

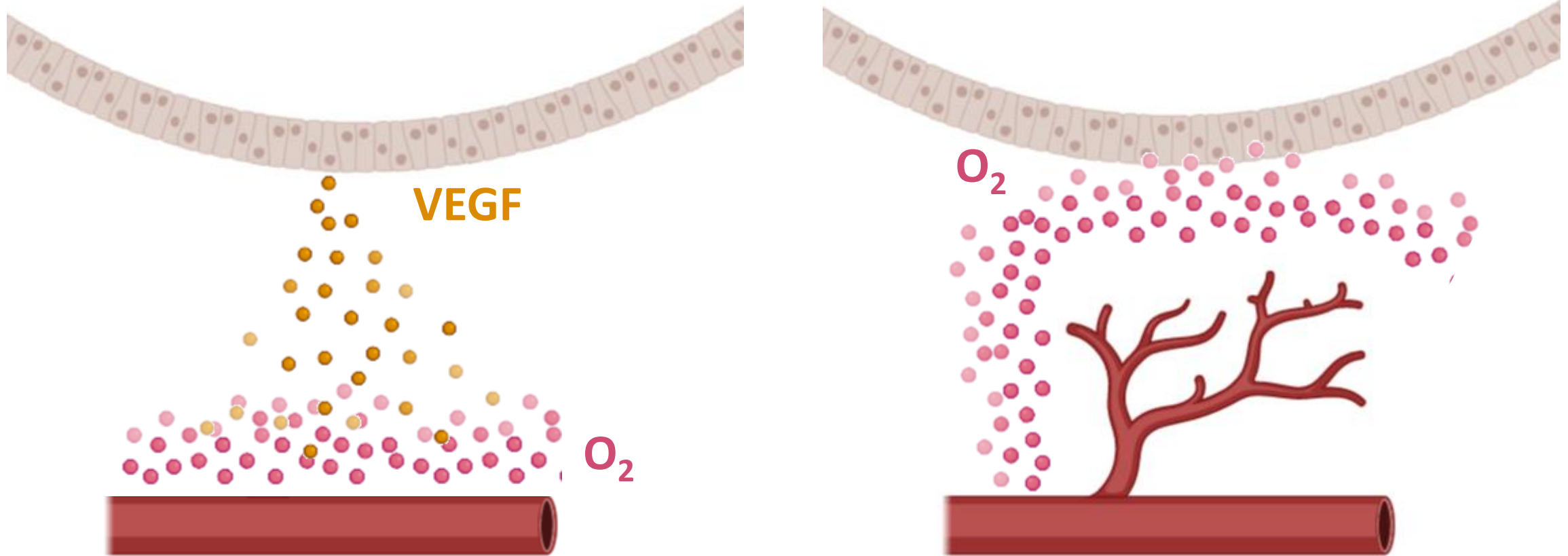
Introduction sur les voies de signalisation vasculaires

Nicolas RICARD, PhD

INSERM UMR 1292 BioSanté Grenoble

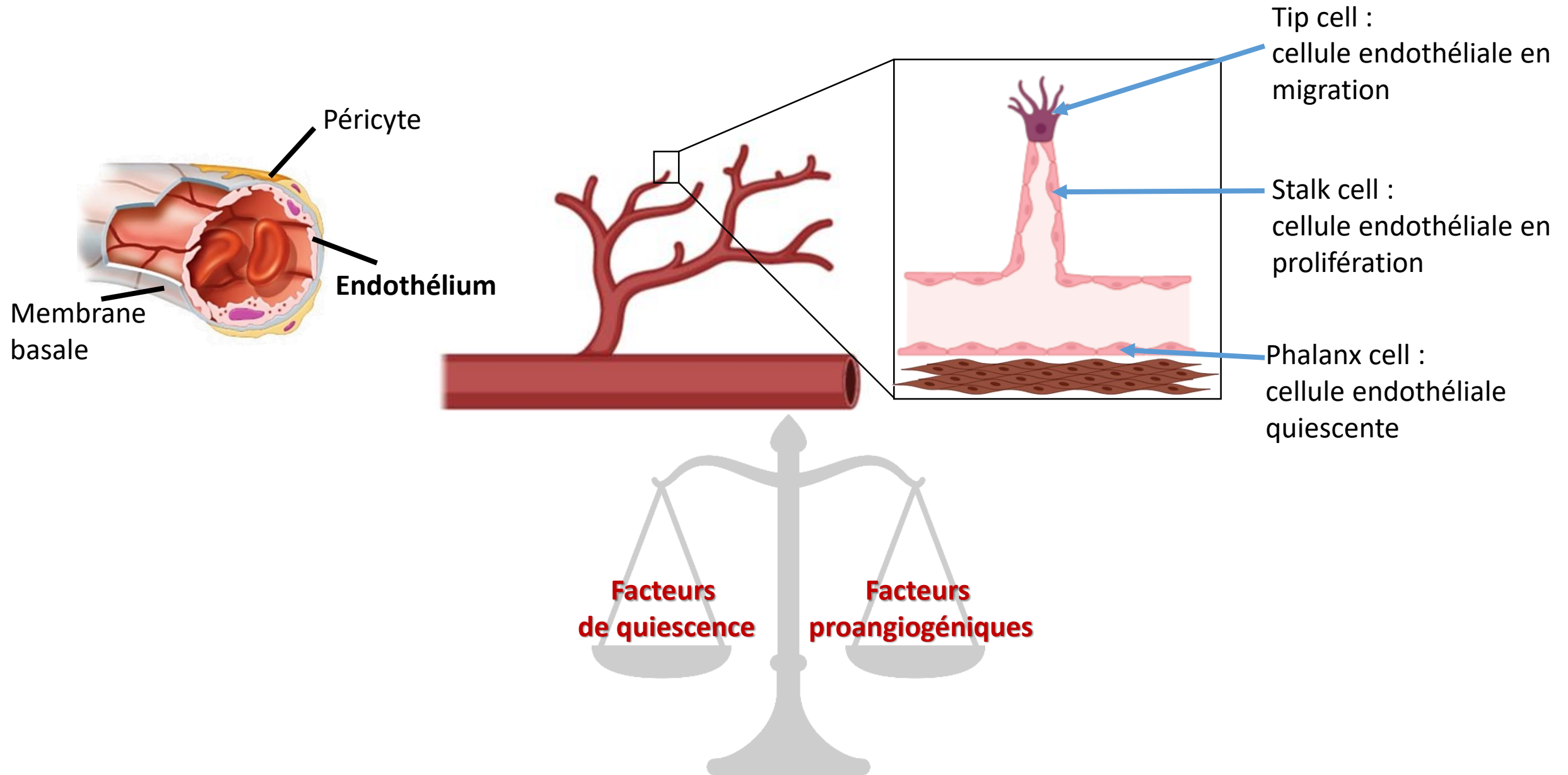
Equipe BAL – S. Bailly

Qu'est ce que l'angiogenèse ?

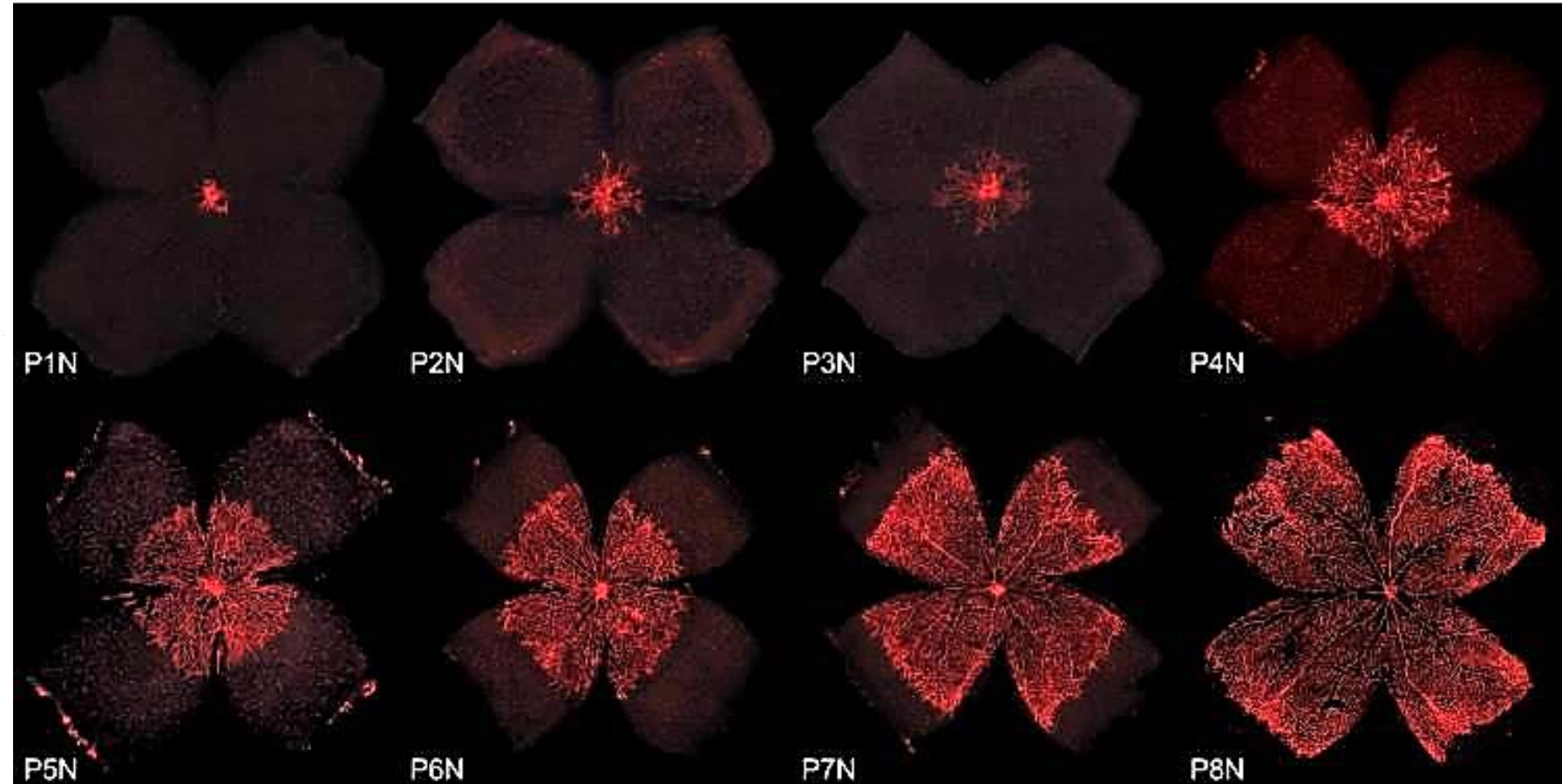


L'angiogenèse est la formation de nouveaux vaisseaux sanguins à partir de vaisseaux sanguins préexistants.

