

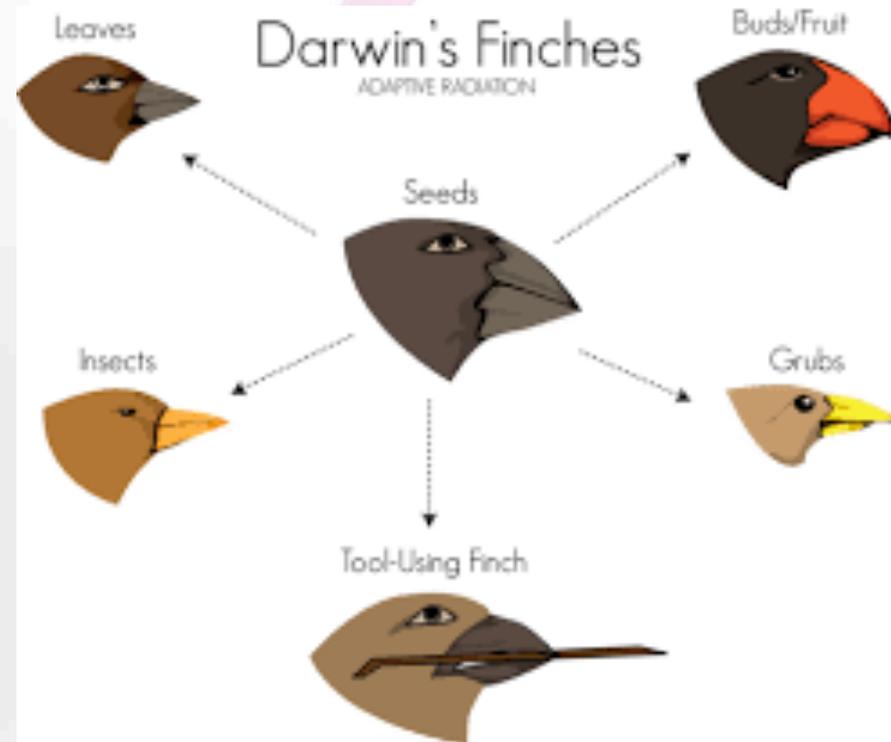
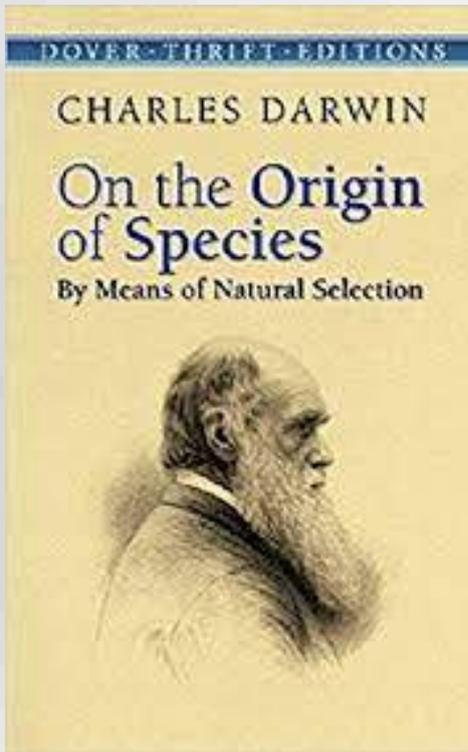
LA DIETA CETOGÈNICA, COM A TRACTAMENT ORFE

Metabolisme, consum
d'energia i orígens del nostre
background genètic per a l'ús
de la dieta com a teràpia

