Inherited genome

ZYGOTE

DNA repair mechanism temporarily turned off, then turned back on

FETUS

Accumulation of multiple variants of genes

Tissue and cellular selection pressures

CHI LD

Evolving genome, different tissues contain different genes, all other variants remain dormant as a distinct minority

YOUNG ADULT

Selection pressures, including by external pressures, i.e. diet, lifestyle, pathogens

OLD ADULT

Further selection pressures can result in disease-associated gene variants being selected by specific environmental factors – can result in multifactorial diseases, i.e., diabetes, cancer, cardiovascular disease