



Lactase: an enzyme that splits lactose apart

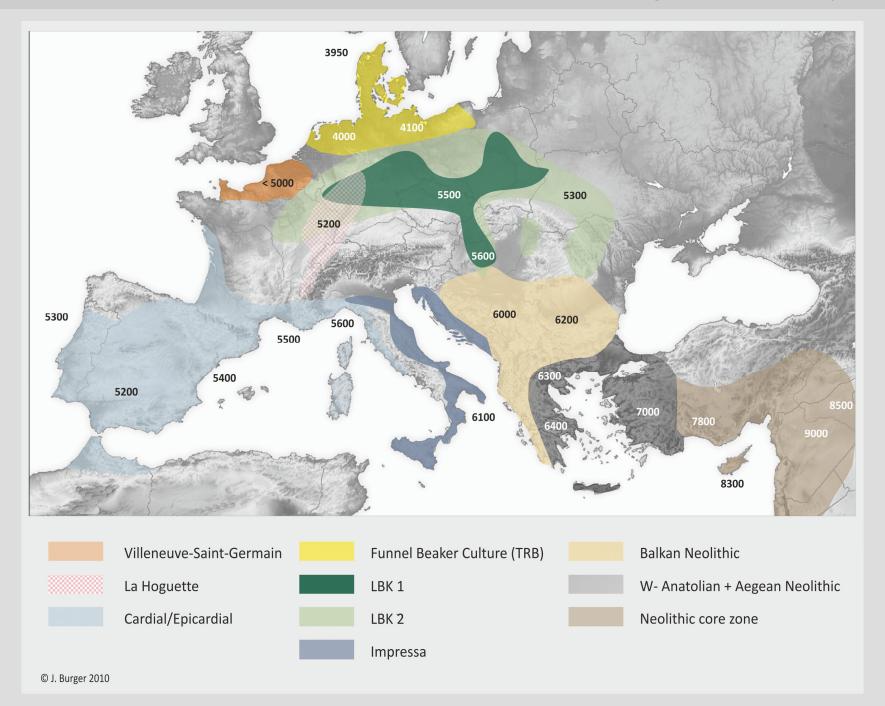
Lactose D-Glucose

Superpower?

- Lactase persistence in Europeans comes from a single nucleotide polymorphism, a T instead of a C at -13,910
- Researchers estimate people with the -13,910*T mutation would have produced between 2 and 19 percent more offspring than those who lacked it.
- That degree of selection "among the strongest yet seen for any gene in the genome." Bersaglieri et al, 2004

The Spread of the Neolithic in Europe (calendar years BC)

From Burger and Thomas (2011)



The Neolithic Toolkit



One last tool...















PROTEIN DRINK

made with Greek Yogurt

ALL NATURAL INGREDIENTS 12 FL OZ (355ml)



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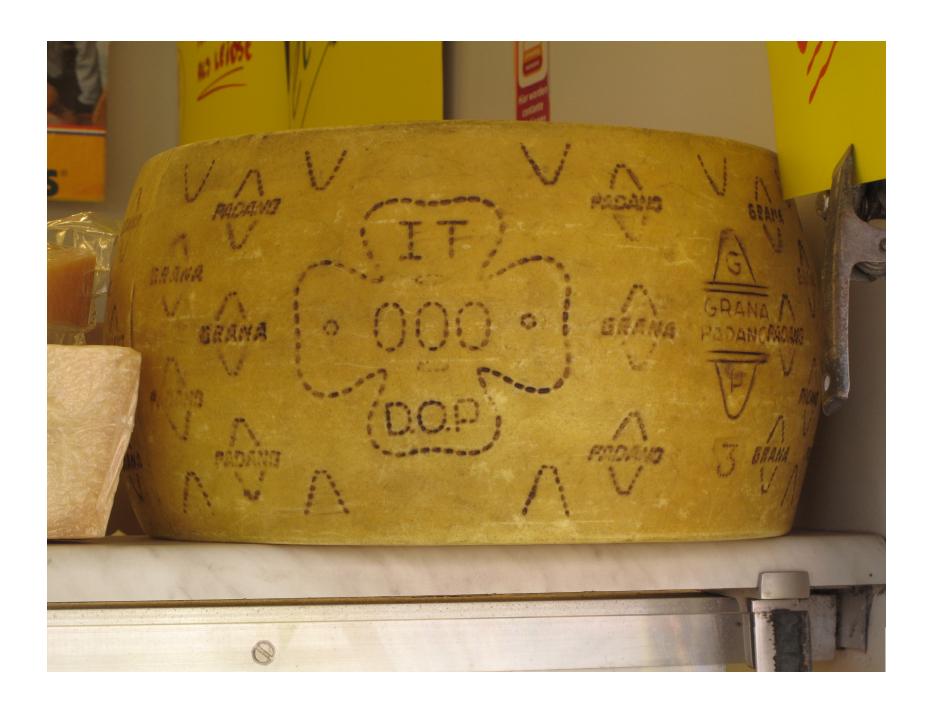