Sandra Acosta, PhD

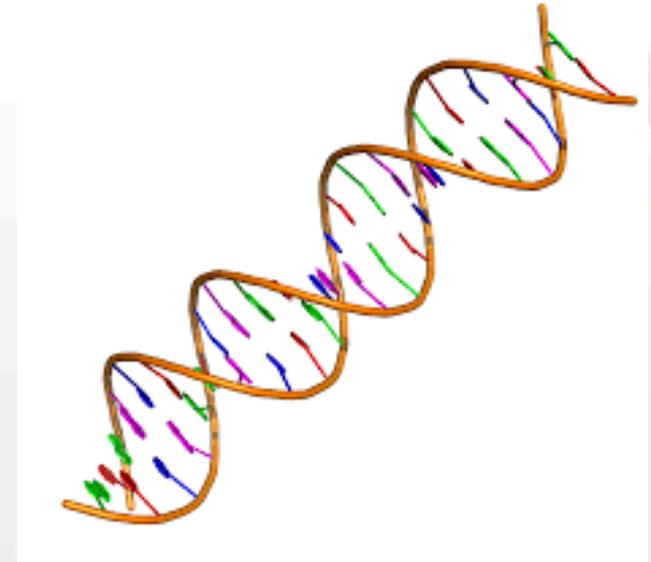


100 anys de l'Origen de les espècies de Darwin

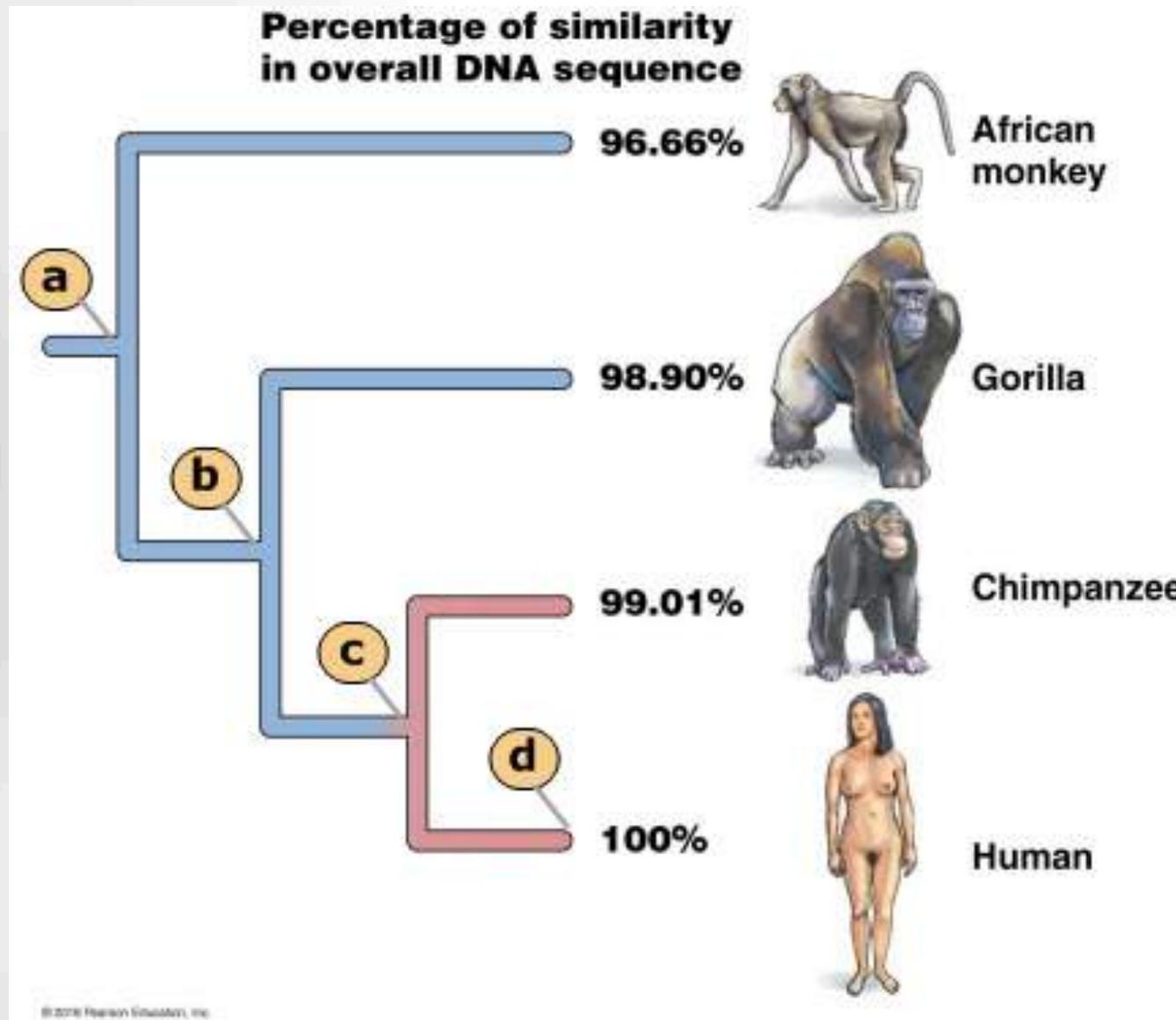


La dieta és un factor de pressió adaptativa molt important

