UNIVERSITAS CAROLINA PRAGENSIS

First Faculty of Medicine



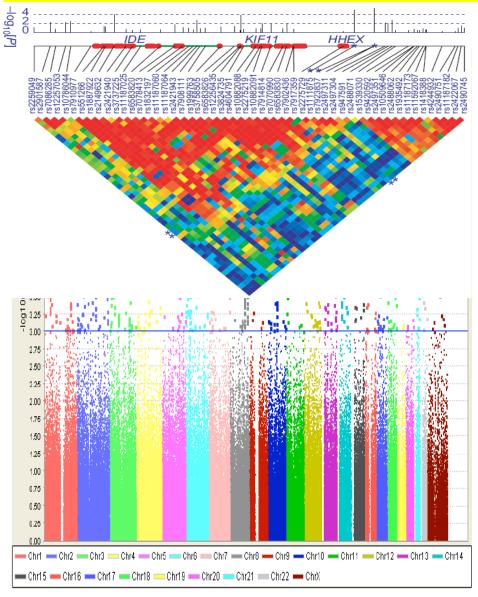


Notes: Introduction to ecogenomics

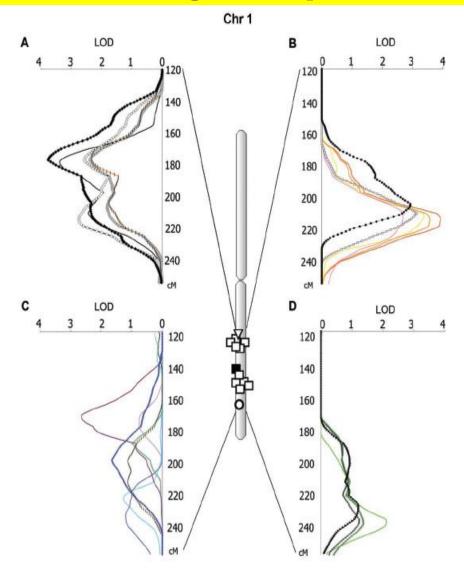
Ondřej Šeda, Lucie Šedová

Approaches of genetic analysis of complex traits





Linkage analysis



Hurdles in genetic analyses of complex traits

