

## **Supplementary File 1: Results of Student's *T*-test statistical analysis.**

### **1: testing for cell type-specific differences**

#### **Q1: Do dimensions of chromosome territories differ between salivary gland cells and ovarian nurse cells?**

chromosome 2L p-value for gambiae nurse cells vs gambiae salivary gland b-semi-axis 0.028

chromosome 3L p-value for merus nurse cells vs merus salivary gland c-semi-axis 0.035

chromosome 3R p-value for coluzzii nurse cells vs coluzzii salivary gland b-semi-axis 0.049

chromosome 3R p-value for coluzzii nurse cells vs coluzzii salivary gland c-semi-axis 0.043

chromosome X p-value for gambiae nurse cells vs gambiae salivary gland b-semi-axis 0.009

#### **Q2: Do territory volume of each chromosome differ between salivary gland cells and ovarian nurse cells?**

territory volume p-value for chromosome 3R in coluzzii salivary gland vs coluzzii nurse cells 0.007

territory volume p-value for chromosome 2L in merus salivary gland vs merus nurse cells 0.028

#### **Q3: Chr polarization: Does the angle differ between salivary gland cells and ovarian nurse cells?**

polarization p-value for coluzzii nurse cells vs coluzzii salivary gland 2L-X 0.019

polarization p-value for merus nurse cells vs merus salivary gland 3R-X 0.010

#### **Q4: Do chromosome territory positions differ between salivary gland cells and ovarian nurse cells?**

No significant p-values found

#### **Q5: Do Chr-NE contact percentages differ between salivary gland cells and ovarian nurse cells?**

NE contacts percent p-value for chromosome 3R in gambiae salivary gland vs gambiae nurse cells 0.001

NE contacts percent p-value for chromosome 2L in coluzzii salivary gland vs coluzzii nurse cells 0.035

NE contacts percent p-value for chromosome 2L in merus salivary gland vs merus nurse cells 0.022

NE contacts percent p-value for chromosome 3L in merus salivary gland vs merus nurse cells 0.014

#### **Q6: Do Chr-Chr contact numbers differ between salivary gland cells and ovarian nurse cells?**

chr 2L-3L interactions p-value for coluzzii nurse cells vs coluzzii salivary gland 0.024

chr 2L-3L interactions p-value for merus nurse cells vs merus salivary gland 0.034

## **2: testing for species-specific differences**

### **Q1: Do dimensions of chromosome territories differ among species?**

chromosome 2L p-value for gambiae salivary gland vs merus salivary gland b-semi-axis 0.027

chromosome 2L p-value for gambiae nurse cells vs merus nurse cells a-semi-axis 0.015

### **Q2: Do chromosome territory volume differ among species?**

territory volume p-value for chromosome 2L in gambiae salivary gland vs coluzzii salivary gland 0.006

territory volume p-value for chromosome 2L in gambiae salivary gland vs merus salivary gland 0.001

territory volume p-value for chromosome 2L in gambiae nurse cells vs merus nurse cells 0.000

territory volume p-value for chromosome 2L in coluzzii nurse cells vs merus nurse cells 0.026

territory volume p-value for chromosome X in coluzzii nurse cells vs merus nurse cells 0.018

### **Q3: Chr polarization: Does the angle differ among species?**

polarization p-value for coluzzii salivary gland vs merus salivary gland 2L-X 0.006

polarization p-value for gambiae nurse cells vs coluzzii nurse cells 2L-3R 0.004

polarization p-value for gambiae nurse cells vs merus nurse cells 3R-X 0.012

### **Q4: Do chromosome territory positions differ among species?**

position p-value for gambiae salivary gland vs coluzzii salivary gland 3L-X 0.038