PROTEIN DRINK

made with Greek Yogurt

ALL NATURAL INGREDIENTS 12FL OZ (355ml)

Flickr: FoodBev Photos



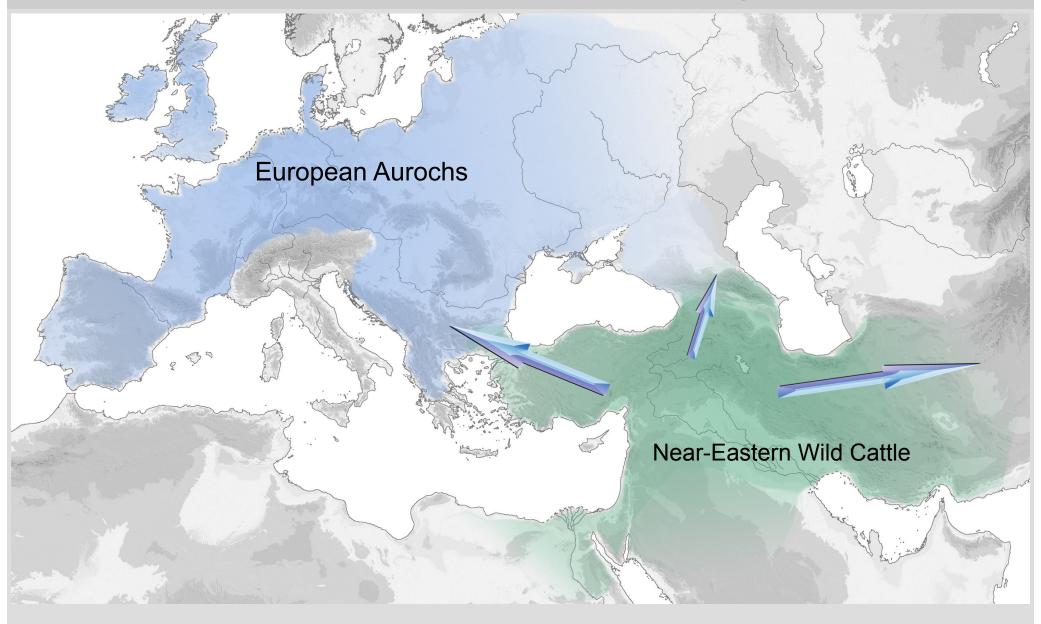
Flickr: KitchenButterfly