L'angiogenèse par bourgeonnement

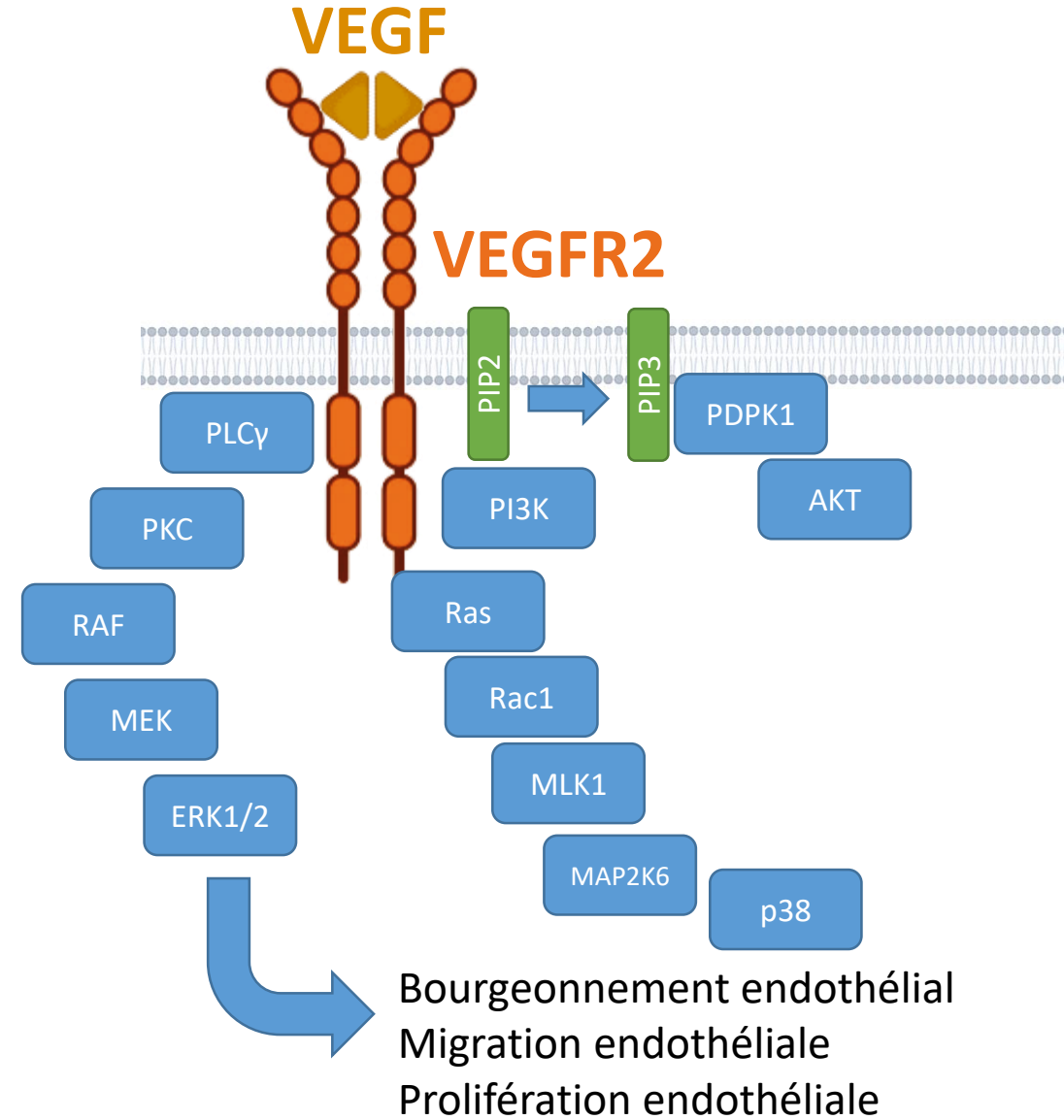
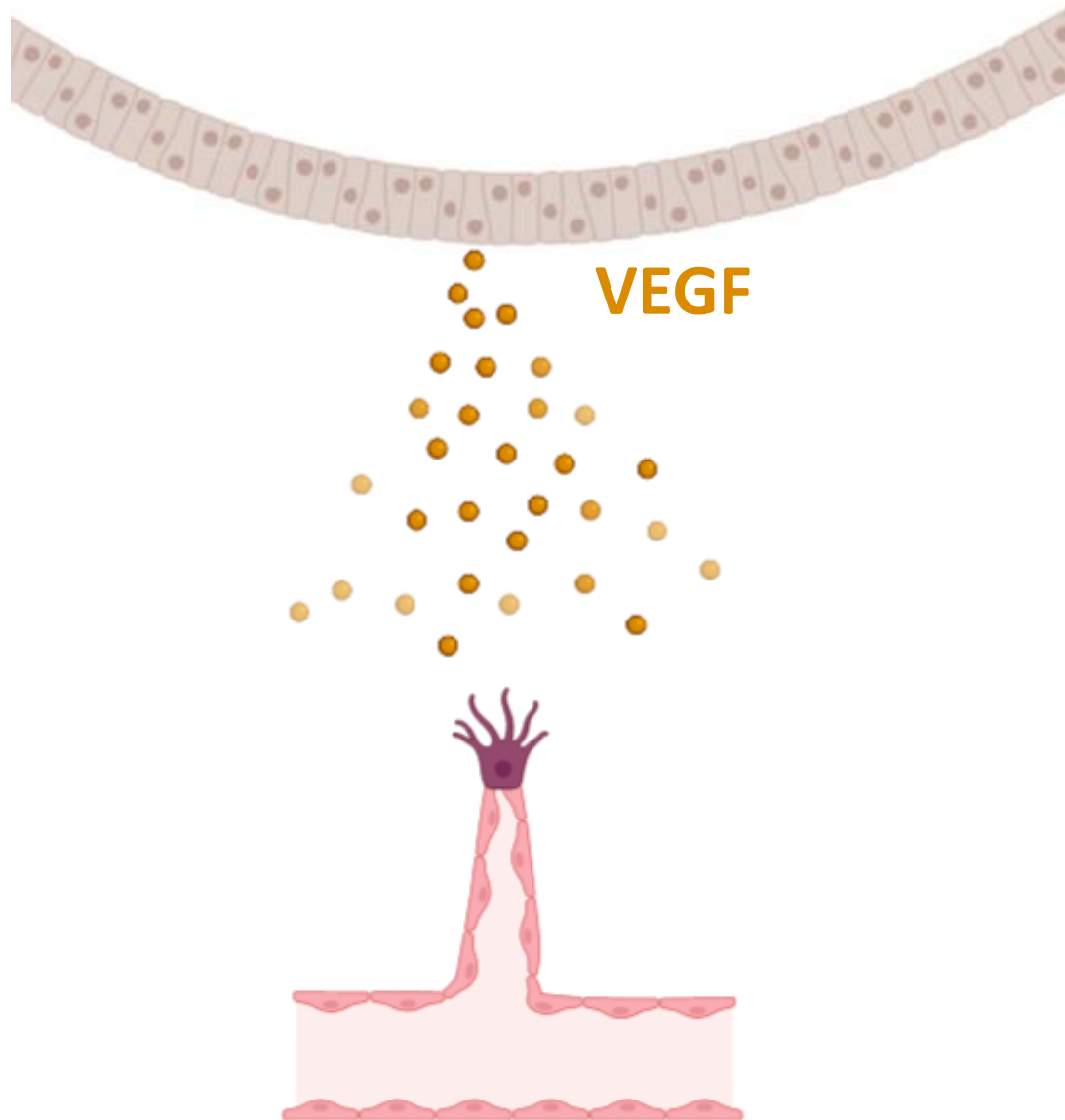


Un modèle d'angiogenèse in vivo : la rétine de la souris

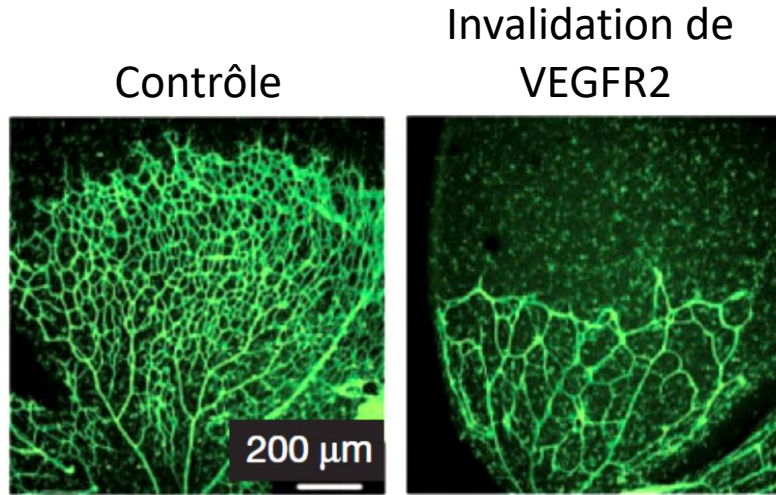


Stahl et al, *Invest Ophthalmol Vis Sci*, 2010

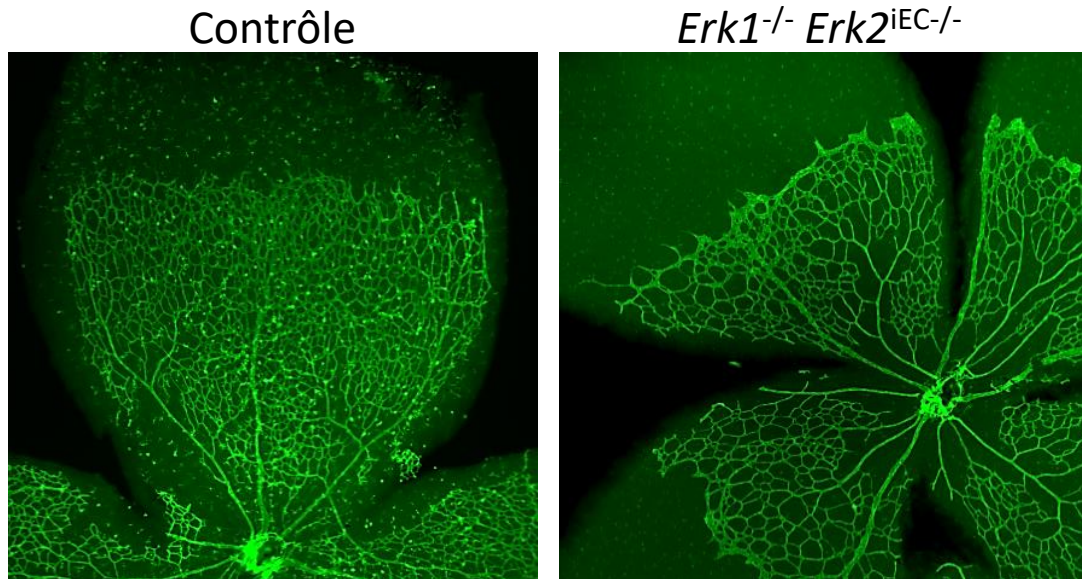
Voie du Vascular endothelial growth factor (VEGF)



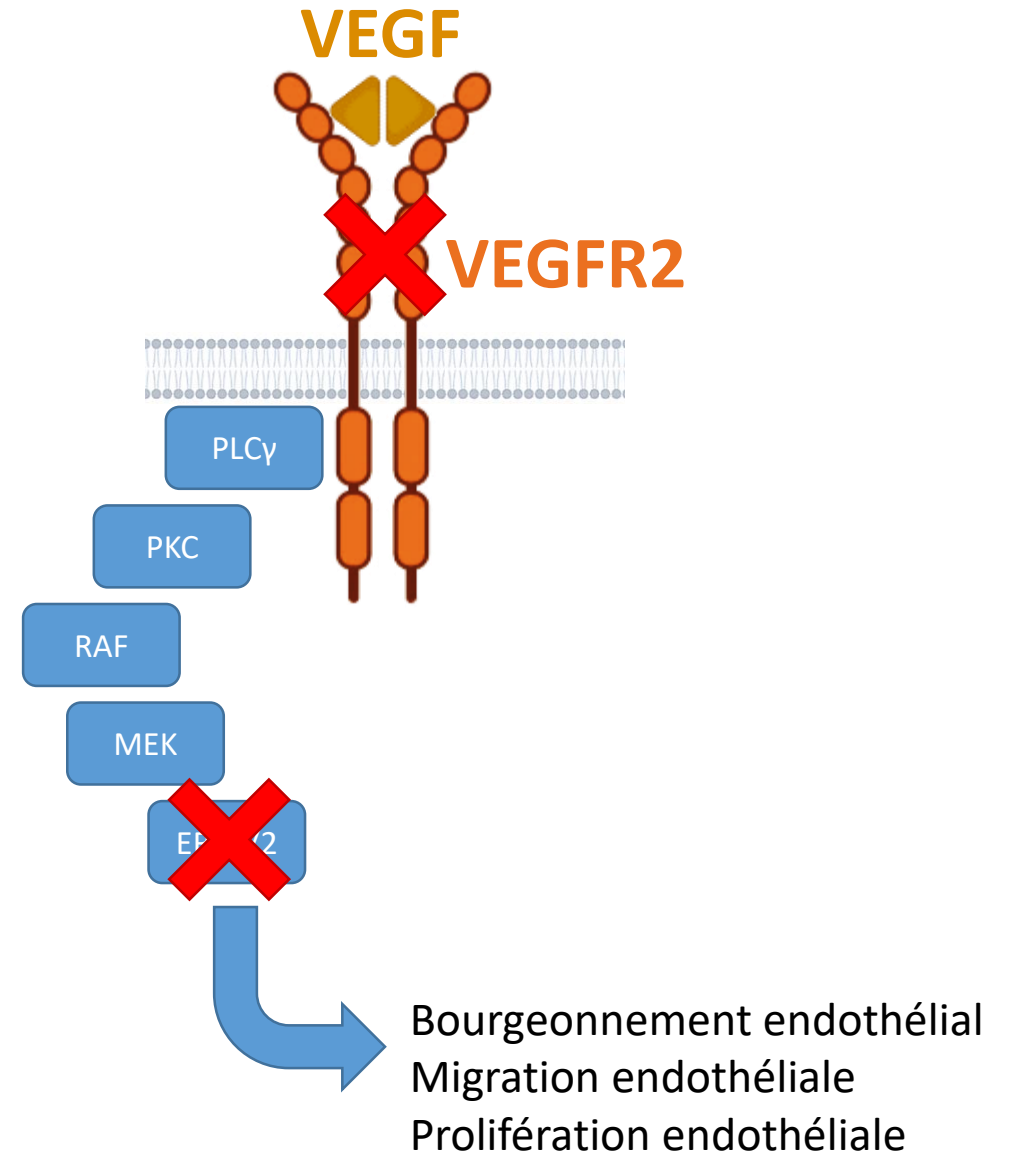
Voie du Vascular endothelial growth factor (VEGF)