Neodarwinisme o la mutació com a motor de l'evolució



Els humans som primats

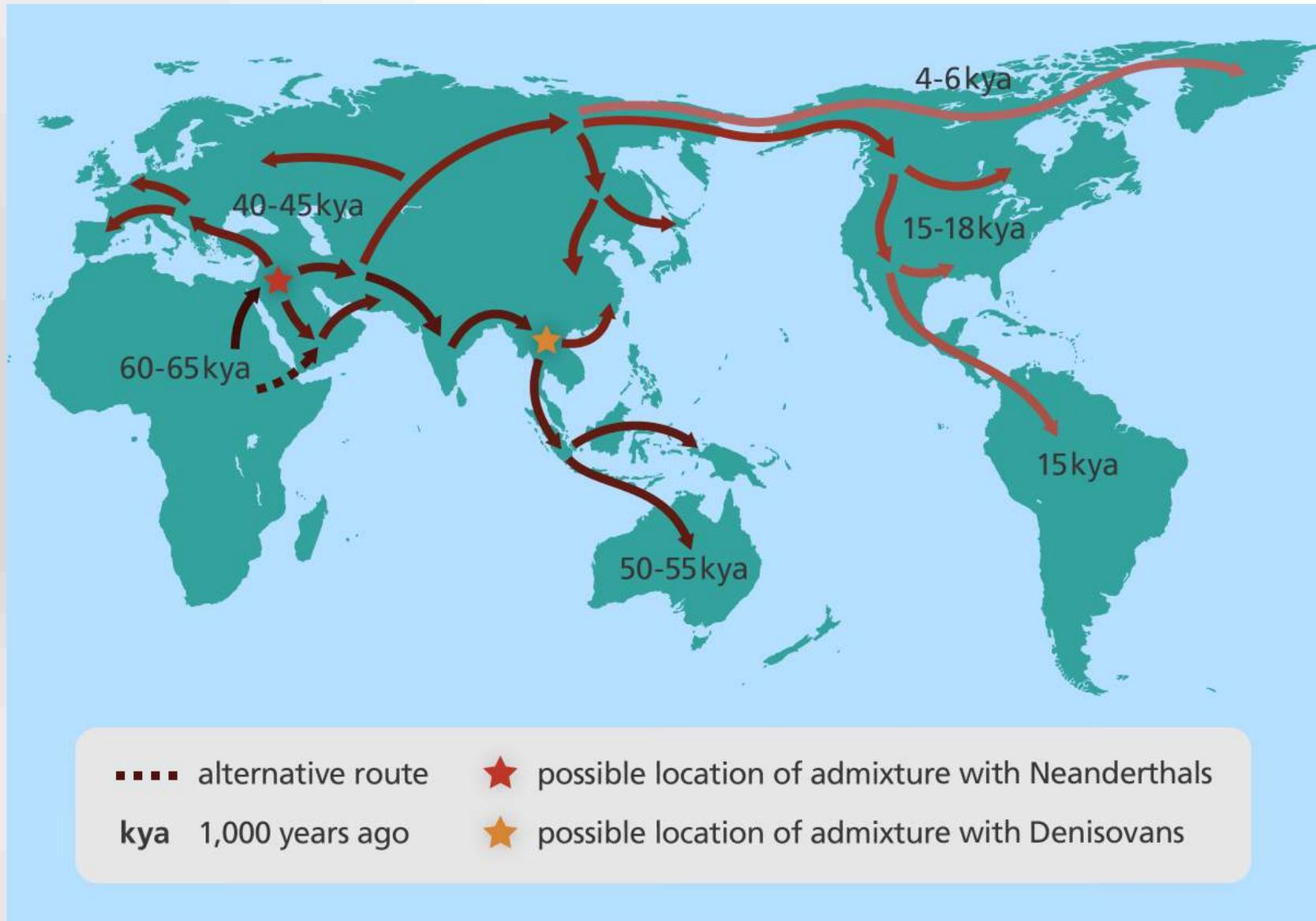


I si som tan iguals als altres primats, per què som tan diferents?



