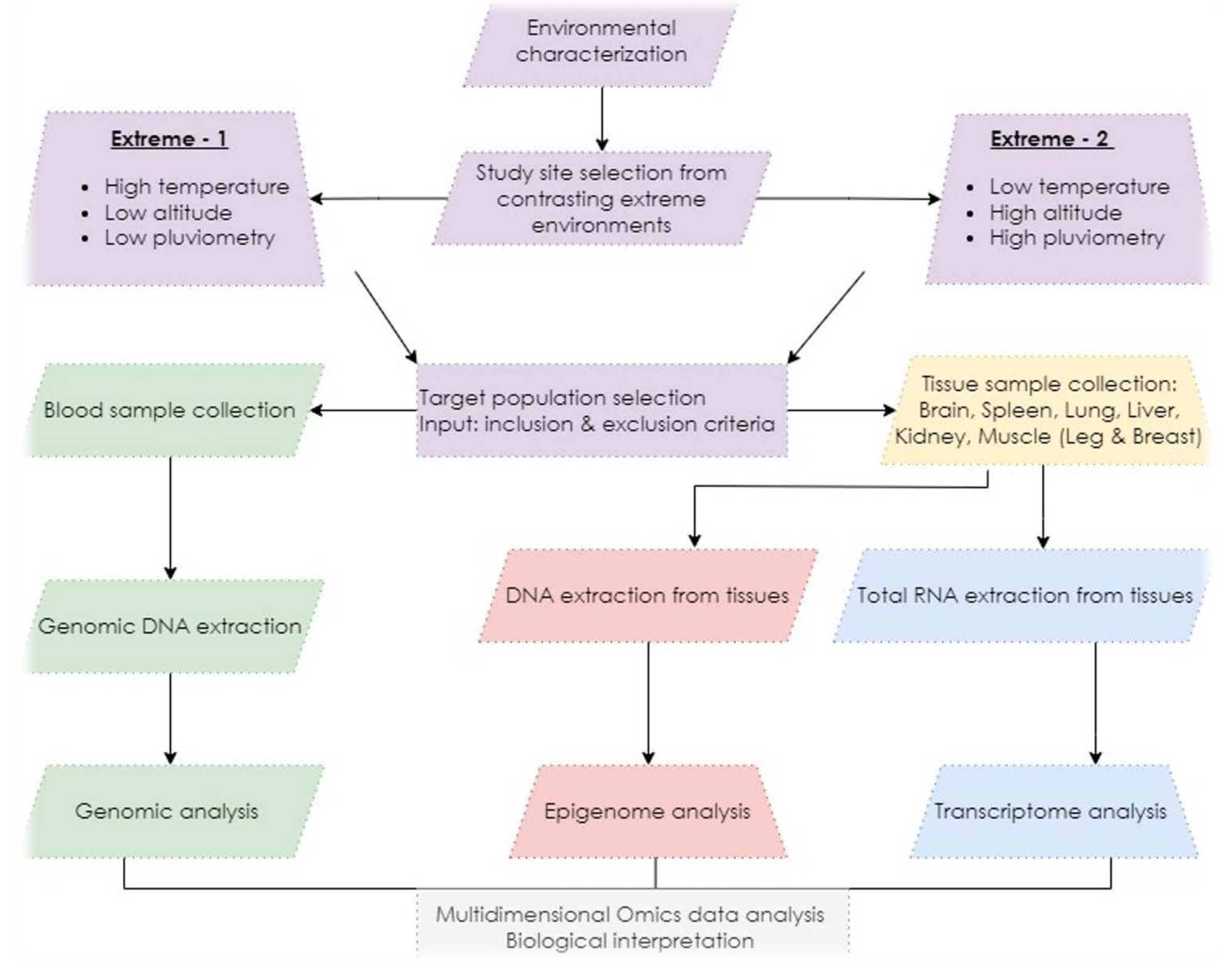


The challenge

- Complex adaptation mechanisms, and limited understanding of the genetic controls to climatic challenges
- No previous study combining genomic, transcriptomic, and epigenomic analysis of adaptation in indigenous chickens inhabiting extreme climatic environments
- Smallholder farmers, needs more productive and adapted chicken