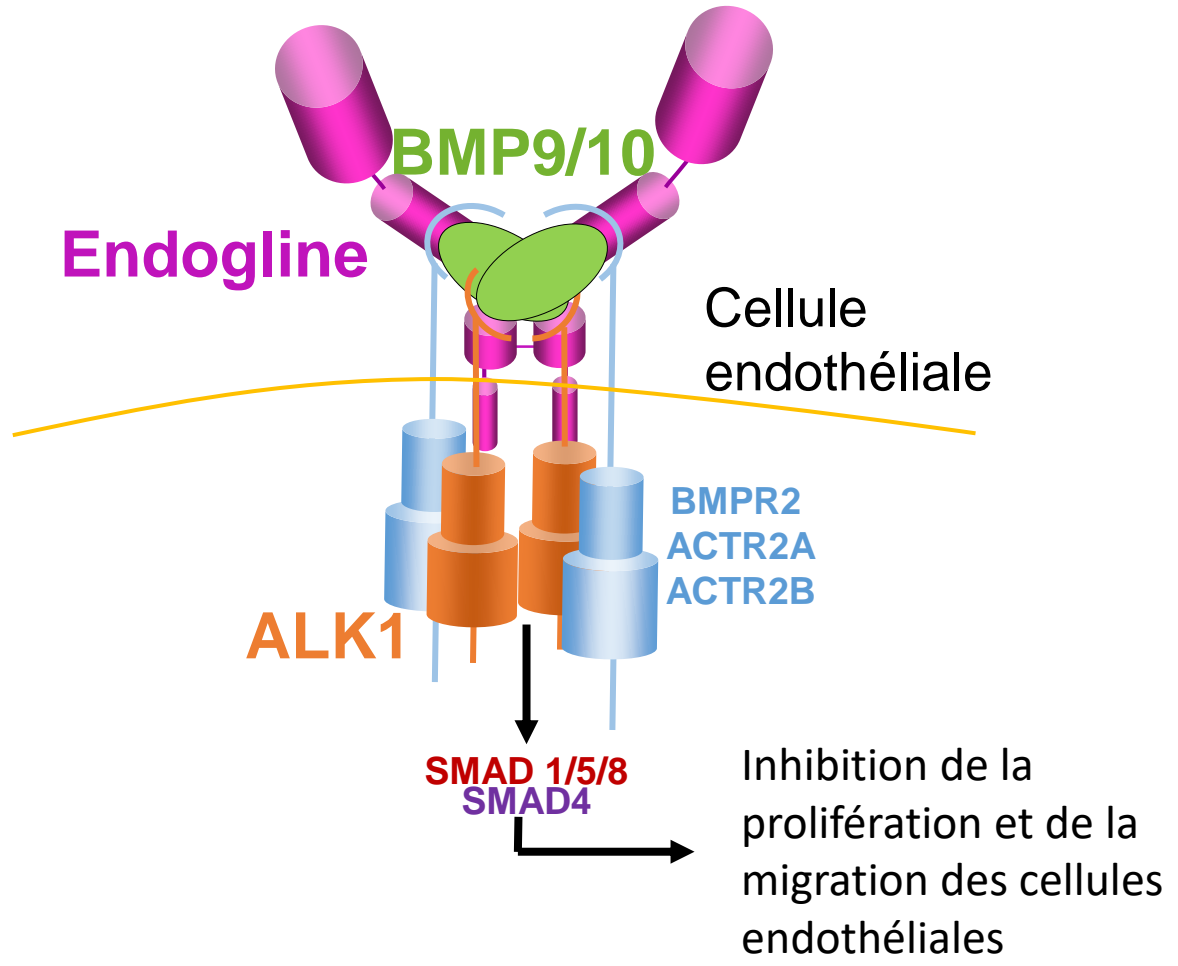
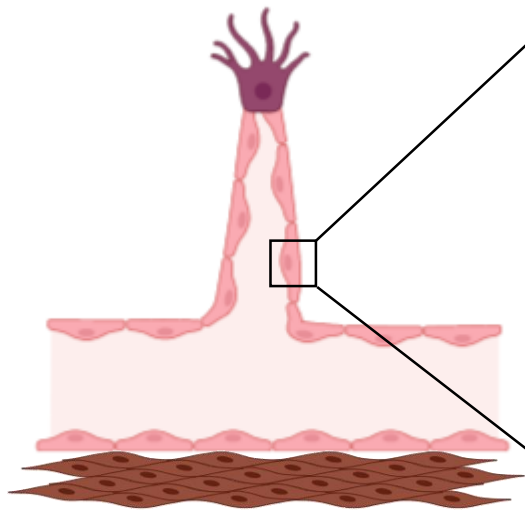
Benedito et al, Nature, 2012



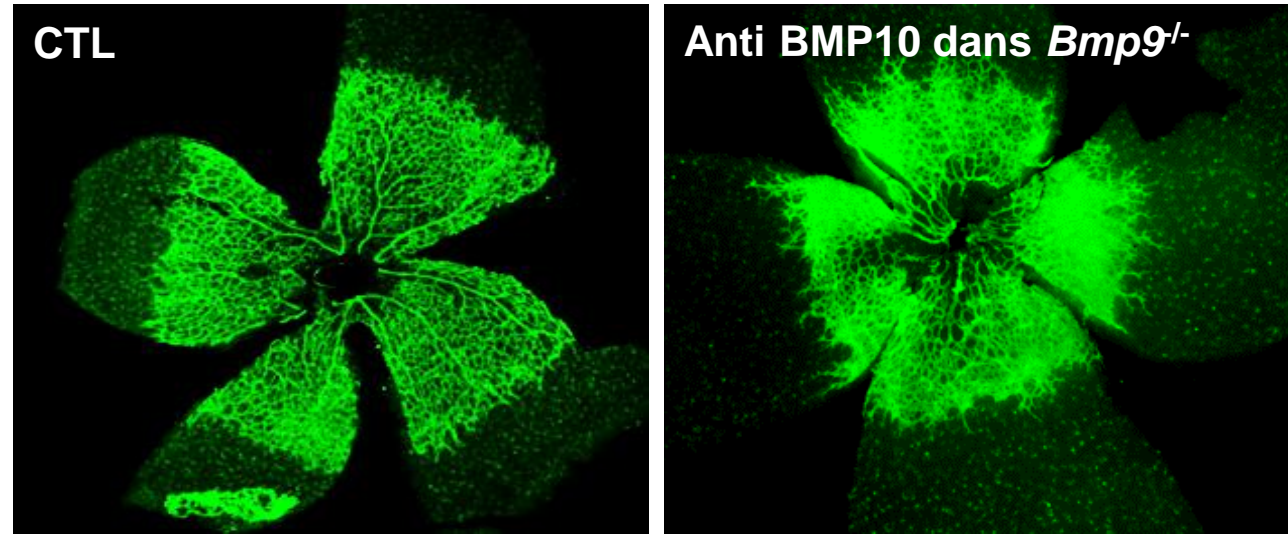
Données non publiées



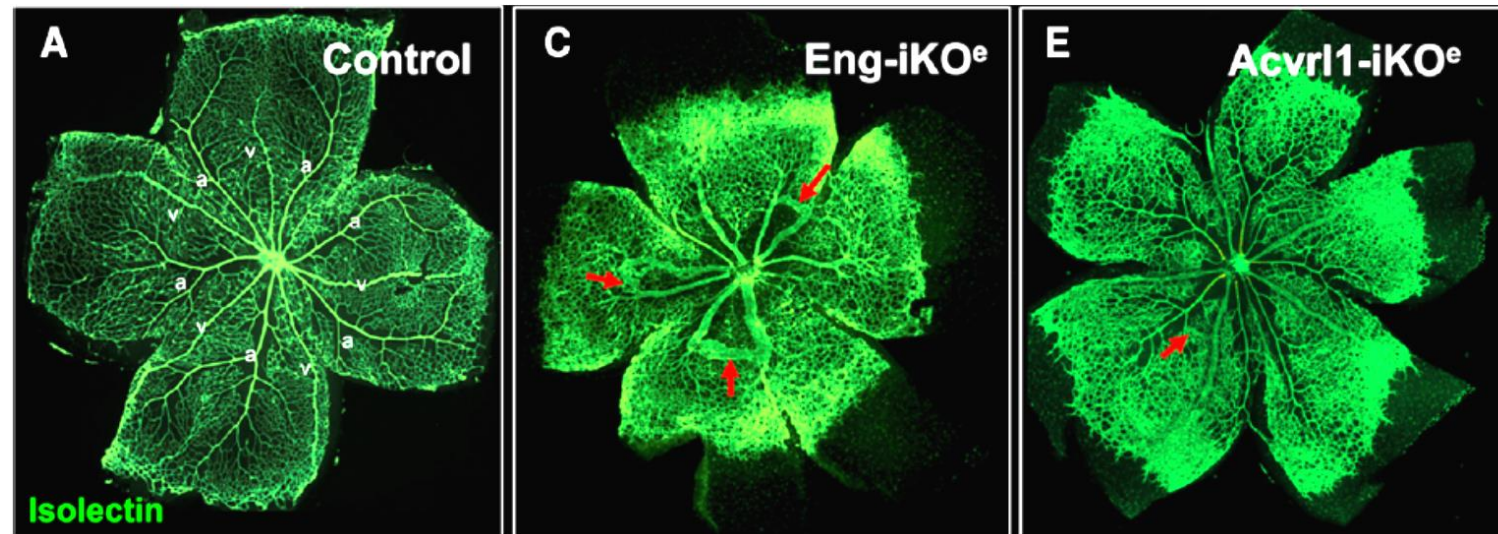
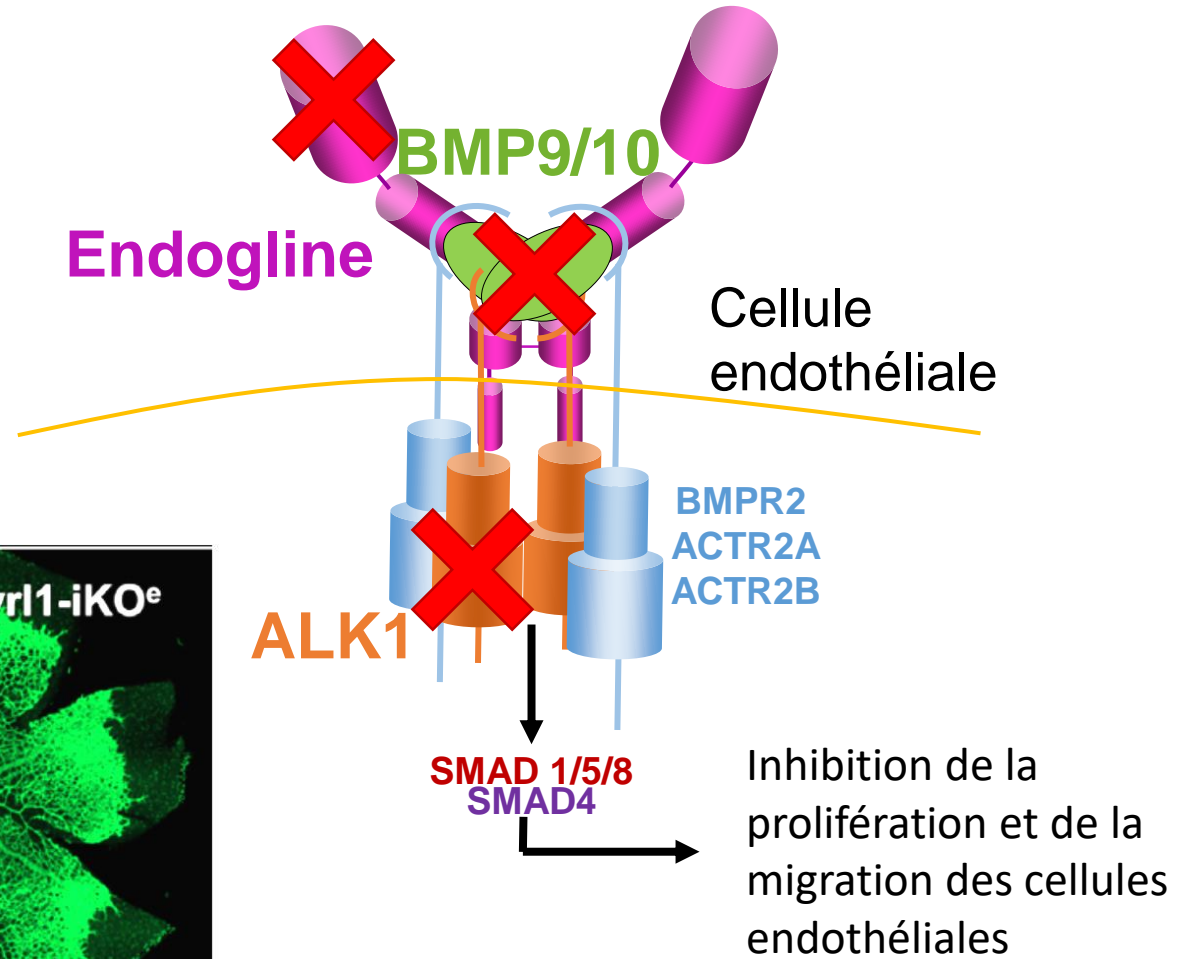
La voie des Bone Morphogenetic Proteins (BMP)



La voie des Bone Morphogenetic Proteins (BMP)