### **Q5: Do Chr-NE contact percentages differ among species?**

No significant p-values found

### **Q6: Do Chr-Chr contact numbers differ among species?**

No significant p-values found

### **3: testing for chromosome arm-specific differences**

#### **Q1: Do chromosome territories differ in dimensions?**

territory axis a p-value for chromosome 2L vs X in gambiae salivary gland vs gambiae salivary gland 0.000  
territory axis a p-value for chromosome 3L vs X in gambiae salivary gland vs gambiae salivary gland 0.000  
territory axis a p-value for chromosome 3R vs X in gambiae salivary gland vs gambiae salivary gland 0.000  
territory axis a p-value for chromosome 2L vs X in gambiae salivary gland vs coluzzii salivary gland 0.003  
territory axis a p-value for chromosome 3L vs X in gambiae salivary gland vs coluzzii salivary gland 0.001  
territory axis a p-value for chromosome 3R vs X in gambiae salivary gland vs coluzzii salivary gland 0.029  
territory axis a p-value for chromosome 2L vs X in gambiae salivary gland vs merus salivary gland 0.000  
territory axis a p-value for chromosome 3L vs X in gambiae salivary gland vs merus salivary gland 0.000  
territory axis a p-value for chromosome 3R vs X in gambiae salivary gland vs merus salivary gland 0.000  
territory axis a p-value for chromosome 2L vs X in coluzzii salivary gland vs gambiae salivary gland 0.000  
territory axis a p-value for chromosome 3L vs X in coluzzii salivary gland vs gambiae salivary gland 0.000  
territory axis a p-value for chromosome 3R vs X in coluzzii salivary gland vs gambiae salivary gland 0.000  
territory axis a p-value for chromosome 2L vs X in coluzzii salivary gland vs coluzzii salivary gland 0.000  
territory axis a p-value for chromosome 3L vs X in coluzzii salivary gland vs coluzzii salivary gland 0.031  
territory axis a p-value for chromosome 3R vs X in coluzzii salivary gland vs coluzzii salivary gland 0.000  
territory axis a p-value for chromosome 2L vs X in coluzzii salivary gland vs merus salivary gland 0.000  
territory axis a p-value for chromosome 3L vs X in coluzzii salivary gland vs merus salivary gland 0.000  
territory axis a p-value for chromosome 3R vs X in coluzzii salivary gland vs merus salivary gland 0.000  
territory axis a p-value for chromosome 2L vs X in merus salivary gland vs gambiae salivary gland 0.000  
territory axis a p-value for chromosome 3L vs X in merus salivary gland vs gambiae salivary gland 0.001  
territory axis a p-value for chromosome 3R vs X in merus salivary gland vs gambiae salivary gland 0.000  
territory axis a p-value for chromosome 2L vs X in merus salivary gland vs coluzzii salivary gland 0.002  
territory axis a p-value for chromosome 3R vs X in merus salivary gland vs coluzzii salivary gland 0.003  
territory axis a p-value for chromosome 2L vs X in merus salivary gland vs merus salivary gland 0.000  
territory axis a p-value for chromosome 3L vs X in merus salivary gland vs merus salivary gland 0.000

territory axis a p-value for chromosome 3R vs X in merus salivary gland vs merus salivary gland 0.000  
territory axis a p-value for chromosome 2L vs X in gambiae nurse cells vs gambiae nurse cells 0.001  
territory axis a p-value for chromosome 3L vs X in gambiae nurse cells vs gambiae nurse cells 0.001  
territory axis a p-value for chromosome 3R vs X in gambiae nurse cells vs gambiae nurse cells 0.005  
territory axis a p-value for chromosome 2L vs X in gambiae nurse cells vs merus nurse cells 0.000  
territory axis a p-value for chromosome 3L vs X in gambiae nurse cells vs merus nurse cells 0.001  
territory axis a p-value for chromosome 3R vs X in gambiae nurse cells vs merus nurse cells 0.002  
territory axis a p-value for chromosome 2L vs X in coluzzii nurse cells vs gambiae nurse cells 0.000  
territory axis a p-value for chromosome 3L vs X in coluzzii nurse cells vs gambiae nurse cells 0.000  
territory axis a p-value for chromosome 3R vs X in coluzzii nurse cells vs gambiae nurse cells 0.000  
territory axis a p-value for chromosome 2L vs X in coluzzii nurse cells vs merus nurse cells 0.000  
territory axis a p-value for chromosome 3L vs X in coluzzii nurse cells vs merus nurse cells 0.000  
territory axis a p-value for chromosome 3R vs X in coluzzii nurse cells vs merus nurse cells 0.000  
territory axis a p-value for chromosome 2L vs X in merus nurse cells vs gambiae nurse cells 0.000  
territory axis a p-value for chromosome 3L vs X in merus nurse cells vs gambiae nurse cells 0.015  
territory axis a p-value for chromosome 3R vs X in merus nurse cells vs gambiae nurse cells 0.000  
territory axis a p-value for chromosome 2L vs X in merus nurse cells vs coluzzii nurse cells 0.026  
territory axis a p-value for chromosome 2L vs 3L in merus nurse cells vs merus nurse cells 0.012  
territory axis a p-value for chromosome 2L vs X in merus nurse cells vs merus nurse cells 0.000  
territory axis a p-value for chromosome 3L vs X in merus nurse cells vs merus nurse cells 0.005  
territory axis a p-value for chromosome 3R vs X in merus nurse cells vs merus nurse cells 0.000  
territory axis a p-value for chromosome 2L vs X in gambiae salivary vs gambiae nurse cells 0.000  
territory axis a p-value for chromosome 3L vs X in gambiae salivary vs gambiae nurse cells 0.000  
territory axis a p-value for chromosome 3R vs X in gambiae salivary vs gambiae nurse cells 0.001  
territory axis a p-value for chromosome 2L vs X in gambiae salivary vs merus nurse cells 0.000  
territory axis a p-value for chromosome 3L vs X in gambiae salivary vs merus nurse cells 0.000  
territory axis a p-value for chromosome 3R vs X in gambiae salivary vs merus nurse cells 0.001  
territory axis a p-value for chromosome 2L vs X in coluzzii salivary vs gambiae nurse cells 0.000  
territory axis a p-value for chromosome 3L vs X in coluzzii salivary vs gambiae nurse cells 0.002  
territory axis a p-value for chromosome 3R vs X in coluzzii salivary vs gambiae nurse cells 0.000

