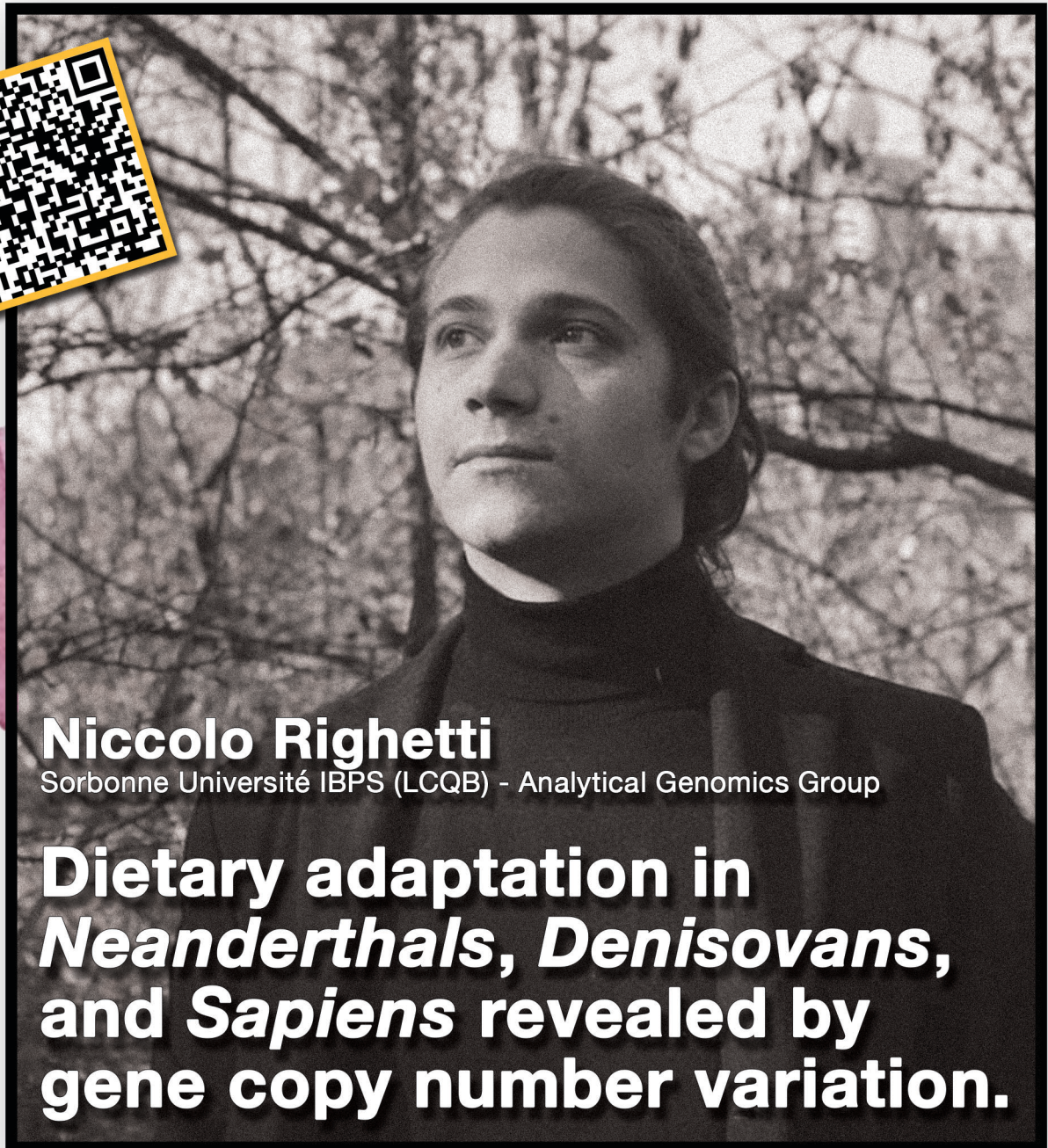


# Venerdì 14 Giugno

## 17:00 - 18:00

### Sala Lauree



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Sorbonne Université IBPS (LCQB) - Analytical Genomics Group

## **Dietary adaptation in *Neanderthals, Denisovans, and Sapiens* revealed by gene copy number variation.**

Dietary adaptation involves developing an efficient **digestive system suited to the available food** in an ecosystem. Traditional reconstructions of ancient human diets rely on isotopic analysis of remains and faunal findings at archaeological sites, supplemented by recent metagenomic studies of dental plaque. We propose a **novel computational method** to uncover the genetic basis of human dietary adaptation. Analyzing 15 genomes from Neandertals, Denisovans, and early *Homo sapiens*, we identify 23 genes - including six gene clusters - with **discernible copy number variation trends at the population level**. The genomic variation shows how metabolic pathways for lipid, brown fat, protein or carbohydrate metabolism adapt to metabolize food from animal or plant sources in archaic humans. Our findings suggest ***Homo sapiens* possessed evolutionary advantages in adapting to cold and temperate ecosystems** compared to *Neandertals* and *Denisovans*.