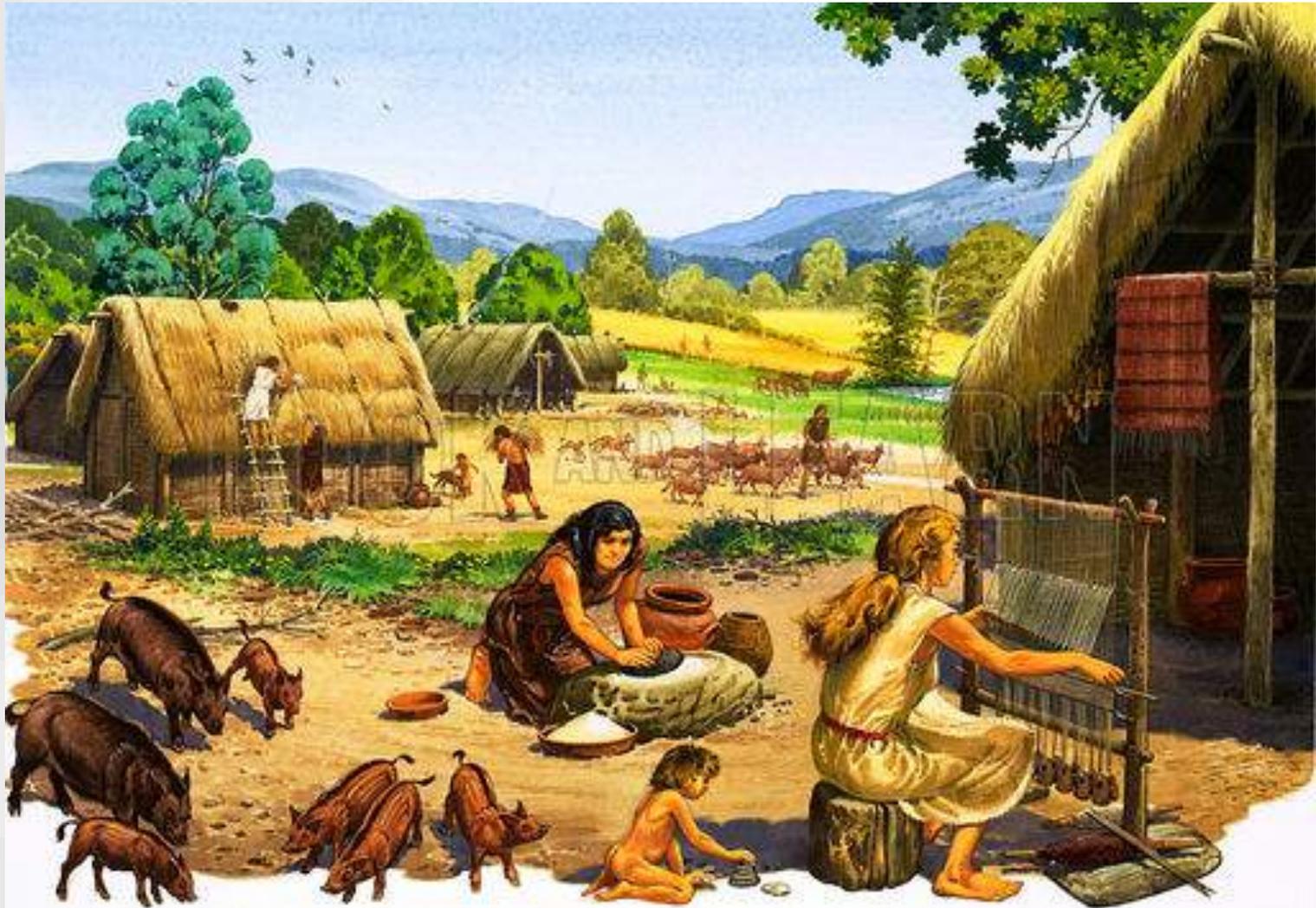
Evolució humana i la dieta

Hunter-gatherers

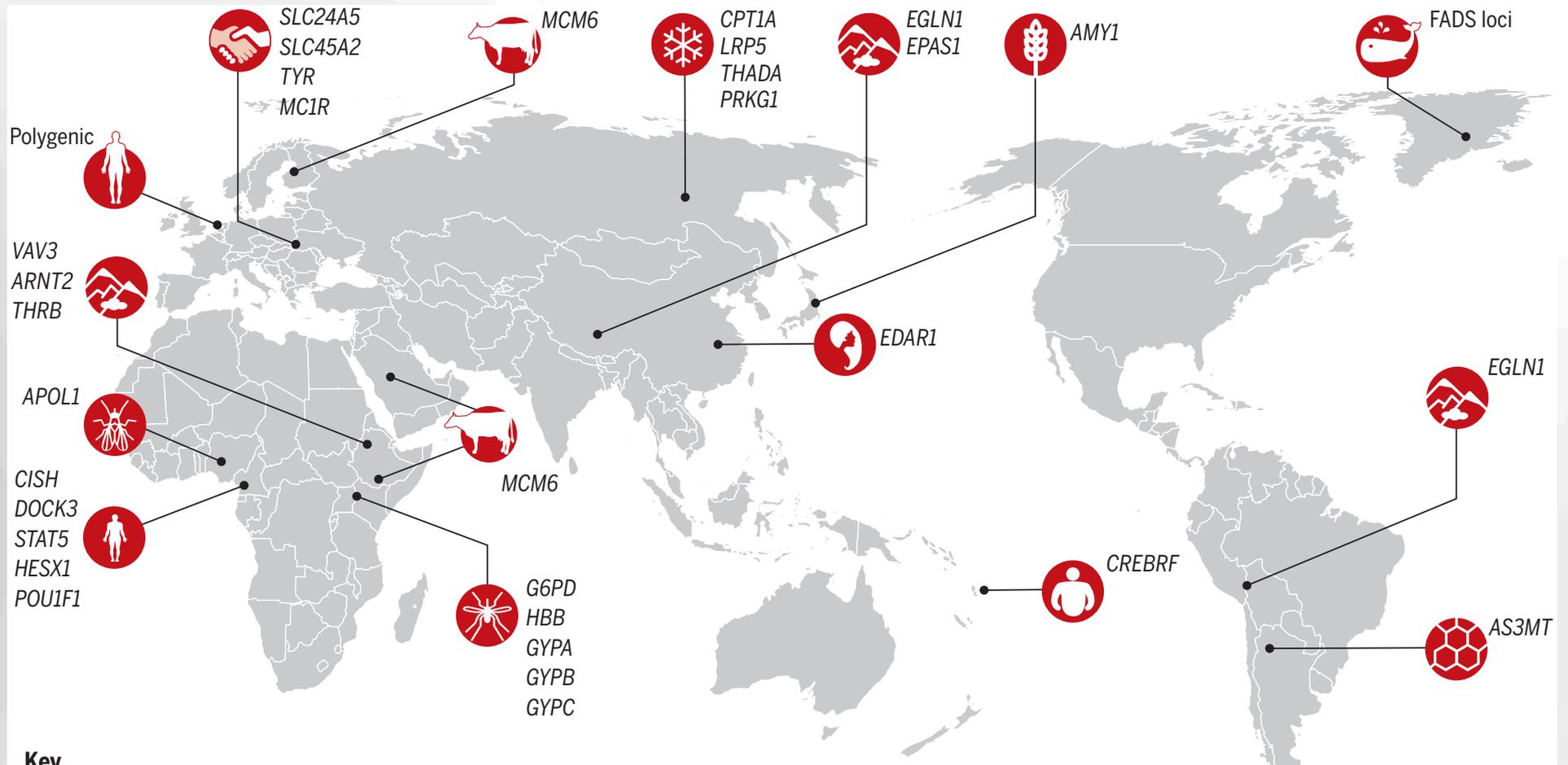


Evolució humana i la dieta

La revolució neolítica



Evolució humana i la dieta



Key

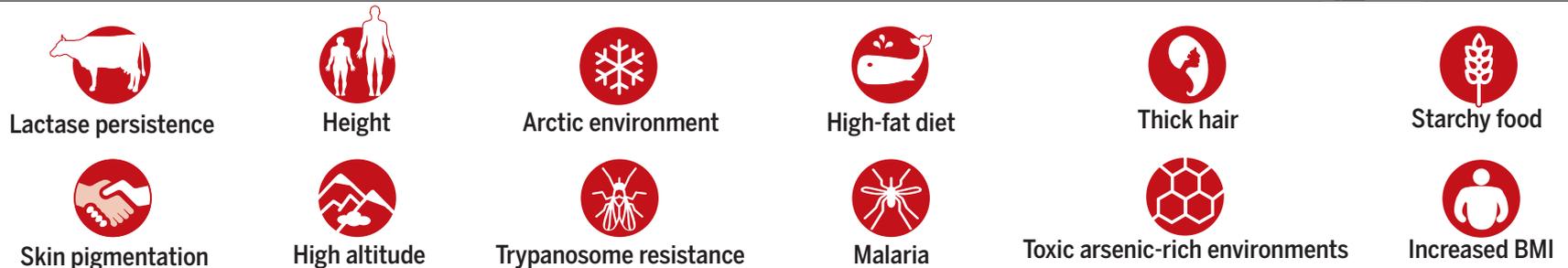