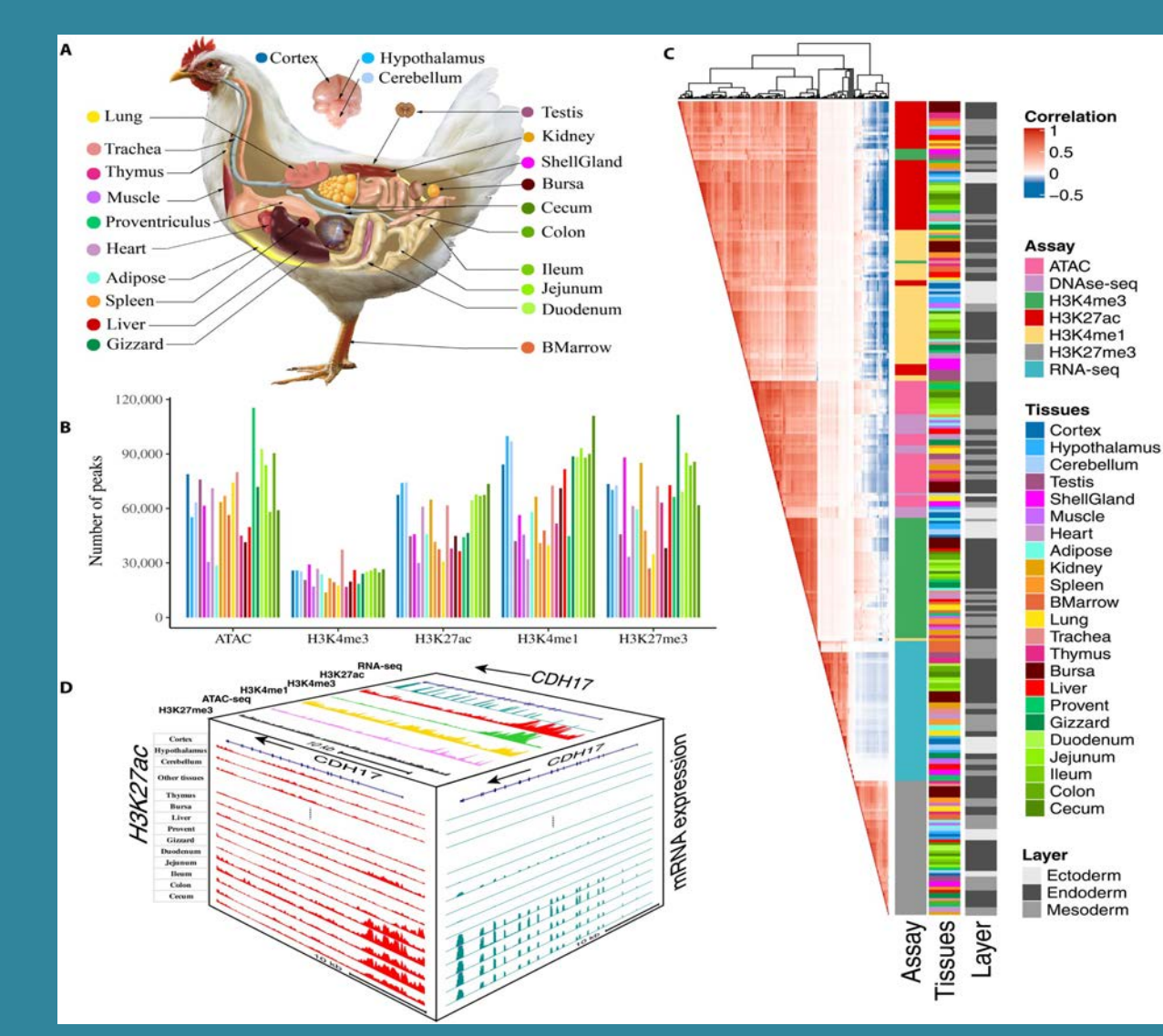
Our innovative approach

- Integrated -omics approach to profile molecular base of adaptation



Signatures of Adaptation to Climate Changes in Ethiopian Indigenous Chicken Ecotypes

Climate difference is shaping the genome of local chickens
 Village chickens are reservoirs of adaptive diversity to climatic challenges



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Outcomes

- Informed sustainable genetic improvement breeding programs
- Shared knowledge among poultry researchers, conservationists, breeders, and geneticists
- Created opportunities to incorporate productivity and resilience in breeding goals

Next steps

- Developing new productive and resilience breeds
- Enhancing sustainable poultry production for food security, improved nutrition, and gender empowerment

Partners



Centre for Tropical Livestock Genetics and Health



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