territory axis a p-value for chromosome 2L vs X in coluzzii salivary vs coluzzii nurse cells 0.014  
territory axis a p-value for chromosome 3R vs X in coluzzii salivary vs coluzzii nurse cells 0.025  
territory axis a p-value for chromosome 2L vs 3L in coluzzii salivary vs merus nurse cells 0.005  
territory axis a p-value for chromosome 2L vs X in coluzzii salivary vs merus nurse cells 0.000  
territory axis a p-value for chromosome 3L vs X in coluzzii salivary vs merus nurse cells 0.001  
territory axis a p-value for chromosome 3R vs X in coluzzii salivary vs merus nurse cells 0.000  
territory axis a p-value for chromosome 2L vs X in merus salivary vs gambiae nurse cells 0.000  
territory axis a p-value for chromosome 3L vs X in merus salivary vs gambiae nurse cells 0.002  
territory axis a p-value for chromosome 3R vs X in merus salivary vs gambiae nurse cells 0.000  
territory axis a p-value for chromosome 2L vs 3L in merus salivary vs merus nurse cells 0.040  
territory axis a p-value for chromosome 2L vs X in merus salivary vs merus nurse cells 0.000  
territory axis a p-value for chromosome 3L vs X in merus salivary vs merus nurse cells 0.001  
territory axis a p-value for chromosome 3R vs X in merus salivary vs merus nurse cells 0.000  
territory axis b p-value for chromosome 2L vs X in gambiae salivary gland vs gambiae salivary gland 0.000  
territory axis b p-value for chromosome 3L vs X in gambiae salivary gland vs gambiae salivary gland 0.000  
territory axis b p-value for chromosome 3R vs X in gambiae salivary gland vs gambiae salivary gland 0.000  
territory axis b p-value for chromosome 2L vs 3R in gambiae salivary gland vs coluzzii salivary gland 0.040  
territory axis b p-value for chromosome 2L vs X in gambiae salivary gland vs coluzzii salivary gland 0.000  
territory axis b p-value for chromosome 3L vs X in gambiae salivary gland vs coluzzii salivary gland 0.000  
territory axis b p-value for chromosome 3R vs X in gambiae salivary gland vs coluzzii salivary gland 0.000  
territory axis b p-value for chromosome 2L vs X in gambiae salivary gland vs merus salivary gland 0.000  
territory axis b p-value for chromosome 3L vs X in gambiae salivary gland vs merus salivary gland 0.000  
territory axis b p-value for chromosome 3R vs X in gambiae salivary gland vs merus salivary gland 0.000  
territory axis b p-value for chromosome 2L vs X in coluzzii salivary gland vs gambiae salivary gland 0.000  
territory axis b p-value for chromosome 3L vs X in coluzzii salivary gland vs gambiae salivary gland 0.000  
territory axis b p-value for chromosome 3R vs X in coluzzii salivary gland vs gambiae salivary gland 0.000  
territory axis b p-value for chromosome 2L vs X in coluzzii salivary gland vs coluzzii salivary gland 0.000  
territory axis b p-value for chromosome 3L vs 3R in coluzzii salivary gland vs coluzzii salivary gland 0.012  
territory axis b p-value for chromosome 3L vs X in coluzzii salivary gland vs coluzzii salivary gland 0.001  
territory axis b p-value for chromosome 3R vs X in coluzzii salivary gland vs coluzzii salivary gland 0.000

territory axis b p-value for chromosome 2L vs X in coluzzii salivary gland vs merus salivary gland 0.000  
territory axis b p-value for chromosome 3L vs 3R in coluzzii salivary gland vs merus salivary gland 0.022  
territory axis b p-value for chromosome 3L vs X in coluzzii salivary gland vs merus salivary gland 0.001  
territory axis b p-value for chromosome 3R vs X in coluzzii salivary gland vs merus salivary gland 0.000  
territory axis b p-value for chromosome 2L vs X in merus salivary gland vs gambiae salivary gland 0.000  
territory axis b p-value for chromosome 3L vs X in merus salivary gland vs gambiae salivary gland 0.000  
territory axis b p-value for chromosome 3R vs X in merus salivary gland vs gambiae salivary gland 0.000  
territory axis b p-value for chromosome 2L vs 3L in merus salivary gland vs coluzzii salivary gland 0.006  
territory axis b p-value for chromosome 2L vs X in merus salivary gland vs coluzzii salivary gland 0.000  
territory axis b p-value for chromosome 3L vs 3R in merus salivary gland vs coluzzii salivary gland 0.043  
territory axis b p-value for chromosome 3L vs X in merus salivary gland vs coluzzii salivary gland 0.000  
territory axis b p-value for chromosome 3R vs X in merus salivary gland vs coluzzii salivary gland 0.000  
territory axis b p-value for chromosome 2L vs 3L in merus salivary gland vs merus salivary gland 0.031  
territory axis b p-value for chromosome 2L vs X in merus salivary gland vs merus salivary gland 0.000  
territory axis b p-value for chromosome 3L vs X in merus salivary gland vs merus salivary gland 0.000  
territory axis b p-value for chromosome 3R vs X in merus salivary gland vs merus salivary gland 0.000  
territory axis b p-value for chromosome 2L vs X in gambiae nurse cells vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in gambiae nurse cells vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in gambiae nurse cells vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 2L vs 3L in gambiae nurse cells vs coluzzii nurse cells 0.032  
territory axis b p-value for chromosome 2L vs 3R in gambiae nurse cells vs coluzzii nurse cells 0.022  
territory axis b p-value for chromosome 2L vs X in gambiae nurse cells vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in gambiae nurse cells vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in gambiae nurse cells vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 2L vs X in gambiae nurse cells vs merus nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in gambiae nurse cells vs merus nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in gambiae nurse cells vs merus nurse cells 0.000  
territory axis b p-value for chromosome 2L vs X in coluzzii nurse cells vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in coluzzii nurse cells vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in coluzzii nurse cells vs gambiae nurse cells 0.000