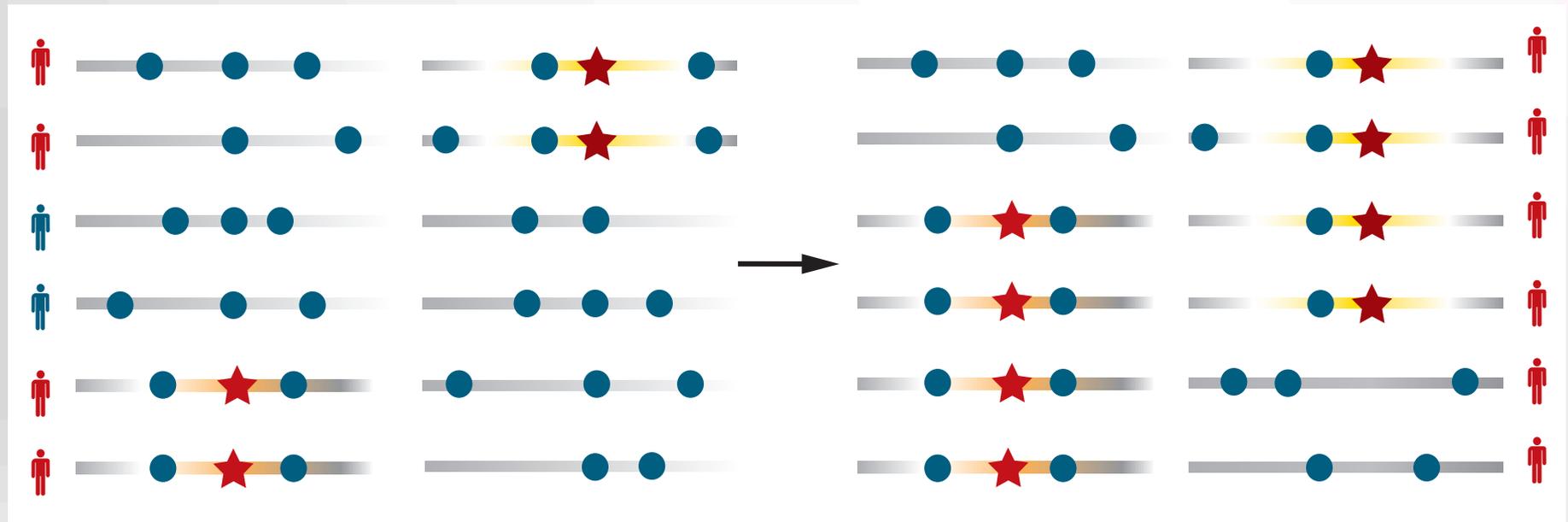


Fig. 1. Examples of human local adaptations, each labeled by the phenotype and/or selection pressure, and the genetic loci under selection. [Adapted

Com es seleccionen els trets fenotípics complexes?