PENETRANCE

EPIGENETICS

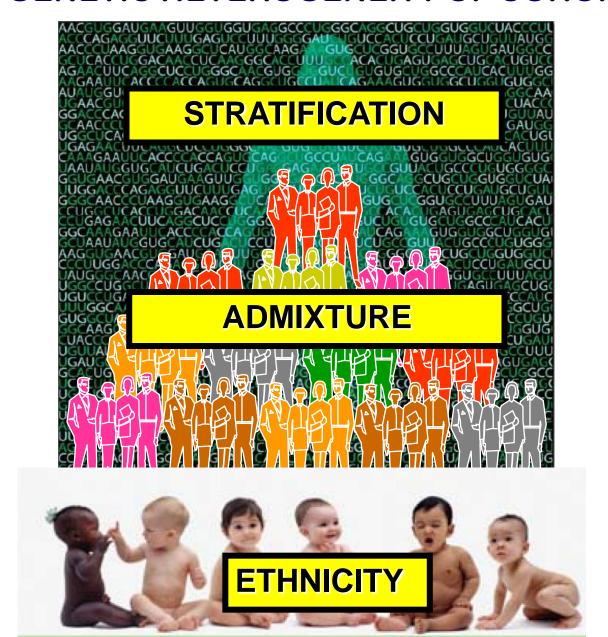
AGE OF ONSET

ENVIRONMENT

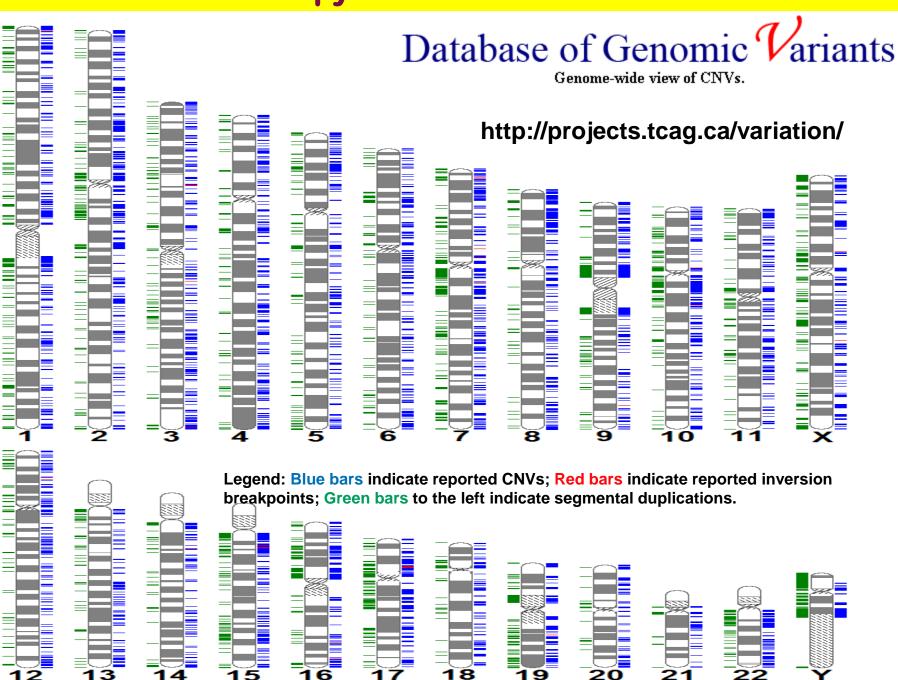
GENOME X ENVIRONMENT INTERACTIONS

GENETIC HETEROGENEITY OF THE TRAITS

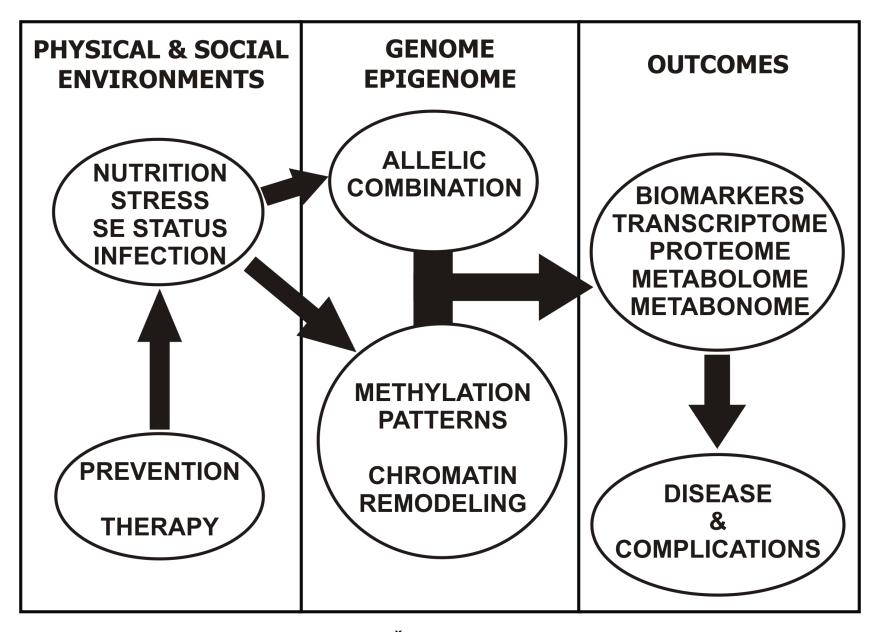
Hurdles in genetic analyses of complex traits GENETIC HETEROGENEITY OF COHORT