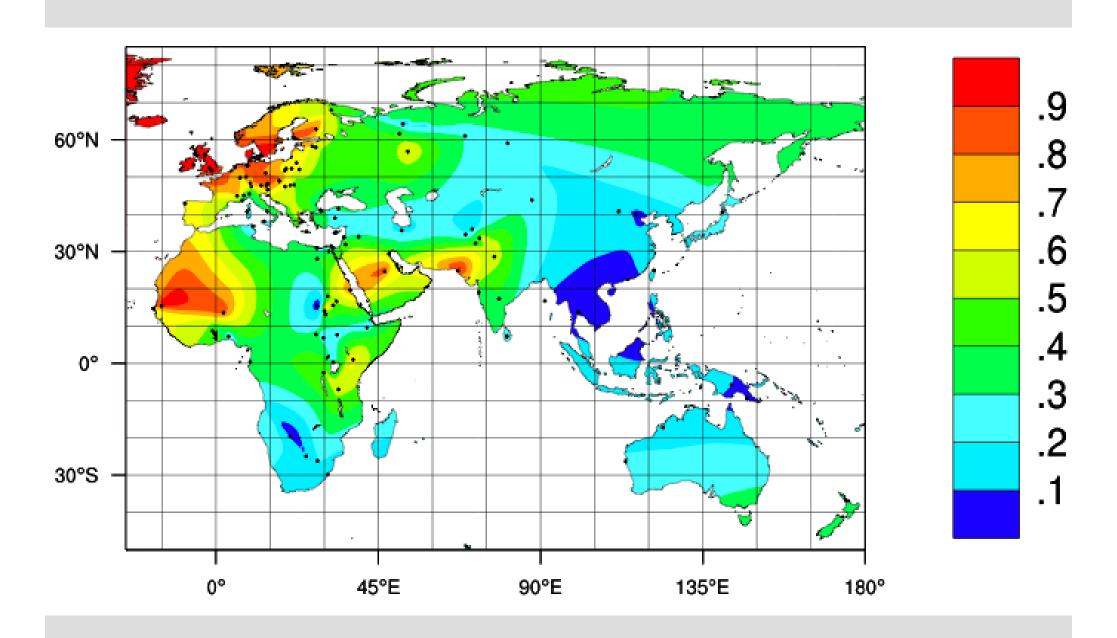


Flickr, Portus Project

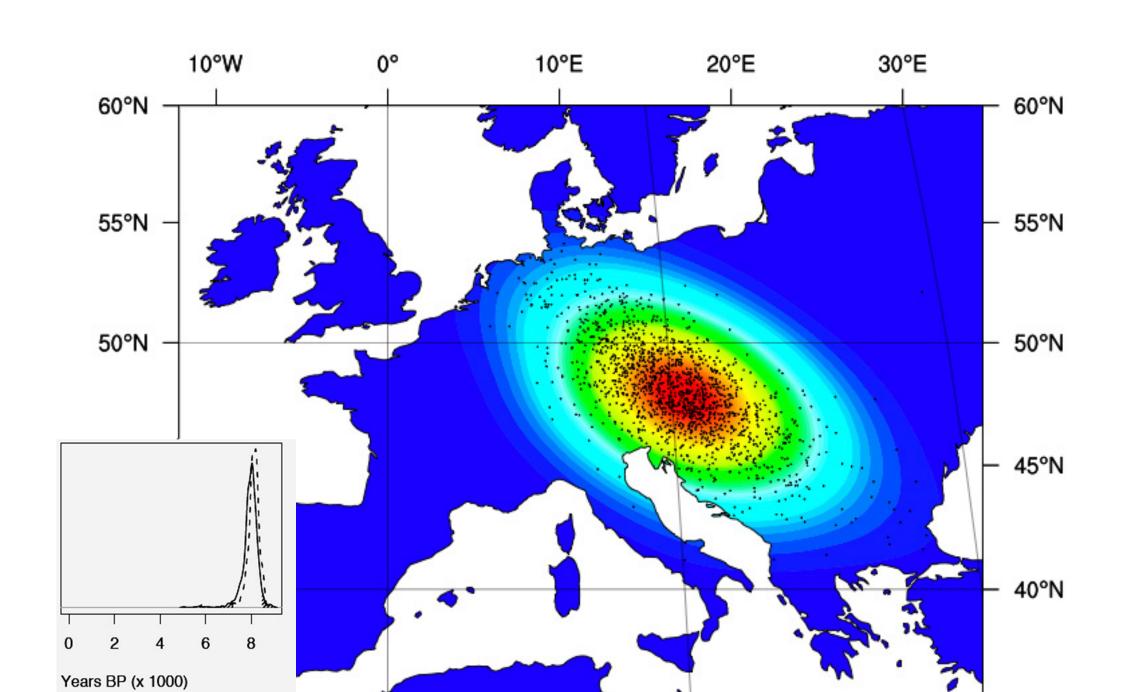
Aurochs & wild cattle distribution at the end of the last Ice Age, 10,000 BC