Trets poligenics



Going global by adapting local: A review of recent human adaptation

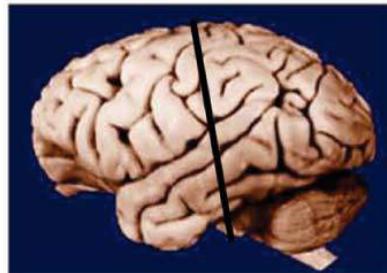
Shaohua Fan,^{1*} Matthew E. B. Hansen,^{1*} Yancy Lo,^{1,2*} Sarah A. Tishkoff^{1,3†}

Com ha evolucionat el nostre cervell?

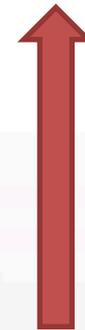
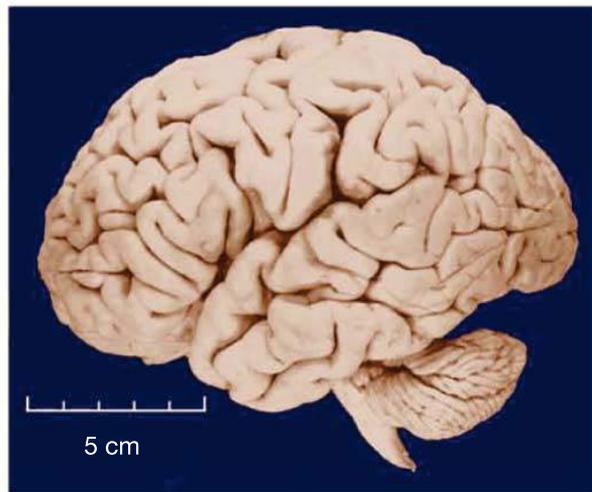
Mouse