territory axis b p-value for chromosome 2L vs 3R in coluzzii nurse cells vs coluzzii nurse cells 0.049  
territory axis b p-value for chromosome 2L vs X in coluzzii nurse cells vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in coluzzii nurse cells vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in coluzzii nurse cells vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 2L vs X in coluzzii nurse cells vs merus nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in coluzzii nurse cells vs merus nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in coluzzii nurse cells vs merus nurse cells 0.000  
territory axis b p-value for chromosome 2L vs X in merus nurse cells vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in merus nurse cells vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in merus nurse cells vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 2L vs 3L in merus nurse cells vs coluzzii nurse cells 0.010  
territory axis b p-value for chromosome 2L vs 3R in merus nurse cells vs coluzzii nurse cells 0.007  
territory axis b p-value for chromosome 2L vs X in merus nurse cells vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in merus nurse cells vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in merus nurse cells vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 2L vs 3L in merus nurse cells vs merus nurse cells 0.017  
territory axis b p-value for chromosome 2L vs X in merus nurse cells vs merus nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in merus nurse cells vs merus nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in merus nurse cells vs merus nurse cells 0.000  
territory axis b p-value for chromosome 2L vs X in gambiae salivary vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in gambiae salivary vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in gambiae salivary vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 2L vs X in gambiae salivary vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in gambiae salivary vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in gambiae salivary vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 2L vs X in gambiae salivary vs merus nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in gambiae salivary vs merus nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in gambiae salivary vs merus nurse cells 0.000  
territory axis b p-value for chromosome 2L vs X in coluzzii salivary vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in coluzzii salivary vs gambiae nurse cells 0.001

territory axis b p-value for chromosome 3R vs X in coluzzii salivary vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 2L vs X in coluzzii salivary vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in coluzzii salivary vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in coluzzii salivary vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 2L vs X in coluzzii salivary vs merus nurse cells 0.000  
territory axis b p-value for chromosome 3L vs 3R in coluzzii salivary vs merus nurse cells 0.024  
territory axis b p-value for chromosome 3L vs X in coluzzii salivary vs merus nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in coluzzii salivary vs merus nurse cells 0.000  
territory axis b p-value for chromosome 2L vs X in merus salivary vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in merus salivary vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in merus salivary vs gambiae nurse cells 0.000  
territory axis b p-value for chromosome 2L vs 3L in merus salivary vs coluzzii nurse cells 0.042  
territory axis b p-value for chromosome 2L vs 3R in merus salivary vs coluzzii nurse cells 0.035  
territory axis b p-value for chromosome 2L vs X in merus salivary vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in merus salivary vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in merus salivary vs coluzzii nurse cells 0.000  
territory axis b p-value for chromosome 2L vs X in merus salivary vs merus nurse cells 0.000  
territory axis b p-value for chromosome 3L vs X in merus salivary vs merus nurse cells 0.000  
territory axis b p-value for chromosome 3R vs X in merus salivary vs merus nurse cells 0.000  
territory axis c p-value for chromosome 2L vs X in gambiae salivary gland vs gambiae salivary gland 0.001  
territory axis c p-value for chromosome 3L vs X in gambiae salivary gland vs gambiae salivary gland 0.000  
territory axis c p-value for chromosome 3R vs X in gambiae salivary gland vs gambiae salivary gland 0.001  
territory axis c p-value for chromosome 2L vs 3R in gambiae salivary gland vs coluzzii salivary gland 0.009  
territory axis c p-value for chromosome 2L vs X in gambiae salivary gland vs coluzzii salivary gland 0.000  
territory axis c p-value for chromosome 3L vs 3R in gambiae salivary gland vs coluzzii salivary gland 0.030  
territory axis c p-value for chromosome 3L vs X in gambiae salivary gland vs coluzzii salivary gland 0.000  
territory axis c p-value for chromosome 3R vs X in gambiae salivary gland vs coluzzii salivary gland 0.000  
territory axis c p-value for chromosome 2L vs 3R in gambiae salivary gland vs merus salivary gland 0.043  
territory axis c p-value for chromosome 2L vs X in gambiae salivary gland vs merus salivary gland 0.000  
territory axis c p-value for chromosome 3L vs X in gambiae salivary gland vs merus salivary gland 0.000



