazolone glycine carboxylate ு——2.4.2.16 **ு**ப்rate Glycine Glycine , serine and 3.5.3.- ► → 4.1.1.- ► → 3.5.4.8 ► → 3.5.2.- ► → 2.1.2.4 ► → → threonine metabolism K16839 5-Ureido-4-imidazole carboxylate Aminoimidazole 2',3'-Cyclic GMP K00839 -5-Hydroxyisourate�\*¹ K14977 Carbamoyl phosphate Ureido-Ureidoglycine (S)-Allantoin ▼glycolate 1.1.1.154 $CO_2$ 5-Hydroxy-2-oxo-4-ureido-2,5-dihydro-1H-imidazole-5-carboxylate | 2.1.3.5 | **- ▶°©**°° миantoate NH3<sup>©</sup>O¹⁴ K01483... <u>spontaneous</u> K16841 Ureaco C10048 Glyoxylate and dicarboxylate metabolism (R)-Allantoin Glyoxylate

00230 3/16/16 (c) Kanehisa Laboratories