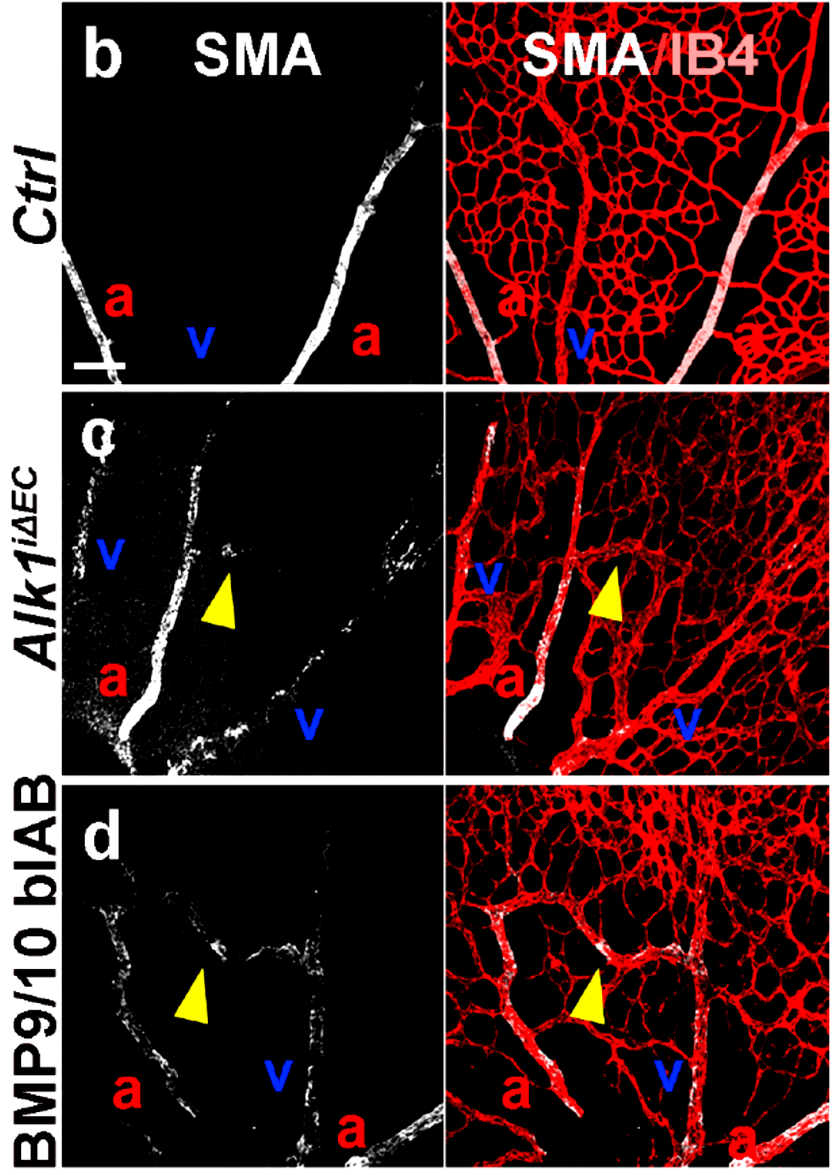


Ricard et al, Blood, 2012

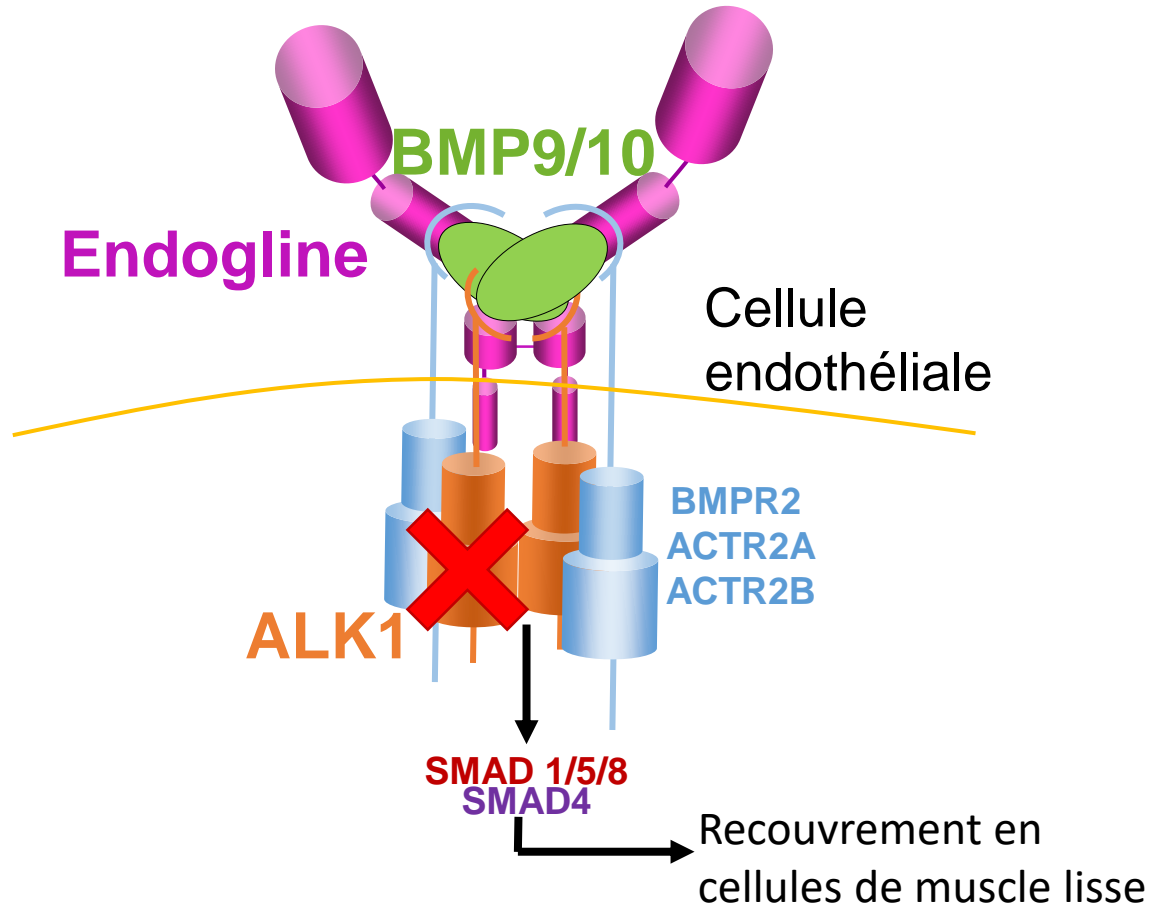


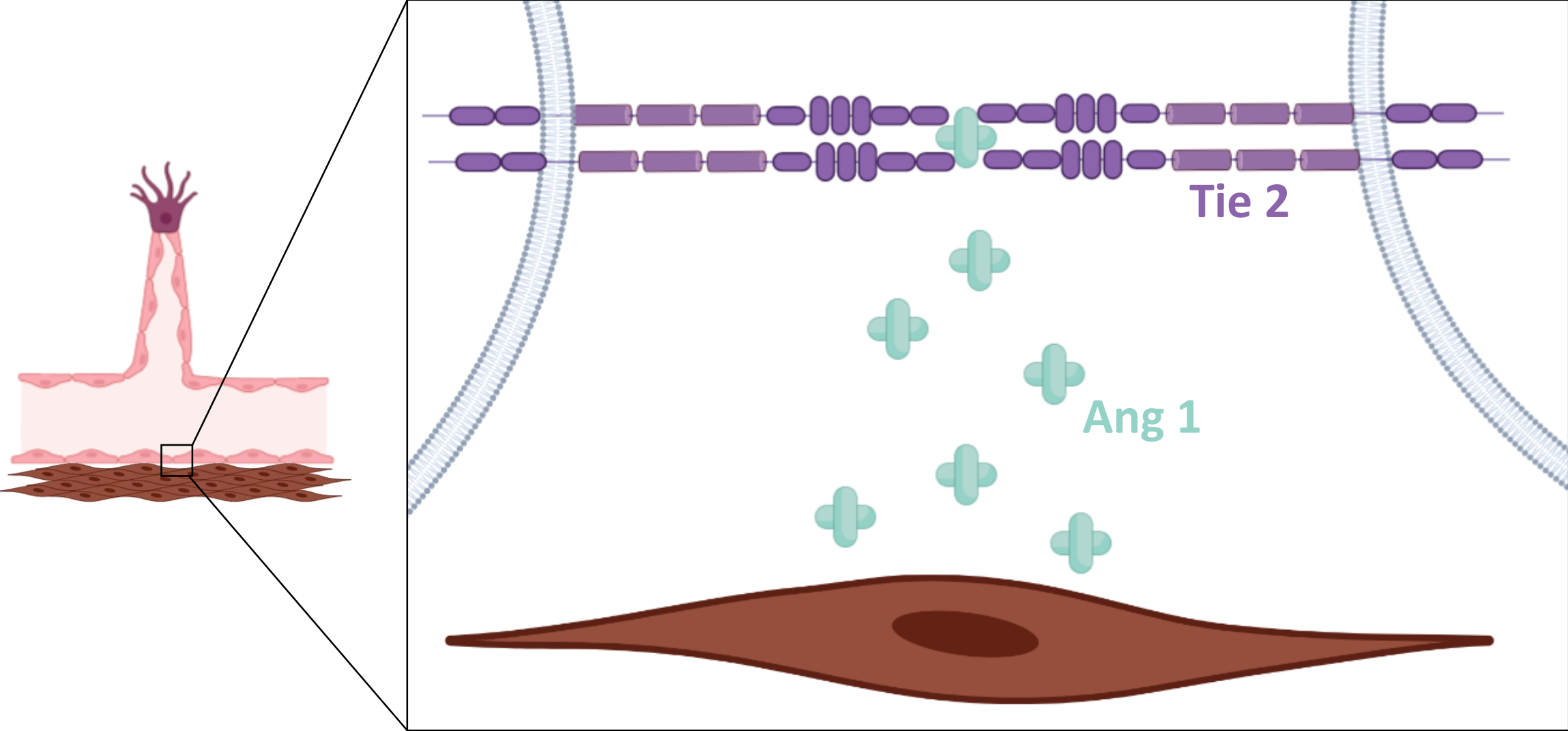
Tual-Chalot et al, Front genet, 2015

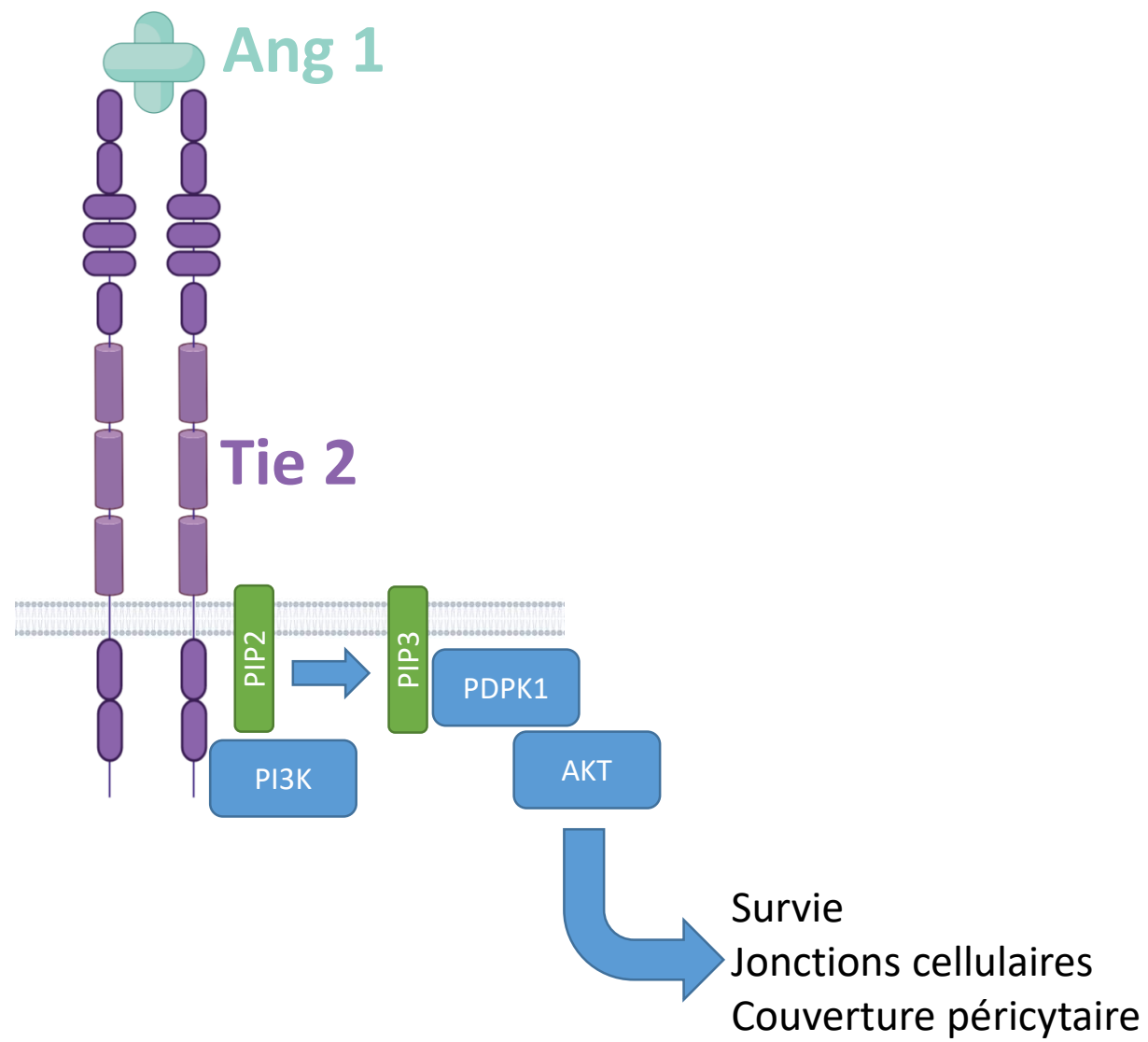
La voie des Bone Morphogenetic Proteins (BMP)