Copy number variation



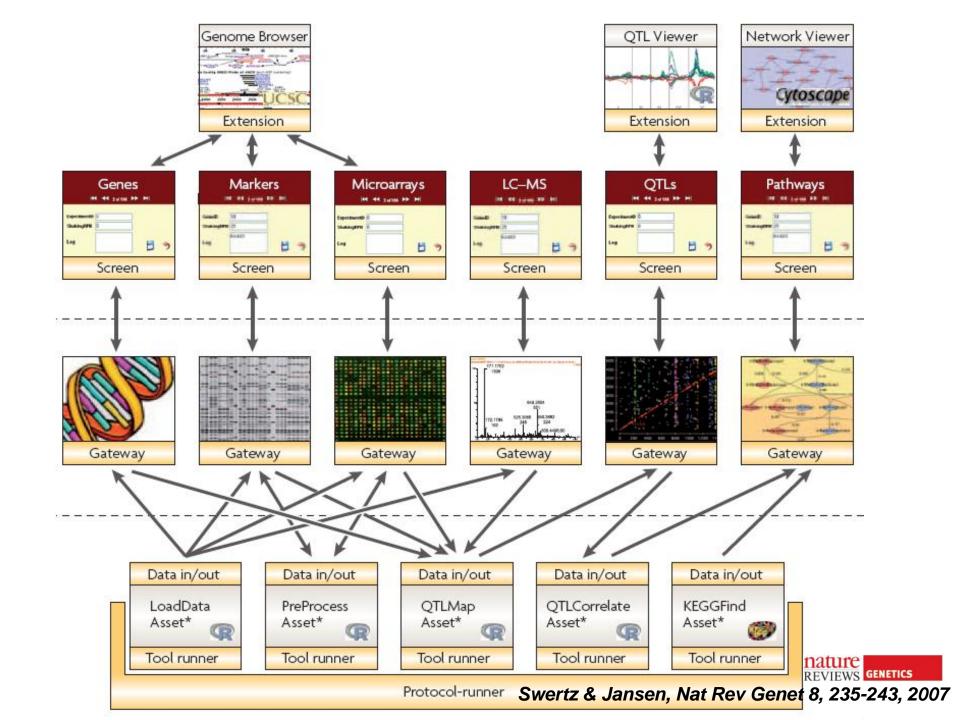
Complex model for analysis of complex diseases



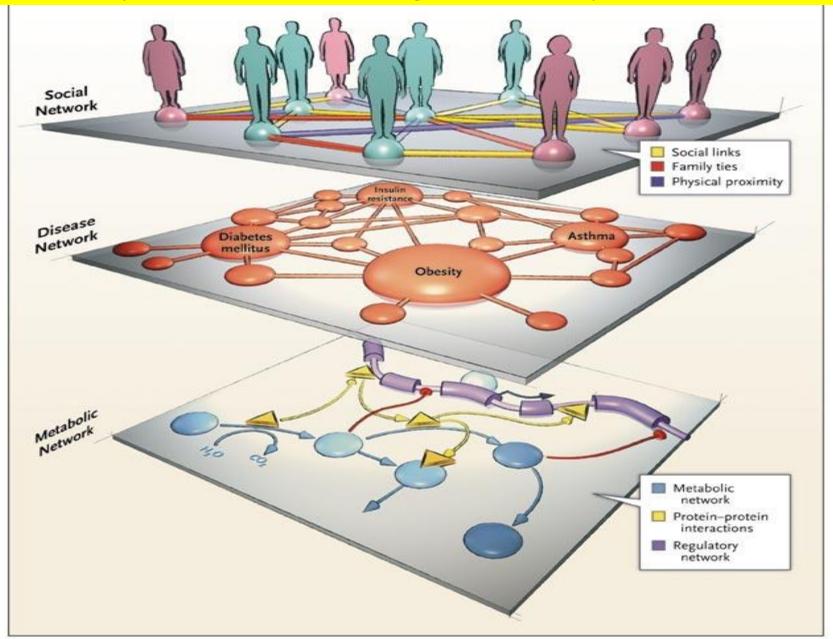
Šeda et al., Curr Opin Mol Ther. 7: 583-587, 2005

From phenotype.to phenome 00000 0000 TRANSCRIPTOME Gene expression profile **PROTEOME** Proteomic profile **METABOLOME** Intracellular metabolomic profile Internal extracellular pool and biofluids \bigcirc $\circ \circ \circ \circ \circ$ Secretion, excretion

METABONOME



Complex model for analysis of complex diseases



Barabási AL. N Engl J Med. 2007 Jul 26;357(4):404-7.