Bollongino et al. 2008 und 2012

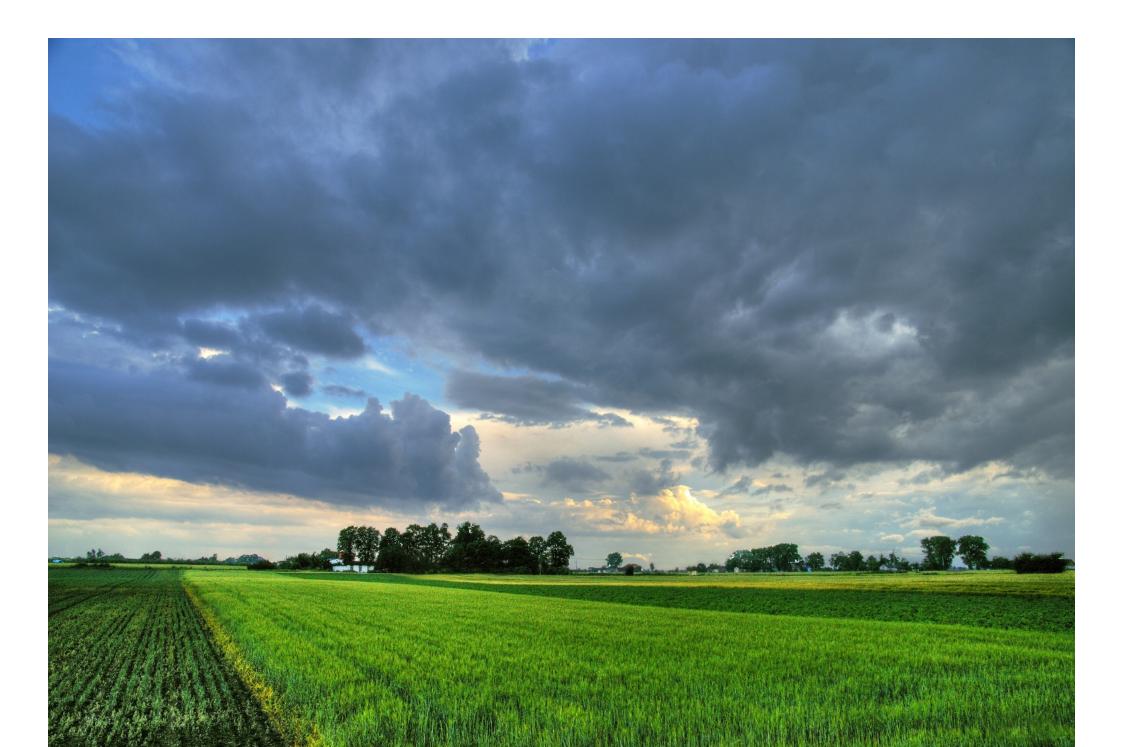




Itan et al. 2009







XVI, 6; 2 — grupy BC, z tych 1 — z ukośną karbowaną listewką — Tabl. XVI, 2; 3 — grupy C — z małymi pojedynczymi guzkami i 3 — grupy D — z krótkimi listewkami, zapewne poziomymi.



Ryc. 6. Radziejów Kujawski, st. 5. Jama 4. Fragment naczynia sitowatego Fig. 6. Radziejów Kujawski site 5. Pit 4. Fragment of a sieve-like vessel



Ryc. 7. Radziejów Kujawski, st. 5. Jama 4. Rekonstrukcja naczynia sito-Fig. 7. Radziejów Kujawski site 5. Pit 4. Reconstruction of the sieve-like