Chimp



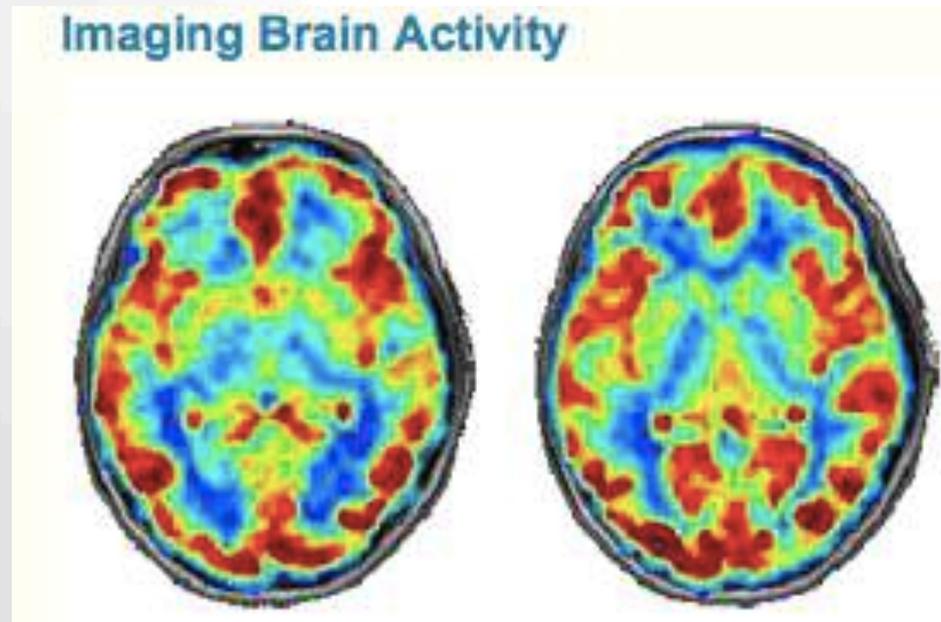
Human



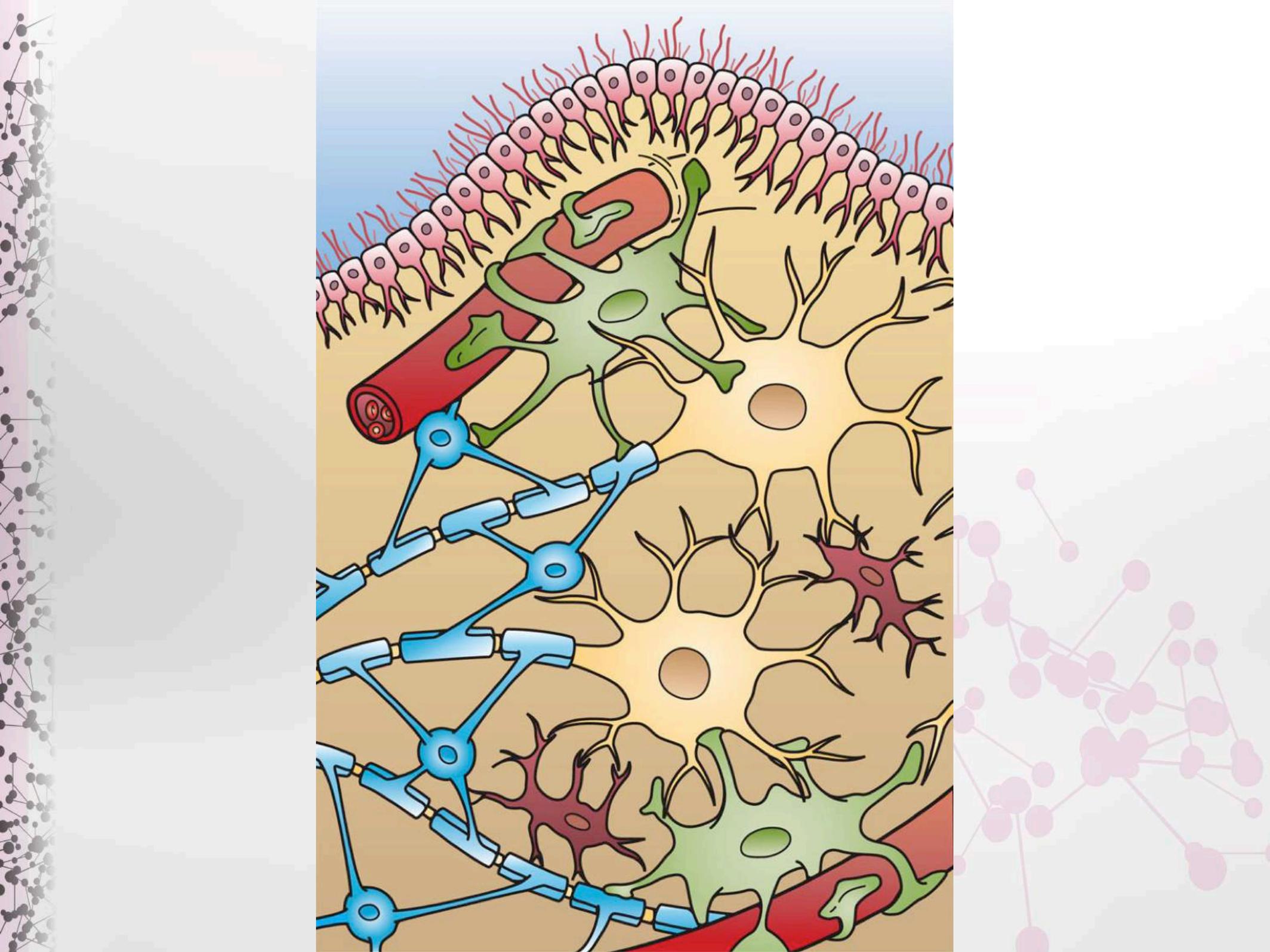
Neurons
Synapses
Glia
Blood vessels



El nostre cervell és l'organ que més energia consumeix del nostre cos



20% en adults i més d'un 40% en infants



Source of brain energy



Neurons



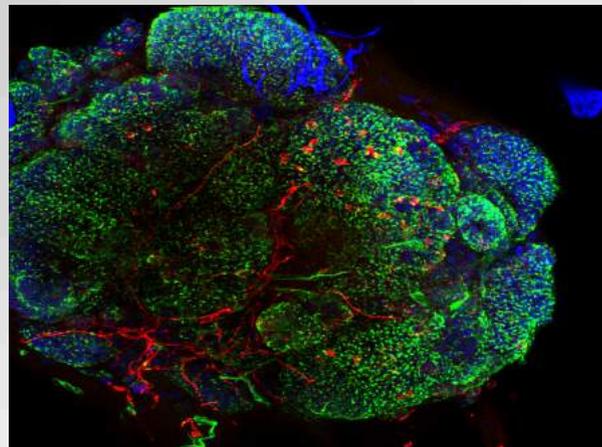
Astrocytes
Blood supply

Gene variant function in brain homeostasis

Introduce ancient gene variants into modern human genes in hESC

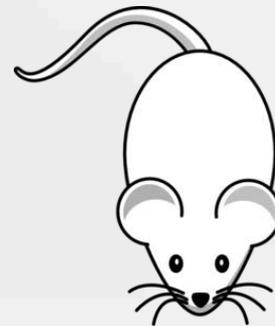


In vitro

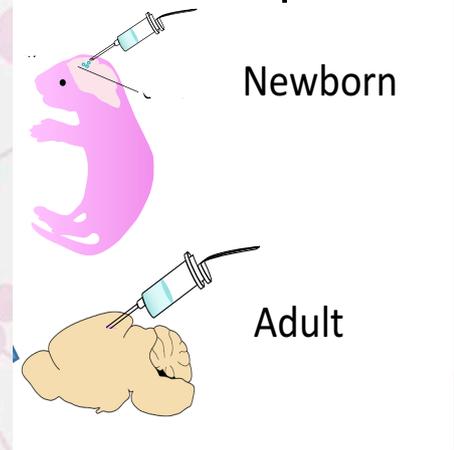


In vivo

Genetic mouse models

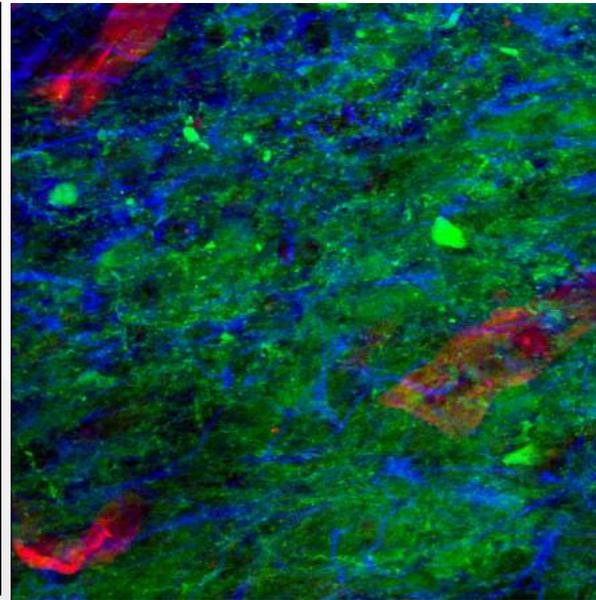