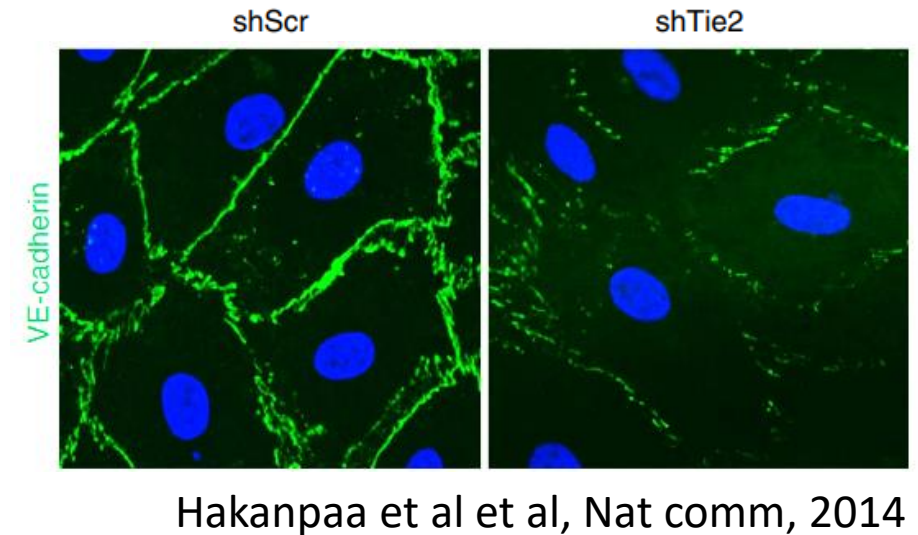
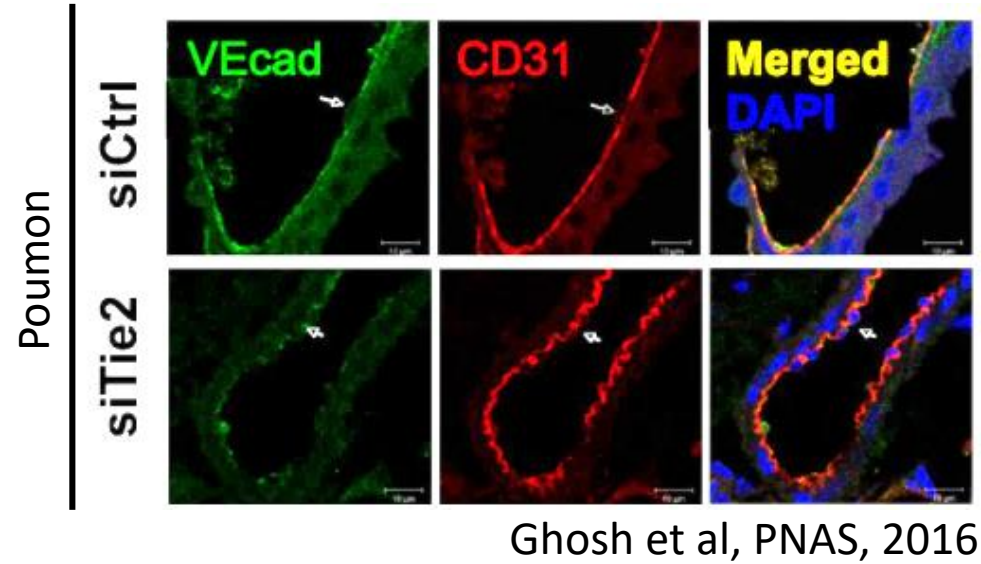
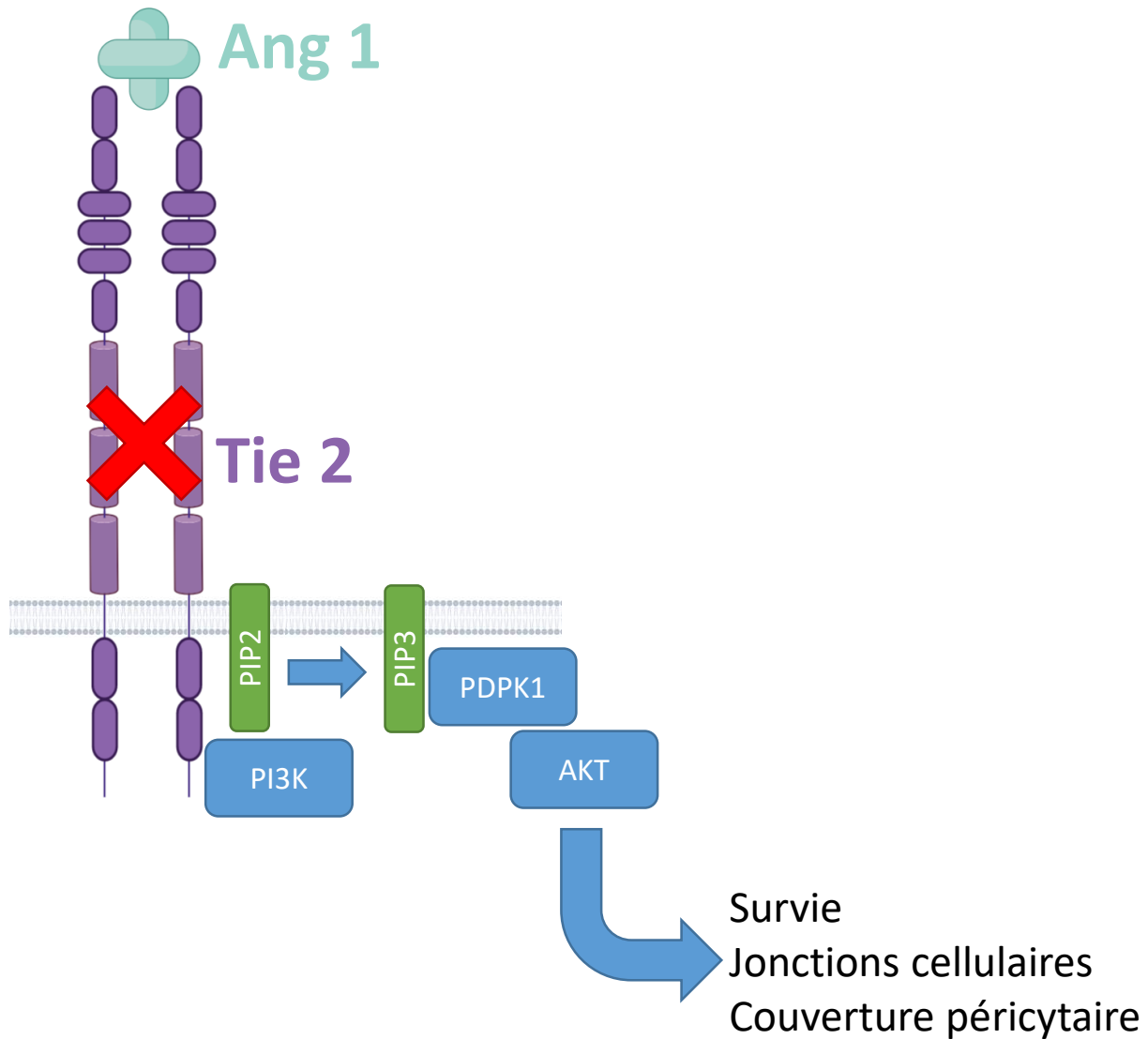
IsolectinB4 SMA



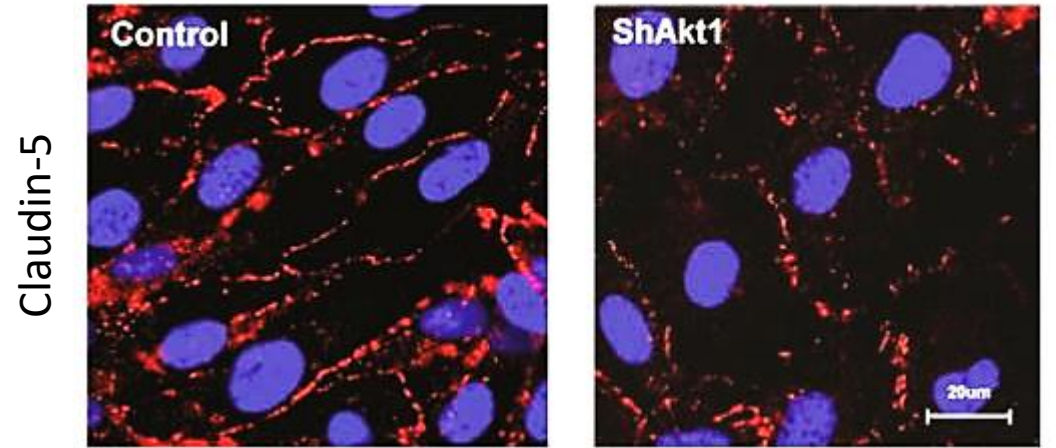
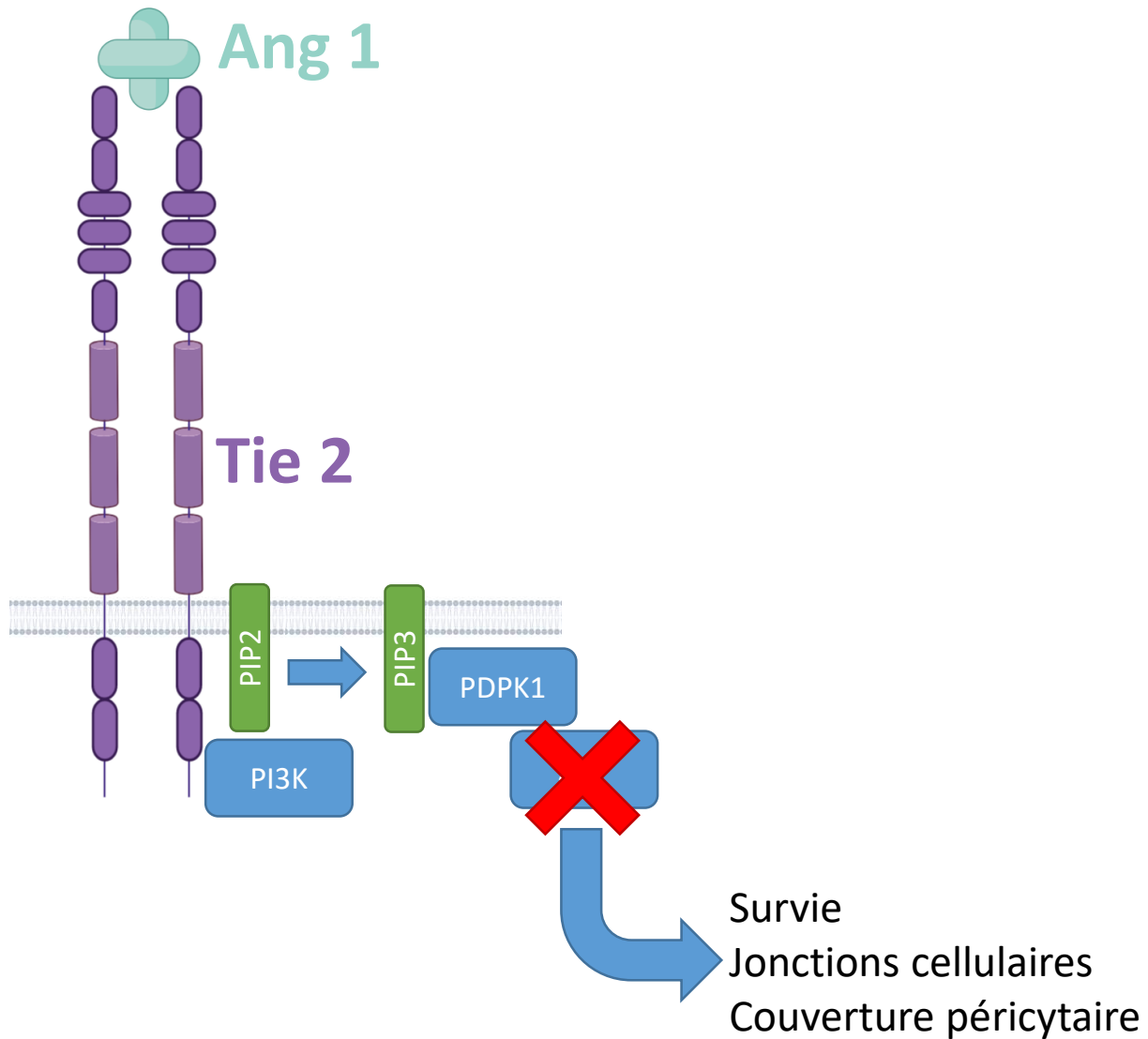




