cGMP-PKG SIGNALING PATHWAY Hypertrophic response genes K04346... β-МНС Reduced cardiac hypertrophy K04446. K12335 Ca²⁺ DNA Decrease in intracellular free calcium K04378 K09183 +p K18154 K03121 Transcription Ca²⁺ **♦**+p IP3 Calcium signaling pathway Hyperpolarization К+ О**⊸** Sarcoplasmic reticulum (SR) **+**p ୍**୍⊸** Ca²⁺ Decreased calcium Decrease in intracellular free calcium release from store Ca²⁺ Increased calcium sequestration ္**ဝ**ု Ca²⁺ K12337 **~** Ca²⁺ Myosin +b, Smooth muscle relaxation ANP p-GCs +p cGMP BNP +p CNP V ascular smooth muscle contraction H₂O₂° Phototransduction Increased pH ***** Cardioprotection Phototransduction 5' GMP K18283 K19021... **-**O-**-**0 cAMP AMP ಄ K12318.. Mitochondria NO Increased Apoptosis expression of 0 Decreased activity_ of caspase-3 anti-apoptotic proteins Bradykinin Inhibition of apoptosis ONO O-Opioids Decreased release of cytochrome C K02158 PI3K-Akt signaling pathway Adenosine Cell growth and differentiation Platelet inhibition K16172... K13242 K06274 K04141... MAPK signaling pathway 04022 7/21/15 (c) Kanehisa Laboratories