iPSC transplant

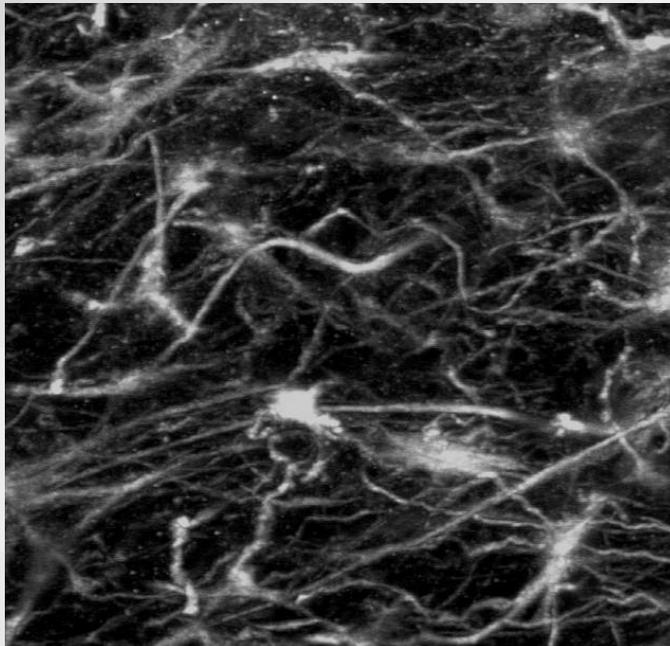


Neurons, astrocytes and blood vessels inside the graft

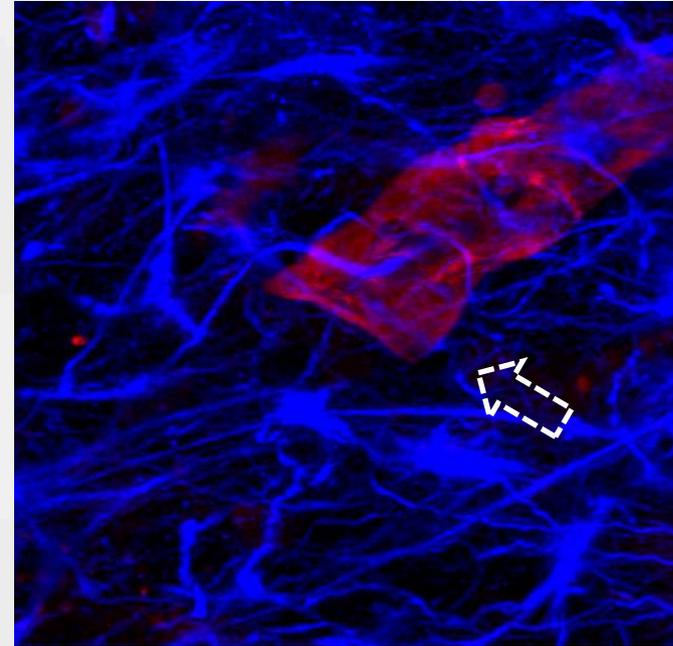
GFP/GFAP/host vessel (tdTOM)



GFAP



GFAP/tdTOMATO



Guillermo Oliver, Northwestern University



Pierre Vanderhaeghen,
Universite Libre de Bruxelles

Jaume Mora and
Cinzia Lavarino, HSJD

Collaborators

Eske Willerslev, U. Copenhagen

Daniel Geschwind, UCLA

Judith Armstrong, HSJD

Jurgen Knoblich, IMBA Vienna

Miguel Manzanares, CBM, Madrid

Holger Heyn, CNAG-CRG

Oscar Lao, CNAG-CRG

Tomàs Marquès, IBE-UPF

Roderic Guigó, CRG



Universitat
Pompeu Fabra
Barcelona

Jaume Bertranpetit