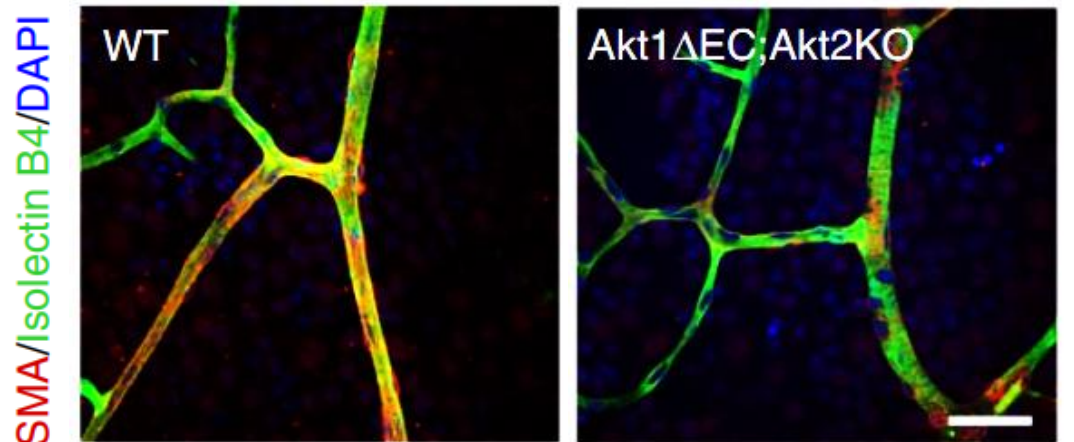
La voie des Angiopoïétines



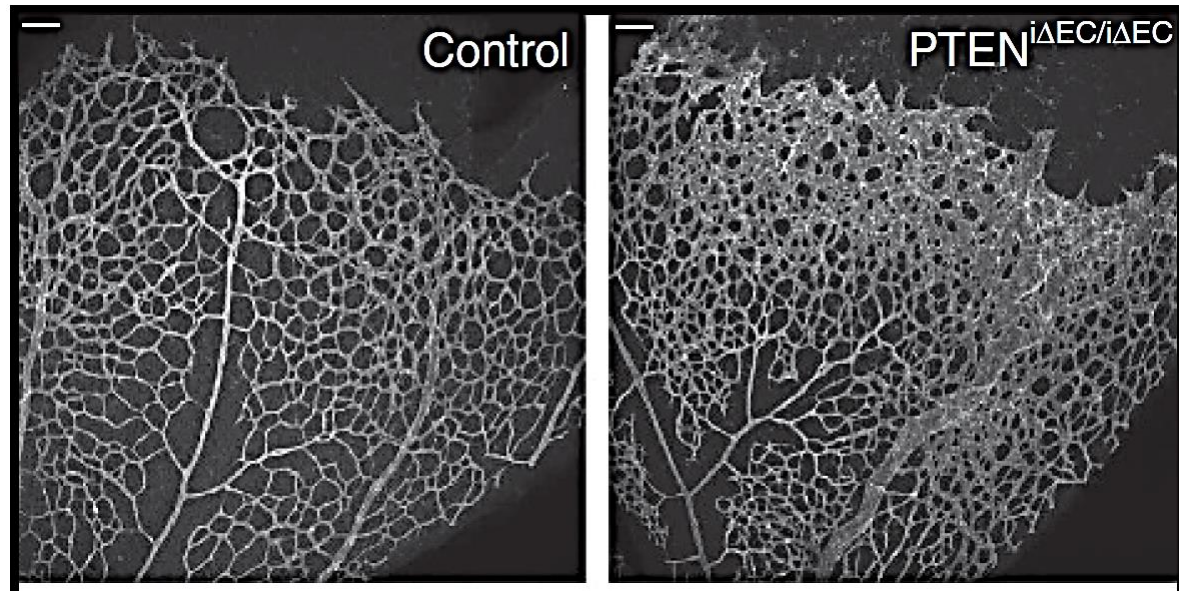
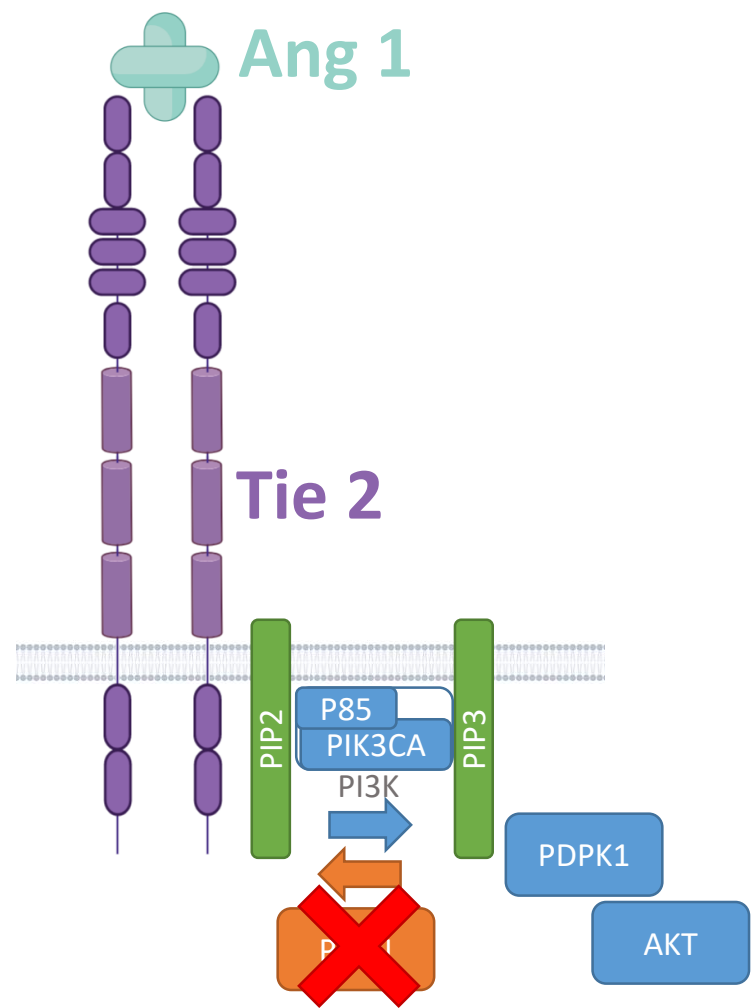
La voie des Angiopoïétines



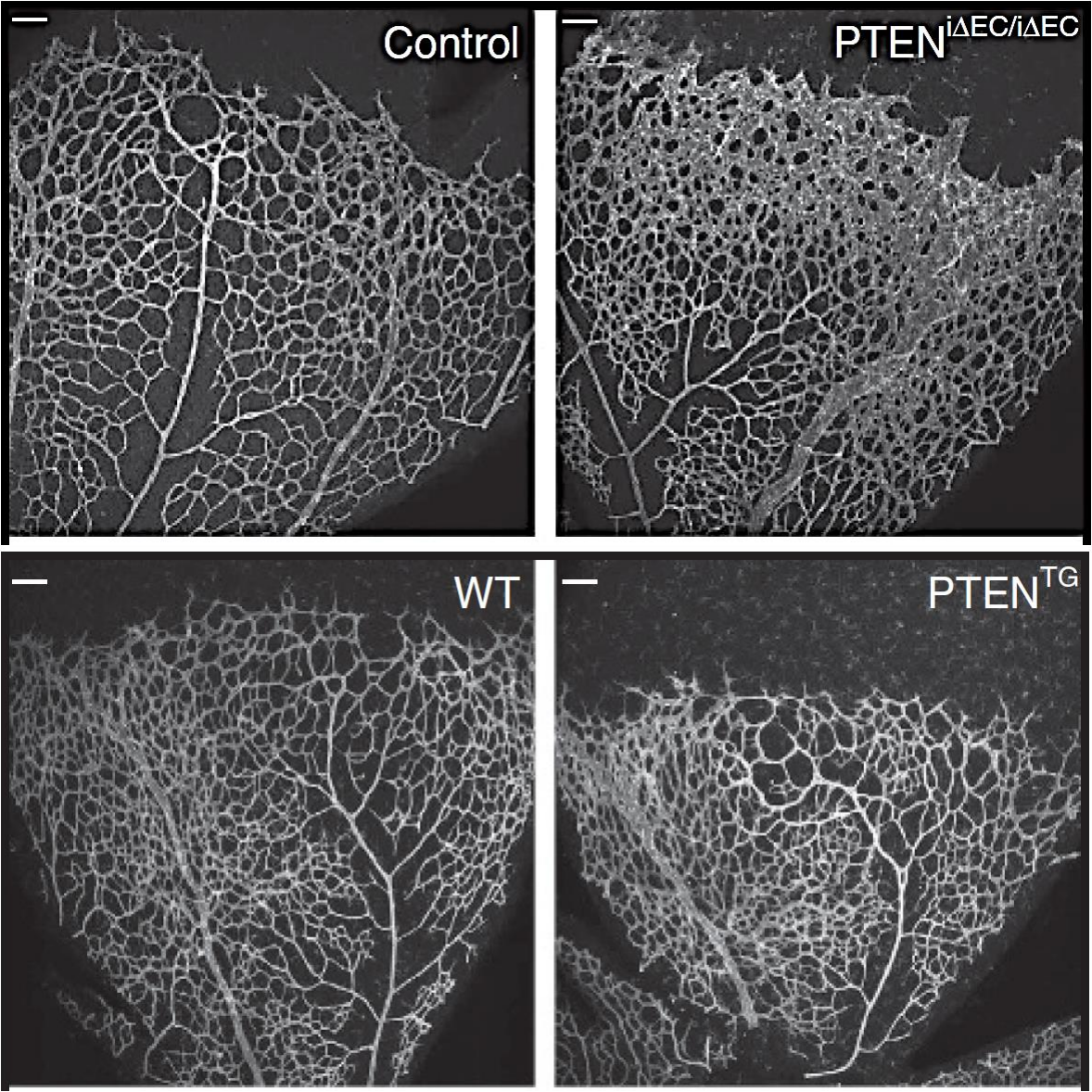
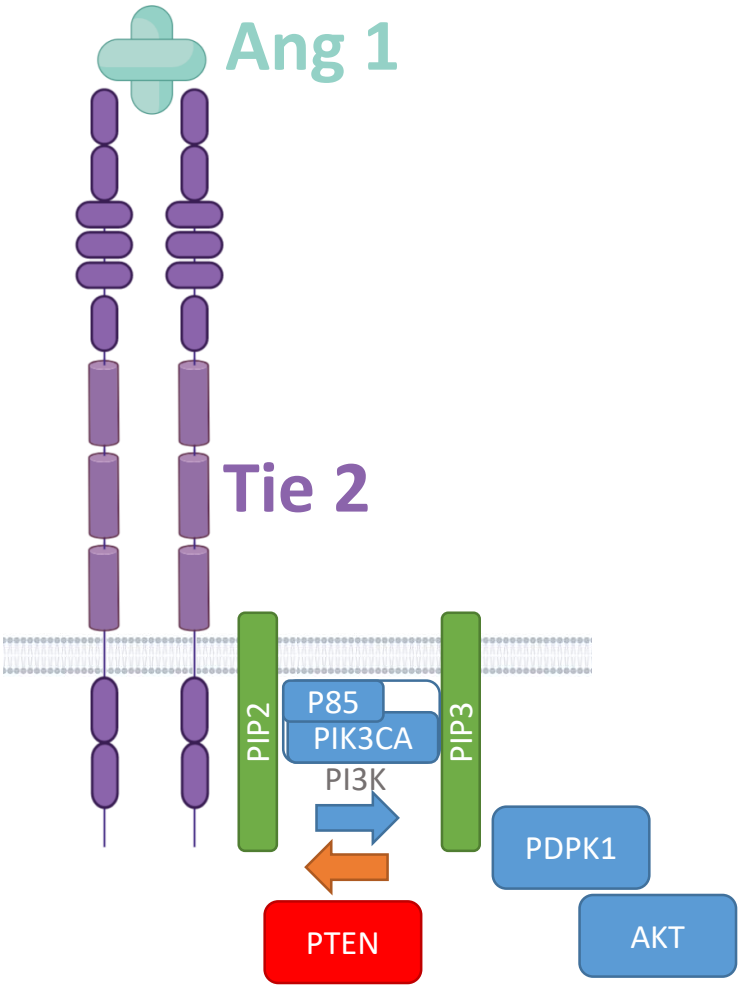
Gao et al, Cell Mol Life Sci, 2016



