CHAGAS DISEASE Macrophage Fibroblast Skeletal muscle cell Cardiac muscle cell LPS, GIPL-ceramide -DNA Toll-like receptor signaling pathway K14624 K03156 Inhibition of parasite growth DNA K05406... K04729 K05405 tGPI-mucin 🕩 K10169 K13729 K10030 K05408 Leukocyte migration DNA K10161 DNA Cardiomyocyte hypertrophy K04519 Endosome Arginine and proline metabolism Inhibited protective response Promotion of parasite growth K04687 K05132.. K03156 K03158 L-arginine O Reduced antiparasitic activity Complement pathway K05443 gp160 K13375... DNA (Calcium signaling) pathway kinin IP3 Trypanosoma cruzi amastigote Lysosome-mediated invasion ► TcTOX Escape into the cytoplasm Plasma membrane-mediated invasion cAMP PIP3 Parasitophorous vacuole TS Phosphatidylinositol signaling system Trypanosoma cruzi trypomastigote TGF-β signaling pathway K04500 Increased parasitemia DNA Inhibition of apoptosis Intracellular persistence of parasite K04389 K04390 K04398 ———— → Apoptosis of infected cells K03156 K03158 K04687 K05132.. GIPL-ceramide Apoptosis Release of viable parasite T cell Activation-induced cell death K10784.. Antigen 🛨 K06450.. K04389 K04390 05142 5/29/13 (c) Kanehisa Laboratories