territory axis c p-value for chromosome 3R vs X in gambiae salivary gland vs merus salivary gland 0.000  
territory axis c p-value for chromosome 2L vs X in coluzzii salivary gland vs gambiae salivary gland 0.001  
territory axis c p-value for chromosome 3L vs X in coluzzii salivary gland vs gambiae salivary gland 0.002  
territory axis c p-value for chromosome 3R vs X in coluzzii salivary gland vs gambiae salivary gland 0.000  
territory axis c p-value for chromosome 2L vs X in coluzzii salivary gland vs coluzzii salivary gland 0.001  
territory axis c p-value for chromosome 3L vs X in coluzzii salivary gland vs coluzzii salivary gland 0.001  
territory axis c p-value for chromosome 3R vs X in coluzzii salivary gland vs coluzzii salivary gland 0.000  
territory axis c p-value for chromosome 2L vs X in coluzzii salivary gland vs merus salivary gland 0.000  
territory axis c p-value for chromosome 3L vs X in coluzzii salivary gland vs merus salivary gland 0.000  
territory axis c p-value for chromosome 3R vs X in coluzzii salivary gland vs merus salivary gland 0.000  
territory axis c p-value for chromosome 2L vs X in merus salivary gland vs gambiae salivary gland 0.000  
territory axis c p-value for chromosome 3L vs X in merus salivary gland vs gambiae salivary gland 0.000  
territory axis c p-value for chromosome 3R vs X in merus salivary gland vs gambiae salivary gland 0.000  
territory axis c p-value for chromosome 2L vs X in merus salivary gland vs coluzzii salivary gland 0.000  
territory axis c p-value for chromosome 3L vs X in merus salivary gland vs coluzzii salivary gland 0.000  
territory axis c p-value for chromosome 3R vs X in merus salivary gland vs coluzzii salivary gland 0.000  
territory axis c p-value for chromosome 2L vs X in merus salivary gland vs merus salivary gland 0.000  
territory axis c p-value for chromosome 3L vs X in merus salivary gland vs merus salivary gland 0.000  
territory axis c p-value for chromosome 3R vs X in merus salivary gland vs merus salivary gland 0.000  
territory axis c p-value for chromosome 2L vs X in gambiae nurse cells vs gambiae nurse cells 0.000  
territory axis c p-value for chromosome 3L vs X in gambiae nurse cells vs gambiae nurse cells 0.001  
territory axis c p-value for chromosome 3R vs X in gambiae nurse cells vs gambiae nurse cells 0.000  
territory axis c p-value for chromosome 2L vs X in gambiae nurse cells vs coluzzii nurse cells 0.000  
territory axis c p-value for chromosome 3L vs X in gambiae nurse cells vs coluzzii nurse cells 0.003  
territory axis c p-value for chromosome 3R vs X in gambiae nurse cells vs coluzzii nurse cells 0.000  
territory axis c p-value for chromosome 2L vs X in gambiae nurse cells vs merus nurse cells 0.000  
territory axis c p-value for chromosome 3L vs X in gambiae nurse cells vs merus nurse cells 0.007  
territory axis c p-value for chromosome 3R vs X in gambiae nurse cells vs merus nurse cells 0.001  
territory axis c p-value for chromosome 2L vs X in coluzzii nurse cells vs gambiae nurse cells 0.000  
territory axis c p-value for chromosome 3L vs X in coluzzii nurse cells vs gambiae nurse cells 0.000

territory axis c p-value for chromosome 3R vs X in coluzzii nurse cells vs gambiae nurse cells 0.000  
territory axis c p-value for chromosome 2L vs X in coluzzii nurse cells vs coluzzii nurse cells 0.000  
territory axis c p-value for chromosome 3L vs X in coluzzii nurse cells vs coluzzii nurse cells 0.000  
territory axis c p-value for chromosome 3R vs X in coluzzii nurse cells vs coluzzii nurse cells 0.000  
territory axis c p-value for chromosome 2L vs X in coluzzii nurse cells vs merus nurse cells 0.001  
territory axis c p-value for chromosome 3L vs X in coluzzii nurse cells vs merus nurse cells 0.003  
territory axis c p-value for chromosome 3R vs X in coluzzii nurse cells vs merus nurse cells 0.002  
territory axis c p-value for chromosome 2L vs 3L in merus nurse cells vs gambiae nurse cells 0.023  
territory axis c p-value for chromosome 2L vs 3R in merus nurse cells vs gambiae nurse cells 0.021  
territory axis c p-value for chromosome 2L vs X in merus nurse cells vs gambiae nurse cells 0.000  
territory axis c p-value for chromosome 3L vs X in merus nurse cells vs gambiae nurse cells 0.001  
territory axis c p-value for chromosome 3R vs X in merus nurse cells vs gambiae nurse cells 0.000  
territory axis c p-value for chromosome 2L vs X in merus nurse cells vs coluzzii nurse cells 0.000  
territory axis c p-value for chromosome 3L vs X in merus nurse cells vs coluzzii nurse cells 0.002  
territory axis c p-value for chromosome 3R vs X in merus nurse cells vs coluzzii nurse cells 0.000  
territory axis c p-value for chromosome 2L vs 3L in merus nurse cells vs merus nurse cells 0.013  
territory axis c p-value for chromosome 2L vs X in merus nurse cells vs merus nurse cells 0.000  
territory axis c p-value for chromosome 3L vs X in merus nurse cells vs merus nurse cells 0.008  
territory axis c p-value for chromosome 3R vs X in merus nurse cells vs merus nurse cells 0.000  
territory axis c p-value for chromosome 2L vs X in gambiae salivary vs gambiae nurse cells 0.000  
territory axis c p-value for chromosome 3L vs X in gambiae salivary vs gambiae nurse cells 0.000  
territory axis c p-value for chromosome 3R vs X in gambiae salivary vs gambiae nurse cells 0.000  
territory axis c p-value for chromosome 2L vs X in gambiae salivary vs coluzzii nurse cells 0.000  
territory axis c p-value for chromosome 3L vs X in gambiae salivary vs coluzzii nurse cells 0.000  
territory axis c p-value for chromosome 3R vs X in gambiae salivary vs coluzzii nurse cells 0.001  
territory axis c p-value for chromosome 2L vs X in gambiae salivary vs merus nurse cells 0.001  
territory axis c p-value for chromosome 3L vs X in gambiae salivary vs merus nurse cells 0.001  
territory axis c p-value for chromosome 3R vs X in gambiae salivary vs merus nurse cells 0.001  
territory axis c p-value for chromosome 2L vs X in coluzzii salivary vs gambiae nurse cells 0.000  
territory axis c p-value for chromosome 3L vs X in coluzzii salivary vs gambiae nurse cells 0.000