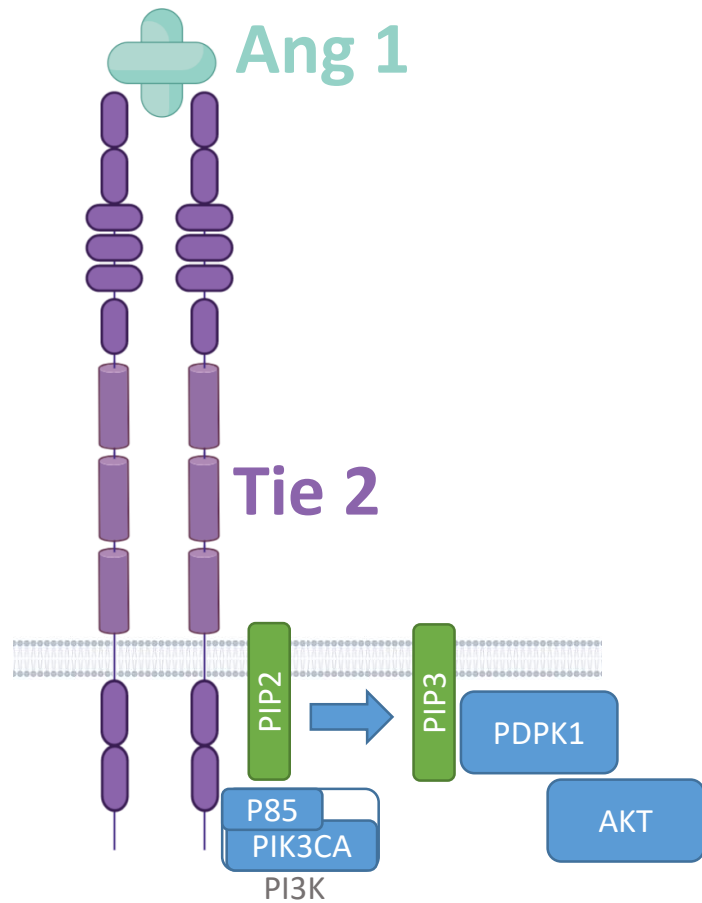
Kerr et al, Nat comm, 2015



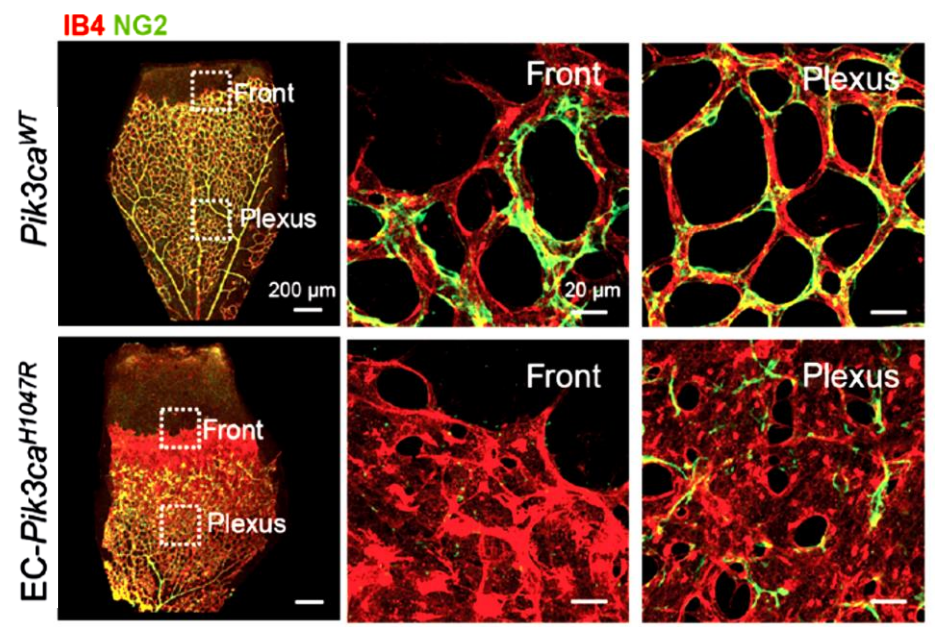
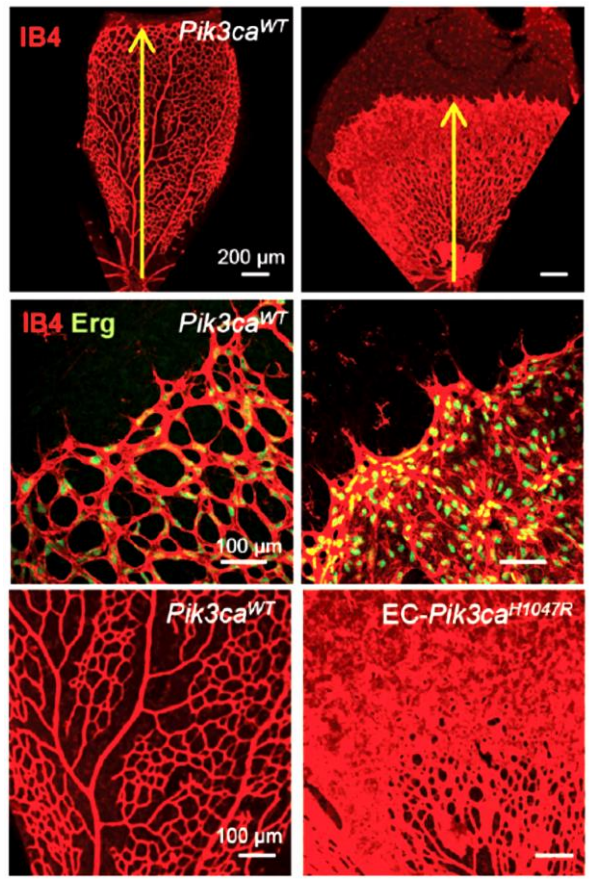
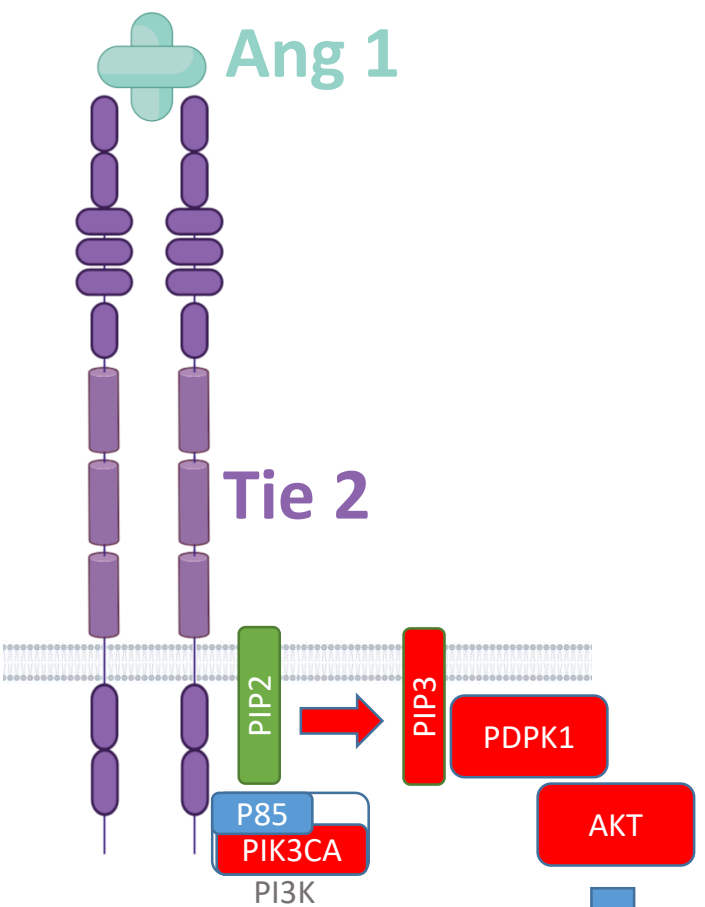
La voie des Angiopoïétines



Serra et al, Nat comm, 2015

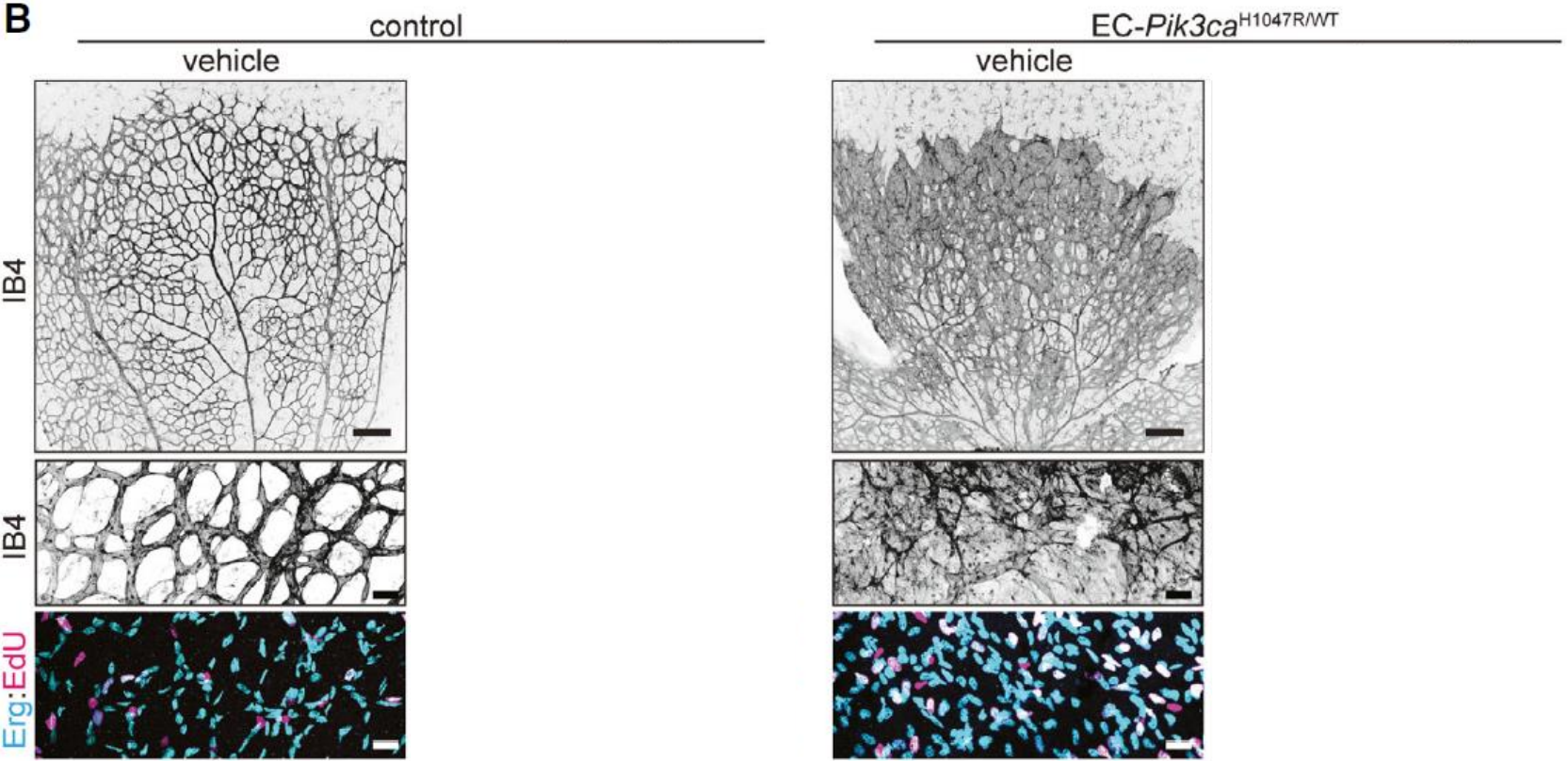
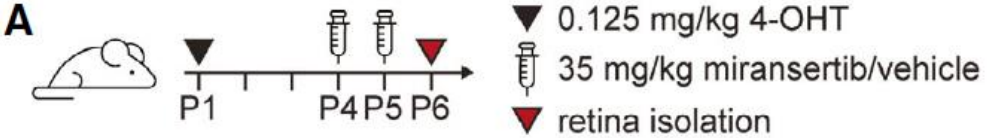
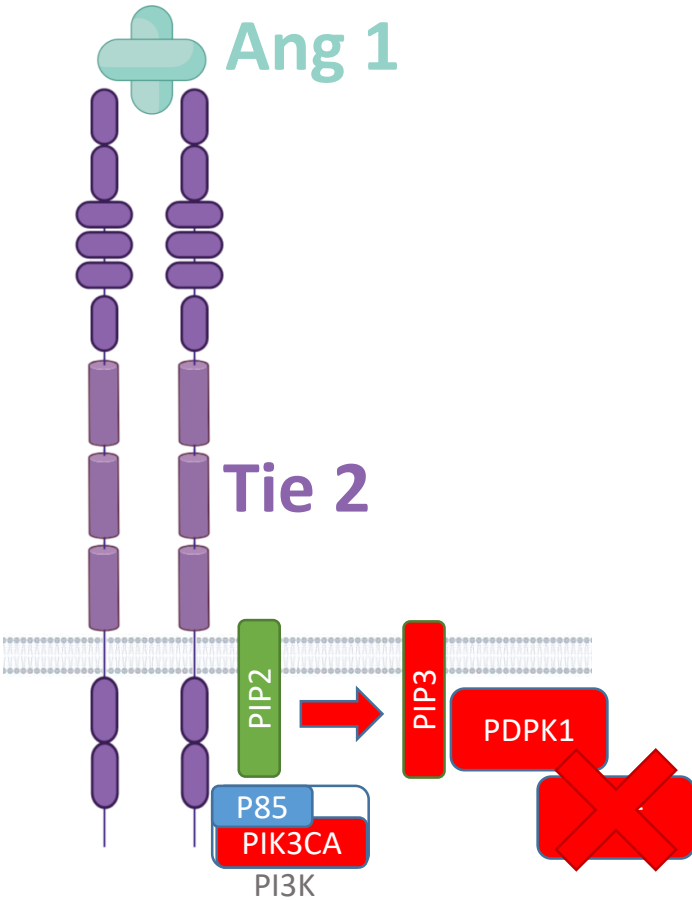