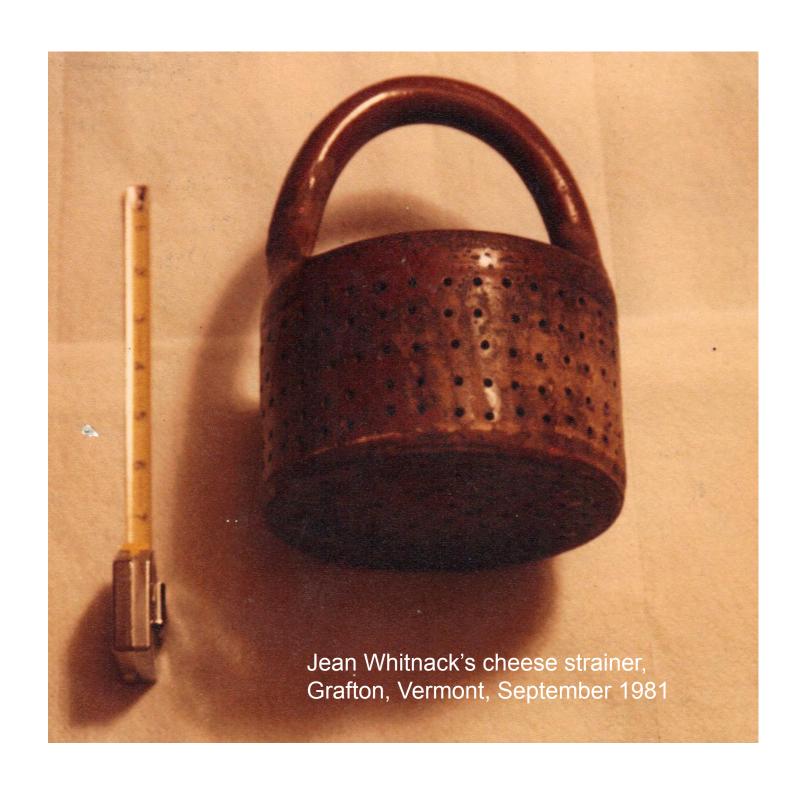
Brześć Kujawski, st. 4. Odc. 2, w. II (2); odc. 3 i 14, w. II (6, 7), w. kult. (1); odc. 9, grób V (9); odc. 19, w. III (3); odc. 51, w. I-II, (4); odc. 96, w. II (5); odc. 152, w. kult. v (15); odc. 452, w. kult. (18, 19); odc. 468, w. kult. (14), 1: 137 (15), grob Jażdżewski in 1933**-39**;vas slown in Grygiel 1976

Tablica XIII

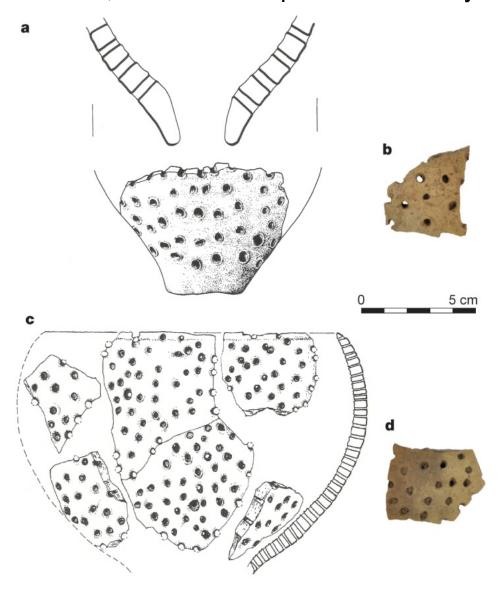
Plate XIII

(1); odc. Sieves from Brześć Kujawski 4, excavated by w. kult. (17); odc. 451, rów (15); odc. 452, w. kult. (18, 19); odc. 460, w. kult. (14), j. 137 (15), grób XXXIV (10).

Interpretation of sieve sherds from Radziejów fragments of a brazier by Gabałówna 1963, per Jażdżewski's opinion, but described in text as a



Reconstructed Neolithic sieve vessels and sieve fragments from Kujawia, Poland, submitted to lipid residue analyses.



M. Salque et al. Nature 493, 522-25 (2013) doi:10.1038/nature11698





360 generations later...