territory axis c p-value for chromosome 3R vs X in coluzzii salivary vs gambiae nurse cells 0.000  
territory axis c p-value for chromosome 2L vs X in coluzzii salivary vs coluzzii nurse cells 0.001  
territory axis c p-value for chromosome 3L vs X in coluzzii salivary vs coluzzii nurse cells 0.001  
territory axis c p-value for chromosome 3R vs X in coluzzii salivary vs coluzzii nurse cells 0.000  
territory axis c p-value for chromosome 2L vs X in coluzzii salivary vs merus nurse cells 0.001  
territory axis c p-value for chromosome 3L vs X in coluzzii salivary vs merus nurse cells 0.003  
territory axis c p-value for chromosome 3R vs X in coluzzii salivary vs merus nurse cells 0.000  
territory axis c p-value for chromosome 2L vs X in merus salivary vs gambiae nurse cells 0.000  
territory axis c p-value for chromosome 3L vs X in merus salivary vs gambiae nurse cells 0.000  
territory axis c p-value for chromosome 3R vs X in merus salivary vs gambiae nurse cells 0.000  
territory axis c p-value for chromosome 2L vs X in merus salivary vs coluzzii nurse cells 0.000  
territory axis c p-value for chromosome 3L vs X in merus salivary vs coluzzii nurse cells 0.000  
territory axis c p-value for chromosome 3R vs X in merus salivary vs coluzzii nurse cells 0.000  
territory axis c p-value for chromosome 2L vs X in merus salivary vs merus nurse cells 0.000  
territory axis c p-value for chromosome 3L vs X in merus salivary vs merus nurse cells 0.000  
territory axis c p-value for chromosome 3R vs X in merus salivary vs merus nurse cells 0.000

## **Q2: Do chromosome territories differ in volume?**

territory volume p-value for chromosome 2L-X in gambiae salivary gland vs gambiae salivary gland 0.000  
territory volume p-value for chromosome 3L-X in gambiae salivary gland vs gambiae salivary gland 0.000  
territory volume p-value for chromosome 3R-X in gambiae salivary gland vs gambiae salivary gland 0.000  
territory volume p-value for chromosome 2L-3R in gambiae salivary gland vs coluzzii salivary gland 0.001  
territory volume p-value for chromosome 2L-X in gambiae salivary gland vs coluzzii salivary gland 0.000  
territory volume p-value for chromosome 3L-3R in gambiae salivary gland vs coluzzii salivary gland 0.018  
territory volume p-value for chromosome 3L-X in gambiae salivary gland vs coluzzii salivary gland 0.000  
territory volume p-value for chromosome 3R-X in gambiae salivary gland vs coluzzii salivary gland 0.001  
territory volume p-value for chromosome 2L-3R in gambiae salivary gland vs merus salivary gland 0.019  
territory volume p-value for chromosome 2L-X in gambiae salivary gland vs merus salivary gland 0.000  
territory volume p-value for chromosome 3L-X in gambiae salivary gland vs merus salivary gland 0.000  
territory volume p-value for chromosome 3R-X in gambiae salivary gland vs merus salivary gland 0.000

territory volume p-value for chromosome 2L-X in coluzzii salivary gland vs gambiae salivary gland 0.000  
territory volume p-value for chromosome 3L-X in coluzzii salivary gland vs gambiae salivary gland 0.000  
territory volume p-value for chromosome 3R-X in coluzzii salivary gland vs gambiae salivary gland 0.000  
territory volume p-value for chromosome 2L-X in coluzzii salivary gland vs coluzzii salivary gland 0.000  
territory volume p-value for chromosome 3L-3R in coluzzii salivary gland vs coluzzii salivary gland 0.018  
territory volume p-value for chromosome 3L-X in coluzzii salivary gland vs coluzzii salivary gland 0.000  
territory volume p-value for chromosome 3R-X in coluzzii salivary gland vs coluzzii salivary gland 0.000  
territory volume p-value for chromosome 2L-X in coluzzii salivary gland vs merus salivary gland 0.000  
territory volume p-value for chromosome 3L-X in coluzzii salivary gland vs merus salivary gland 0.000  
territory volume p-value for chromosome 3R-X in coluzzii salivary gland vs merus salivary gland 0.000  
territory volume p-value for chromosome 2L-X in merus salivary gland vs gambiae salivary gland 0.000  
territory volume p-value for chromosome 3L-X in merus salivary gland vs gambiae salivary gland 0.000  
territory volume p-value for chromosome 3R-X in merus salivary gland vs gambiae salivary gland 0.000  
territory volume p-value for chromosome 2L-3L in merus salivary gland vs coluzzii salivary gland 0.035  
territory volume p-value for chromosome 2L-X in merus salivary gland vs coluzzii salivary gland 0.000  
territory volume p-value for chromosome 3L-3R in merus salivary gland vs coluzzii salivary gland 0.017  
territory volume p-value for chromosome 3L-X in merus salivary gland vs coluzzii salivary gland 0.000  
territory volume p-value for chromosome 3R-X in merus salivary gland vs coluzzii salivary gland 0.000  
territory volume p-value for chromosome 2L-X in merus salivary gland vs merus salivary gland 0.000  
territory volume p-value for chromosome 3L-X in merus salivary gland vs merus salivary gland 0.000  
territory volume p-value for chromosome 3R-X in merus salivary gland vs merus salivary gland 0.000  
territory volume p-value for chromosome 2L-X in gambiae nurse cells vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 3L-X in gambiae nurse cells vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 3R-X in gambiae nurse cells vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 2L-X in gambiae nurse cells vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 3L-X in gambiae nurse cells vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 3R-X in gambiae nurse cells vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 2L-3L in gambiae nurse cells vs merus nurse cells 0.025  
territory volume p-value for chromosome 2L-X in gambiae nurse cells vs merus nurse cells 0.000  
territory volume p-value for chromosome 3L-X in gambiae nurse cells vs merus nurse cells 0.000

