INFLUENZA A Alveolar and bronchial epithelial cells Alveolar macrophages Type II pneumocytes Plasmacytoid dendritic cells Influenza A virus IAV proteins α2-6 SA [Human influenza (H1N1, H1N2, H2N2, H3N2)] K19251 Endocytosis Non-structural proteins Structural proteins α2-3 SA [Avian influenza (H5N1])] K19397 Endosome K19389 K19393 K19394 K19390 K19394 РКСВИ Virus-host cell fusion K19395 K19251 Release of viral genetic material Clara K19391 HA2 Plasmin 2'-5'_oligo(A) 'HA1 dsRNA HAT K19396 MAPK signaling pathway K04383... K05405 K10652 K19396 Acute respiratory distress syndrome K05406... K03156 DNA K12648 dsRNA K10030 K14624 RIG-I-like receptor signaling pathway Chemoattraction of monocytes and macrophages K12499 K12671 K05842 Viral myocarditis K05411 Endosome K06490 +p K05414 T cell activation Antibody response OxPL PIP3 K05415 DNA K04729 K09447 ssRNA Toll-like receptor signaling pathway K19396 K14216 Jak-STAT pathway K12968 +p K05130... K11217... K11220... K04693 K10054 +p DNA K06752 ROS K12800 NOD-like-receptor signaling pathway DNA K04519 K12799 K19396 K05482 Inflammasome K12967 PB1-F2 K04389 K04390 Apoptosis ANT3 Mitochondrion K03158 IAV RNA Alveolar epithelial cell death K19391 K04399 K19389 ── Viral RNA synthesis K19388 K19390 Inhibited premature apoptosis K19393 Terpenoid backbone biosynthesis K02677 K19395 Lipid laft RNA transport Viral RNP export Viral protein expression vRNP K19388 K19390 K19393 K19251 K19391 K19392 K19395 Inhibited 3'-end processing Inhibited host gene expression K19396 K19394 K14404 Virus budding mRNA surveillance pathway Cellular mRNA K14285 ── Inhibited mRNA export Golgi network K19392 Avian influenza K19251 SA Virus release 05164 10/23/15 (c) Kanehisa Laboratories