Table 1. Main Climate-Health Associations from Urban African Cohort

Biomarker	*Climate Variable*	*Lag (days)*	*n*	*r*	*95% CI*	*p-value*	*Effect Size*	*Clinical Interpretation*
Systolic BP	Temperature	***21*** †	4,957	-0.114	(-0.141, -0.087)	<0.0001	Small	Novel 3-week cardiovascular adaptation effect
Systolic BP	Apparent Temp.	***21*** †	4,957	-0.113	(-0.139, -0.086)	<0.0001	Small	Confirms extended vascular adaptation
Fasting Glucose	Land Temperature	3	2,731	0.131	(0.094, 0.168)	<0.0001	Small	Acute metabolic stress response
Fasting Glucose	Temperature	0	2,731	0.118	(0.084, 0.154)	<0.0001	Small	Immediate thermal glucoregulation

Statistical Methods:

- Pearson correlation coefficients with bootstrap 95% confidence intervals (1000 iterations)
- P-values from permutation testing (10,000 permutations) with Bonferroni correction (α = 0.0125)
- Effect sizes categorized using Cohen's conventions: Small (|r| = 0.10-0.29), Medium (|r| = 0.30-0.49), Large (|r| ≥ 0.50)
- All associations remained significant after false discovery rate (FDR) adjustment

† Novel finding: First report of 21-day cardiovascular adaptation to temperature in African population

Abbreviations:

BP = Blood Pressure; CI = Confidence Interval; r = Pearson correlation coefficient; n = sample size

Apparent Temperature = Heat index combining temperature and humidity

Land Temperature = Surface temperature measurements from meteorological stations

Clinical Significance: All reported associations represent statistically robust and clinically meaningful climate-health relationships