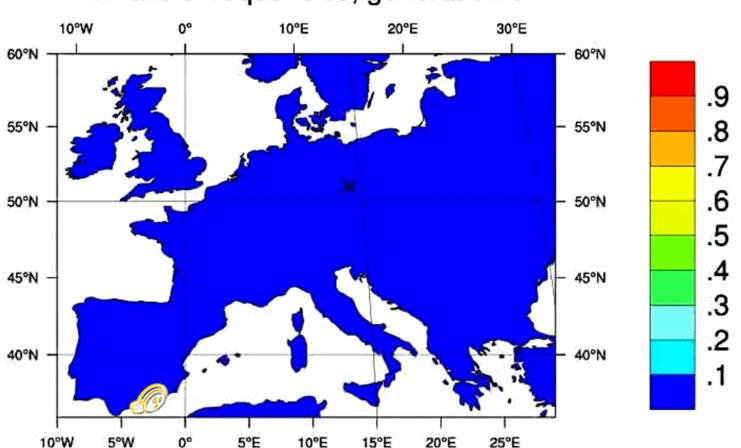
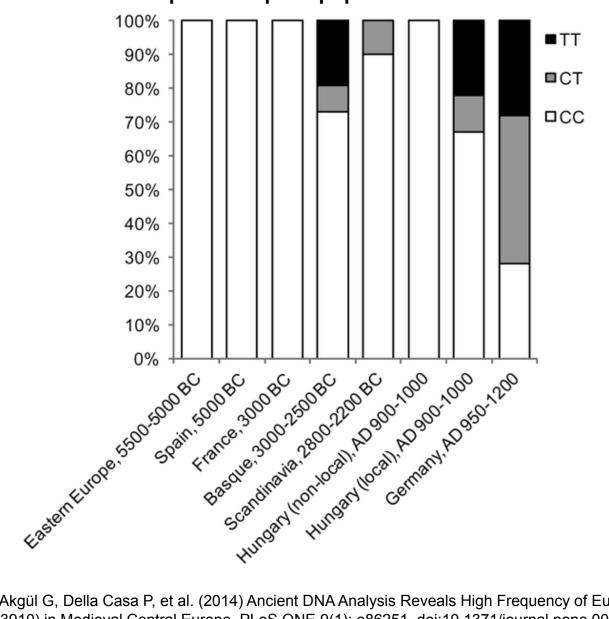


Figure 1. Relative frequency of lactase persistence and non-persistence genotypes reported in past European populations.



Krüttli A, Bouwman A, Akgül G, Della Casa P, et al. (2014) Ancient DNA Analysis Reveals High Frequency of European Lactase Persistence Allele (T-13910) in Medieval Central Europe. PLoS ONE 9(1): e86251. doi:10.1371/journal.pone.0086251 http://www.plosone.org/article/info:doi/10.1371/journal.pone.0086251



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For help with slides and interviews

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Andrew Curry – www.andrewcurry.com

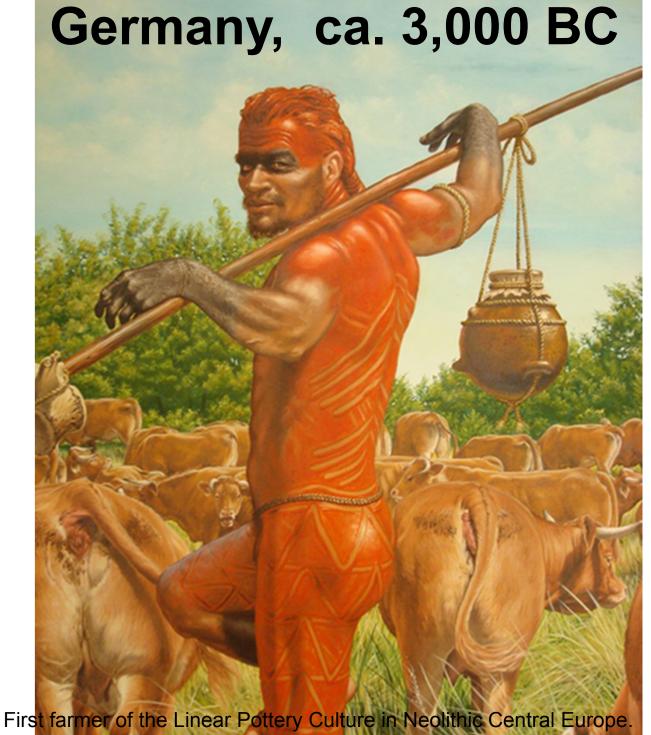


Illustration: Karol Schauer, State Museum of Prehistory in Halle (Saale), Saxony-Anhalt, Germany.