

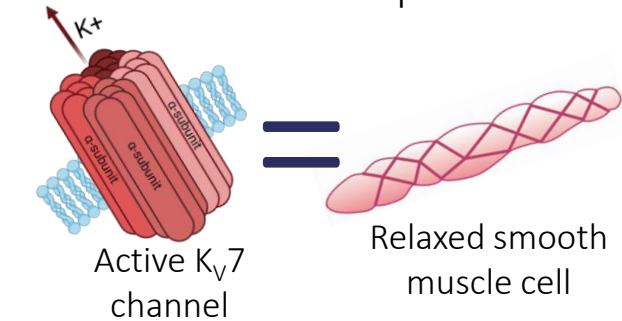
M13: Characterisation of K_v7 channels in human uterine smooth muscle as a potential target for preterm birth prevention

Jenna M. Sajous, Kim C. Jonas, Rachel M. Tribe. Department of Women and Children's Health

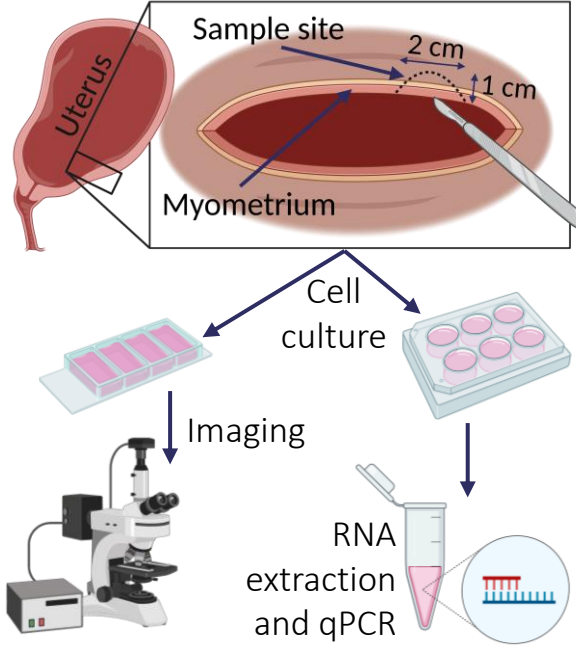
Background

K_v7 channels, voltage-gated potassium channels:

- ✓ Cell repolarisation
- ✓ Maintain smooth muscle cell membrane potential



Methods



Results

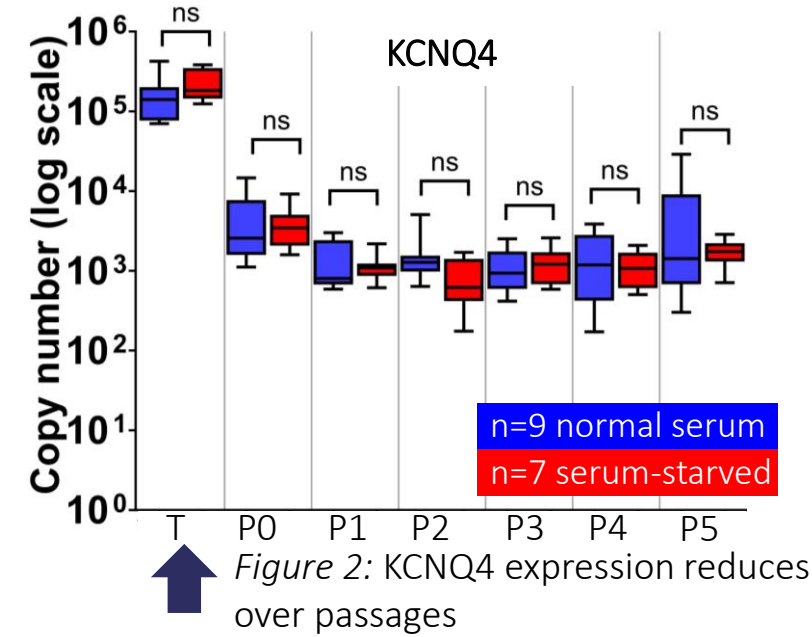
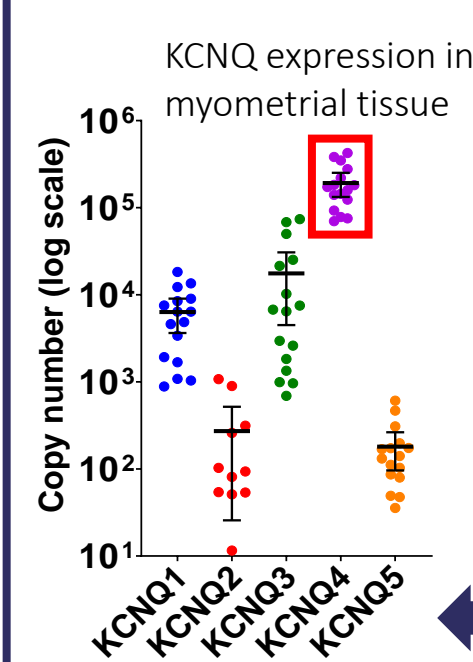


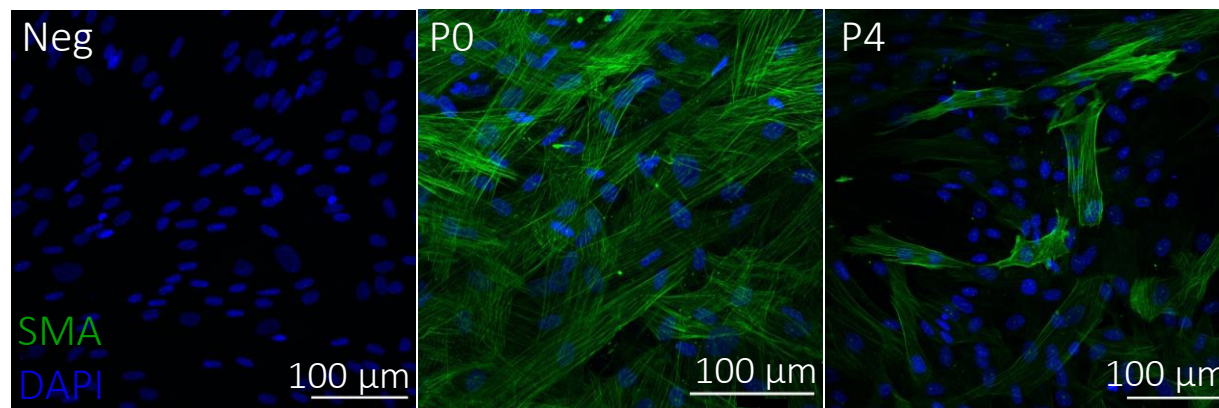
Figure 1: KCNQ4 is the predominately expressed subunit in myometrial tissue (qPCR)

Figure 2: KCNQ4 expression reduces over passages

Aim

Assess myometrial cell culture model to determine K_v7 profile and suitability for functional studies.

Figure 3: Myometrial cells reduce smooth muscle actin (SMA) from P0 to P4



Conclusion

P0 cells exhibits closest KCNQ and SMA expression to tissue; best for functional studies. Later passages convert to synthetic phenotype despite serum deprivation; more suitable for over expression studies.

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