territory volume p-value for chromosome 3R-X in gambiae nurse cells vs merus nurse cells 0.000  
territory volume p-value for chromosome 2L-X in coluzzii nurse cells vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 3L-X in coluzzii nurse cells vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 3R-X in coluzzii nurse cells vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 2L-3L in coluzzii nurse cells vs coluzzii nurse cells 0.012  
territory volume p-value for chromosome 2L-X in coluzzii nurse cells vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 3L-X in coluzzii nurse cells vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 3R-X in coluzzii nurse cells vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 2L-3L in coluzzii nurse cells vs merus nurse cells 0.007  
territory volume p-value for chromosome 2L-X in coluzzii nurse cells vs merus nurse cells 0.000  
territory volume p-value for chromosome 3L-3R in coluzzii nurse cells vs merus nurse cells 0.041  
territory volume p-value for chromosome 3L-X in coluzzii nurse cells vs merus nurse cells 0.000  
territory volume p-value for chromosome 3R-X in coluzzii nurse cells vs merus nurse cells 0.000  
territory volume p-value for chromosome 2L-3L in merus nurse cells vs gambiae nurse cells 0.001  
territory volume p-value for chromosome 2L-3R in merus nurse cells vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 2L-X in merus nurse cells vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 3L-X in merus nurse cells vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 3R-X in merus nurse cells vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 2L-3L in merus nurse cells vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 2L-3R in merus nurse cells vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 2L-X in merus nurse cells vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 3L-X in merus nurse cells vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 3R-X in merus nurse cells vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 2L-3L in merus nurse cells vs merus nurse cells 0.000  
territory volume p-value for chromosome 2L-3R in merus nurse cells vs merus nurse cells 0.041  
territory volume p-value for chromosome 2L-X in merus nurse cells vs merus nurse cells 0.000  
territory volume p-value for chromosome 3L-3R in merus nurse cells vs merus nurse cells 0.017  
territory volume p-value for chromosome 3L-X in merus nurse cells vs merus nurse cells 0.000  
territory volume p-value for chromosome 3R-X in merus nurse cells vs merus nurse cells 0.000  
territory volume p-value for chromosome 2L-X in gambiae salivary vs gambiae nurse cells 0.000

territory volume p-value for chromosome 3L-X in gambiae salivary vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 3R-X in gambiae salivary vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 2L-X in gambiae salivary vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 3L-X in gambiae salivary vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 3R-X in gambiae salivary vs coluzzii nurse cells 0.001  
territory volume p-value for chromosome 2L-3R in gambiae salivary vs merus nurse cells 0.040  
territory volume p-value for chromosome 2L-X in gambiae salivary vs merus nurse cells 0.000  
territory volume p-value for chromosome 3L-X in gambiae salivary vs merus nurse cells 0.000  
territory volume p-value for chromosome 3R-X in gambiae salivary vs merus nurse cells 0.000  
territory volume p-value for chromosome 2L-X in coluzzii salivary vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 3L-X in coluzzii salivary vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 3R-X in coluzzii salivary vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 2L-3L in coluzzii salivary vs coluzzii nurse cells 0.006  
territory volume p-value for chromosome 2L-3R in coluzzii salivary vs coluzzii nurse cells 0.033  
territory volume p-value for chromosome 2L-X in coluzzii salivary vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 3L-X in coluzzii salivary vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 3R-X in coluzzii salivary vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 2L-3L in coluzzii salivary vs merus nurse cells 0.004  
territory volume p-value for chromosome 2L-X in coluzzii salivary vs merus nurse cells 0.000  
territory volume p-value for chromosome 3L-X in coluzzii salivary vs merus nurse cells 0.000  
territory volume p-value for chromosome 3R-X in coluzzii salivary vs merus nurse cells 0.000  
territory volume p-value for chromosome 2L-3L in merus salivary vs gambiae nurse cells 0.044  
territory volume p-value for chromosome 2L-3R in merus salivary vs gambiae nurse cells 0.022  
territory volume p-value for chromosome 2L-X in merus salivary vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 3L-X in merus salivary vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 3R-X in merus salivary vs gambiae nurse cells 0.000  
territory volume p-value for chromosome 2L-3L in merus salivary vs coluzzii nurse cells 0.001  
territory volume p-value for chromosome 2L-3R in merus salivary vs coluzzii nurse cells 0.010  
territory volume p-value for chromosome 2L-X in merus salivary vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 3L-X in merus salivary vs coluzzii nurse cells 0.000

territory volume p-value for chromosome 3R-X in merus salivary vs coluzzii nurse cells 0.000  
territory volume p-value for chromosome 2L-3L in merus salivary vs merus nurse cells 0.000  
territory volume p-value for chromosome 2L-X in merus salivary vs merus nurse cells 0.000  
territory volume p-value for chromosome 3L-X in merus salivary vs merus nurse cells 0.000  
territory volume p-value for chromosome 3R-X in merus salivary vs merus nurse cells 0.000

**Q3: Do Chr-NE contact percentages differ among chromosome arms?**

NE contacts percent p-value for chromosome 3R vs X in gambiae salivary vs gambiae salivary 0.024  
NE contacts percent p-value for chromosome 3R vs X in gambiae salivary vs coluzzii salivary gland 0.020  
NE contacts percent p-value for chromosome 3L vs X in merus salivary vs gambiae salivary gland 0.027  
NE contacts percent p-value for chromosome 2L vs X in merus salivary vs coluzzii salivary gland 0.041  
NE contacts percent p-value for chromosome 3L vs X in merus salivary vs coluzzii salivary gland 0.028  
NE contacts percent p-value for chromosome 3L vs 3R in gambiae nurse cells vs gambiae nurse cells 0.005  
NE contacts percent p-value for chromosome 3R vs X in gambiae nurse cells vs coluzzii nurse cells 0.049  
NE contacts percent p-value for chromosome 2L vs 3R in gambiae salivary vs gambiae nurse cells 0.018  
NE contacts percent p-value for chromosome 3R vs X in gambiae salivary vs merus nurse cells 0.033  
NE contacts percent p-value for chromosome 2L vs 3R in coluzzii salivary vs gambiae nurse cells 0.002  
NE contacts percent p-value for chromosome 2L vs 3L in coluzzii salivary vs coluzzii nurse cells 0.011  
NE contacts percent p-value for chromosome 2L vs 3L in coluzzii salivary vs merus nurse cells 0.044  
NE contacts percent p-value for chromosome 2L vs 3R in merus salivary vs gambiae nurse cells 0.001  
NE contacts percent p-value for chromosome 3L vs 3R in merus salivary vs gambiae nurse cells 0.001  
NE contacts percent p-value for chromosome 2L vs 3L in merus salivary vs coluzzii nurse cells 0.012  
NE contacts percent p-value for chromosome 2L vs 3L in merus salivary vs merus nurse cells 0.021  
NE contacts percent p-value for chromosome 3L vs X in merus salivary vs merus nurse cells 0.040  
NE contacts percent p-value for chromosome 2L vs 3R in gambiae nurse cells vs gambiae salivary 0.020  
NE contacts percent p-value for chromosome 2L vs 3L in gambiae nurse cells vs merus salivary 0.023  
NE contacts percent p-value for chromosome 3R vs X in gambiae nurse cells vs merus salivary 0.010  
NE contacts percent p-value for chromosome 2L vs 3R in coluzzii nurse cells vs gambiae salivary 0.022  
NE contacts percent p-value for chromosome 3L vs 3R in coluzzii nurse cells vs gambiae salivary 0.009  
NE contacts percent p-value for chromosome 3L vs 3R in coluzzii nurse cells vs coluzzii salivary 0.041

NE contacts percent p-value for chromosome 2L vs 3L in coluzzii nurse cells vs merus salivary 0.029  
NE contacts percent p-value for chromosome 2L vs 3R in merus nurse cells vs gambiae salivary 0.013  
NE contacts percent p-value for chromosome 3L vs 3R in merus nurse cells vs gambiae salivary 0.009  
NE contacts percent p-value for chromosome 3L vs 3R in merus nurse cells vs coluzzii salivary 0.045  
NE contacts percent p-value for chromosome 2L vs 3L in merus nurse cells vs merus salivary 0.019

**Q4: Do autosomal arms and the X chromosome differ by the chromosome decompaction factor (CDF)?**

The CDF p-value for chromosome 2L vs X in coluzzii salivary 0.001  
The CDF p-value for chromosome 3R vs X in coluzzii salivary 0.001  
The CDF p-value for chromosome 3L vs X in coluzzii salivary 0.011  
The CDF p-value for chromosome 2L vs X in coluzzii nurse cells 0.002  
The CDF p-value for chromosome 3R vs X in coluzzii nurse cells 0.158  
The CDF p-value for chromosome 3L vs X in gambiae nurse cells 0.009  
The CDF p-value for chromosome 2L vs X in gambiae salivary 0.012  
The CDF p-value for chromosome 3R vs X in gambiae salivary 0.008  
The CDF p-value for chromosome 3L vs X in gambiae salivary 0.004  
The CDF p-value for chromosome 2L vs X in gambiae nurse cells 0.084  
The CDF p-value for chromosome 3R vs X in gambiae nurse cells 0.468  
The CDF p-value for chromosome 3L vs X in gambiae nurse cells 0.038  
The CDF p-value for chromosome 2L vs X in merus salivary 0.000  
The CDF p-value for chromosome 3R vs X in merus salivary 0.000  
The CDF p-value for chromosome 3L vs X in merus salivary 0.000  
The CDF p-value for chromosome 2L vs X in merus nurse cells 0.006  
The CDF p-value for chromosome 3R vs X in merus nurse cells 0.005  
The CDF p-value for chromosome 3L vs X in merus nurse cells 0.033