La voie des Angiopoïétines



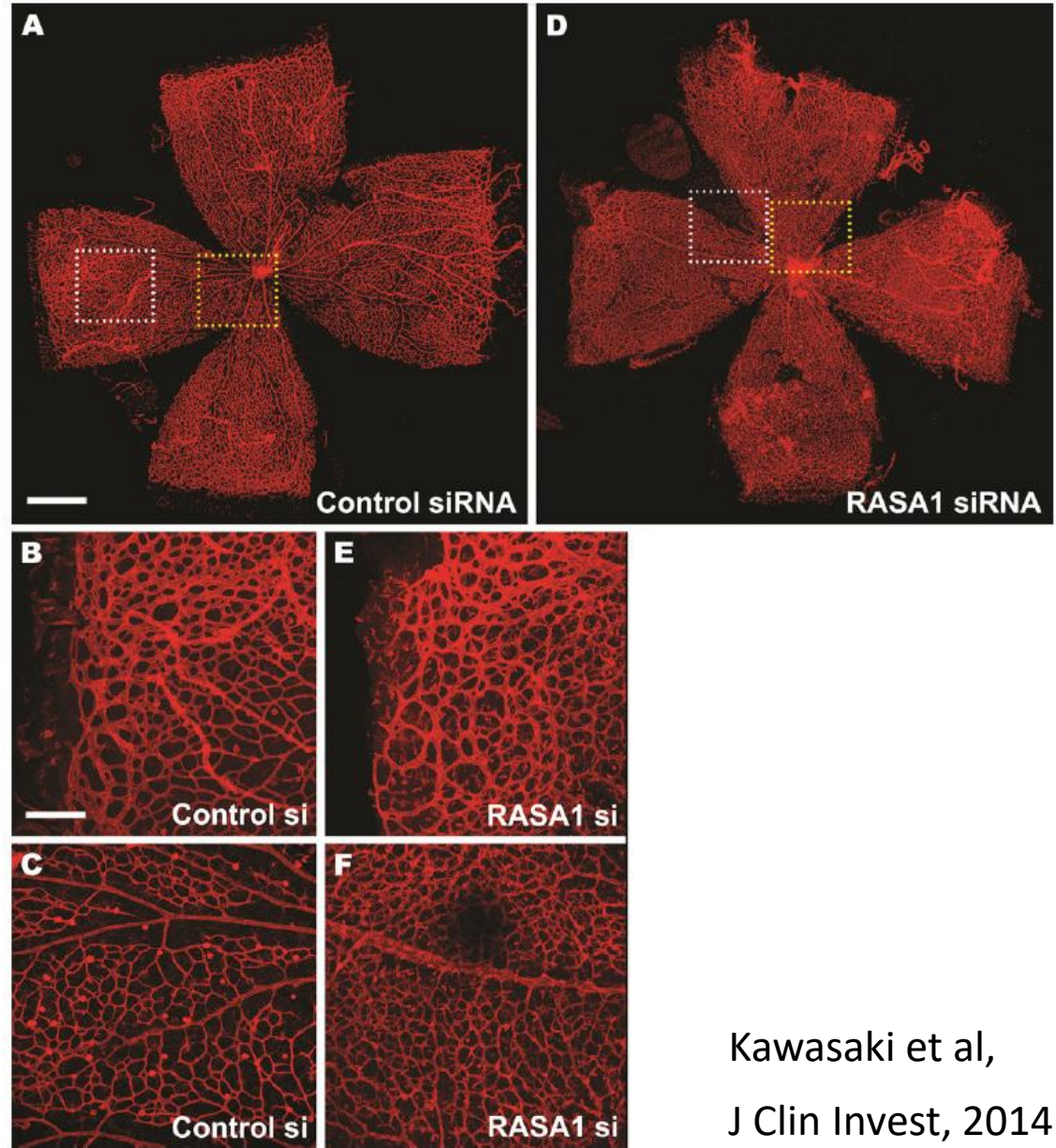
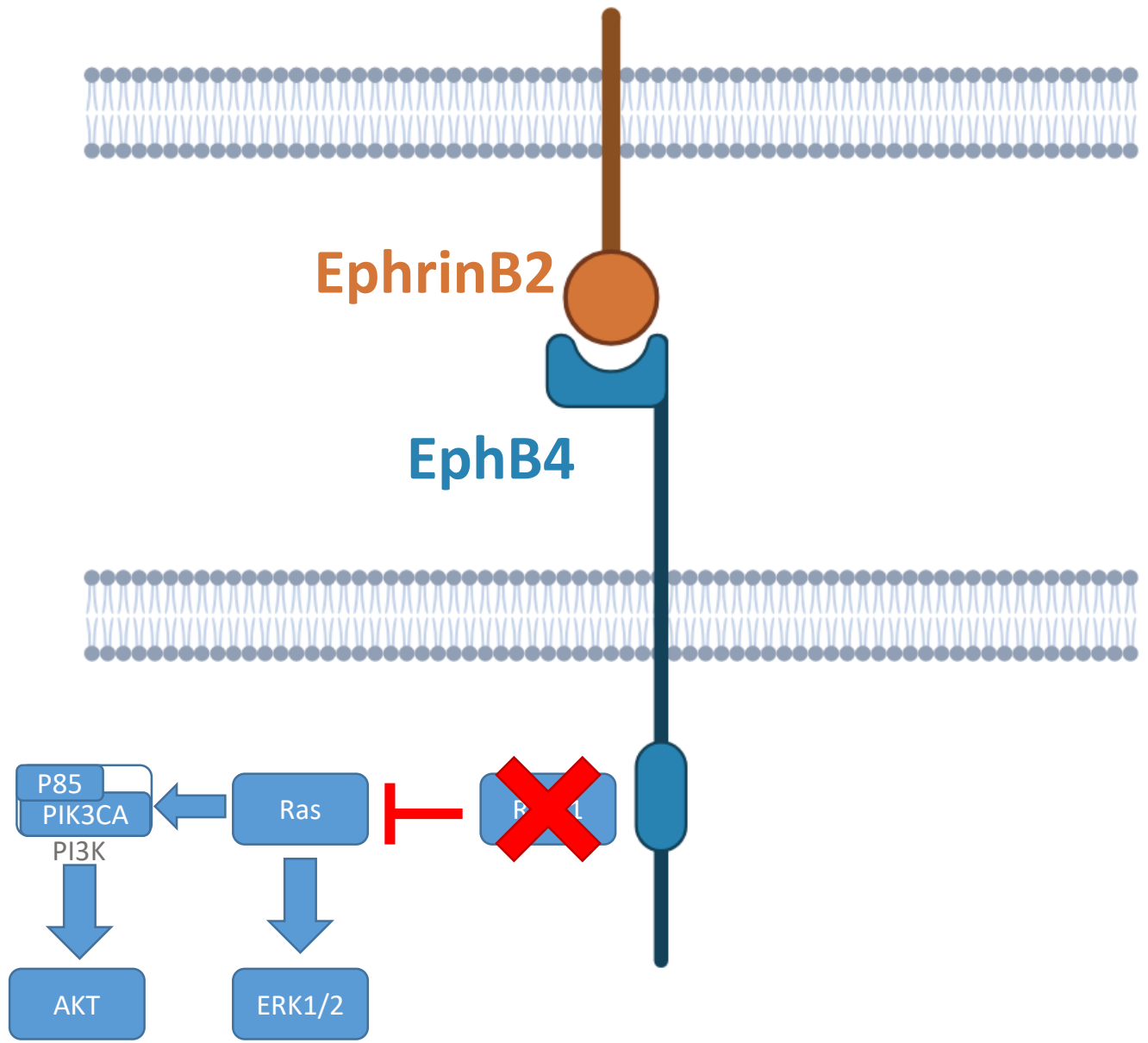
Castillo et al, Sci Transla Med, 2016

Prolifération des CE
Défaut de recouvrement en péricytes



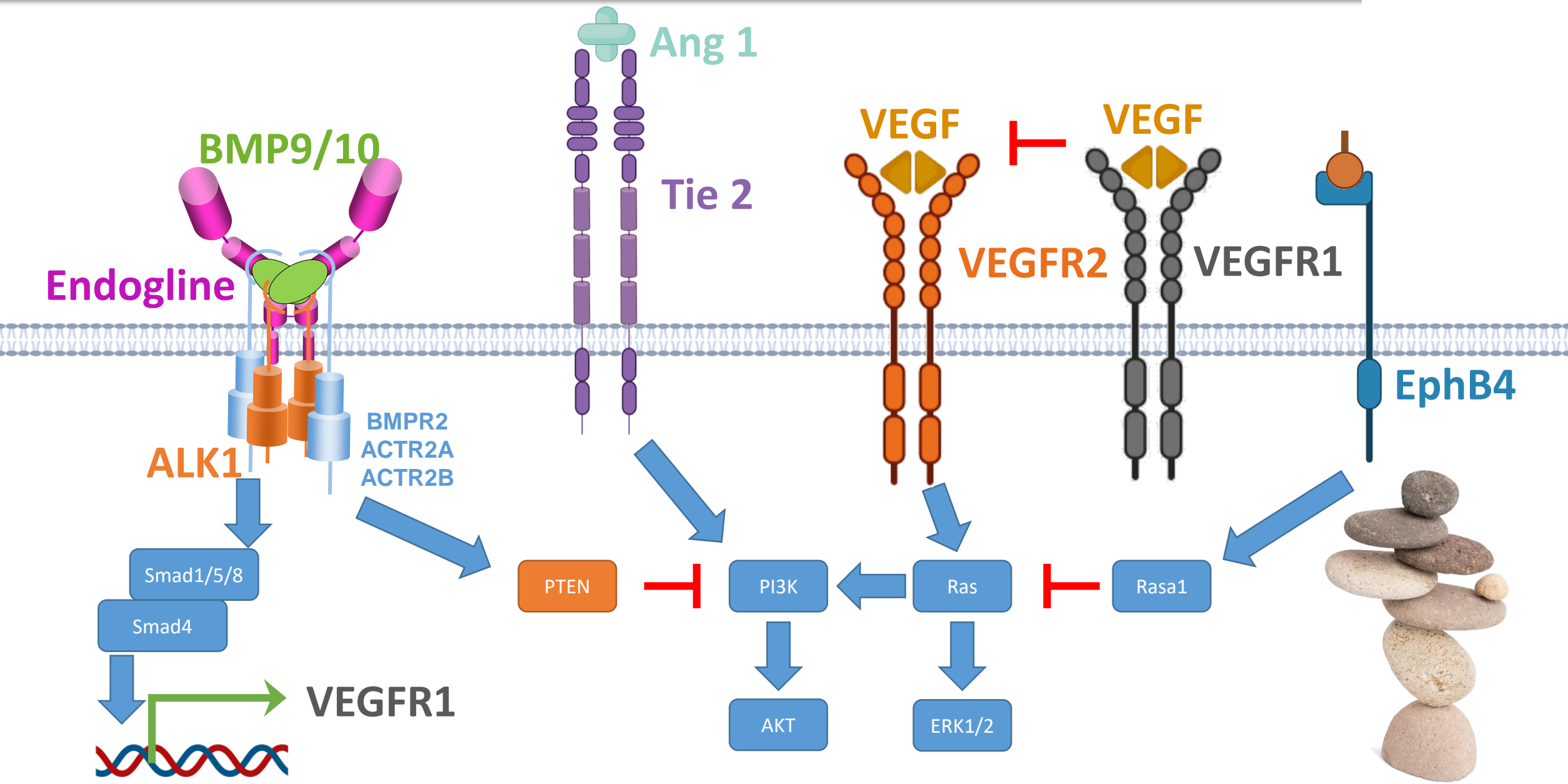
Kobialka et al, EMBO mol med, 2022

La voie de EphB4 Rasa1

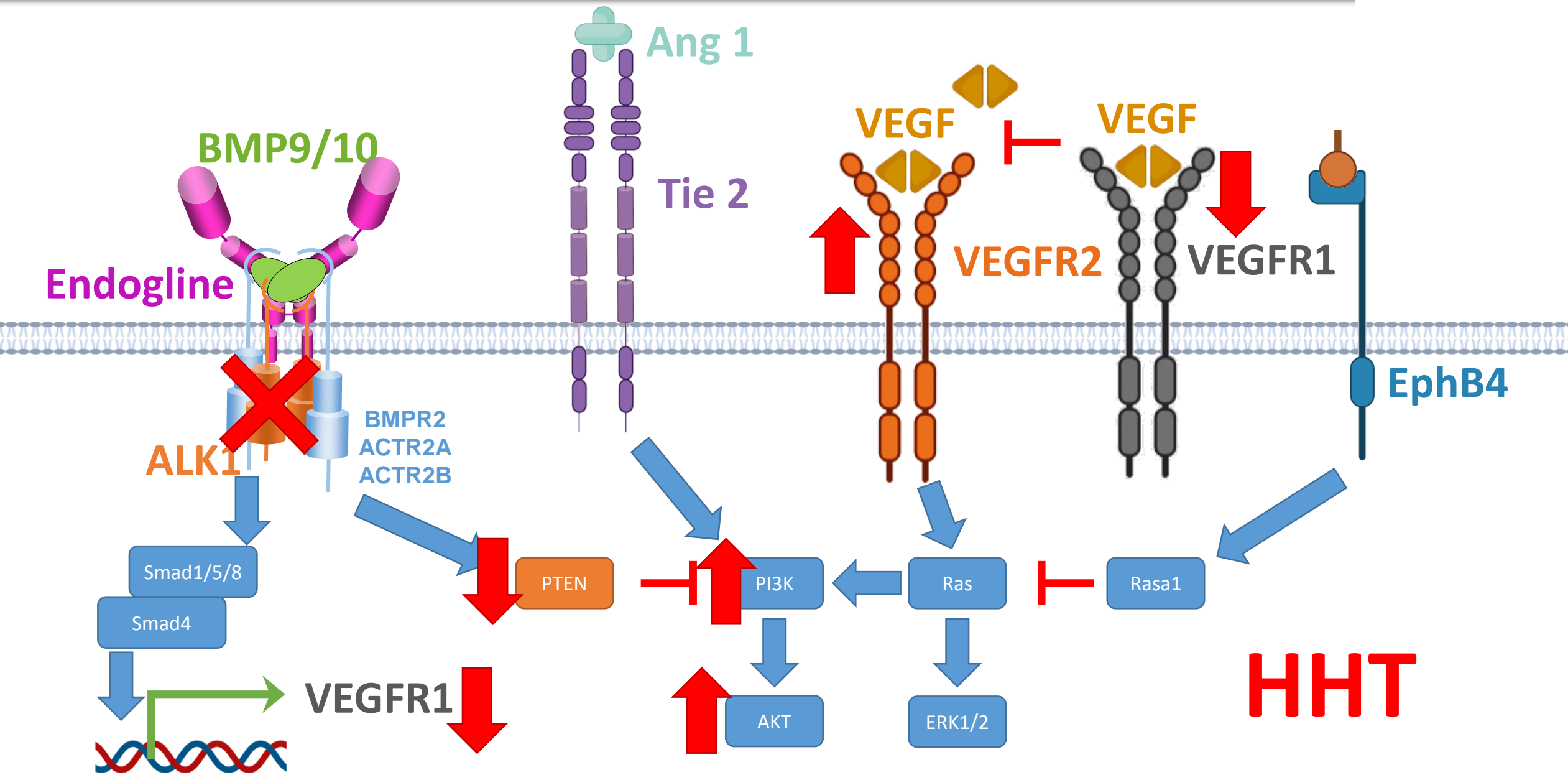


Kawasaki et al,
J Clin Invest, 2014

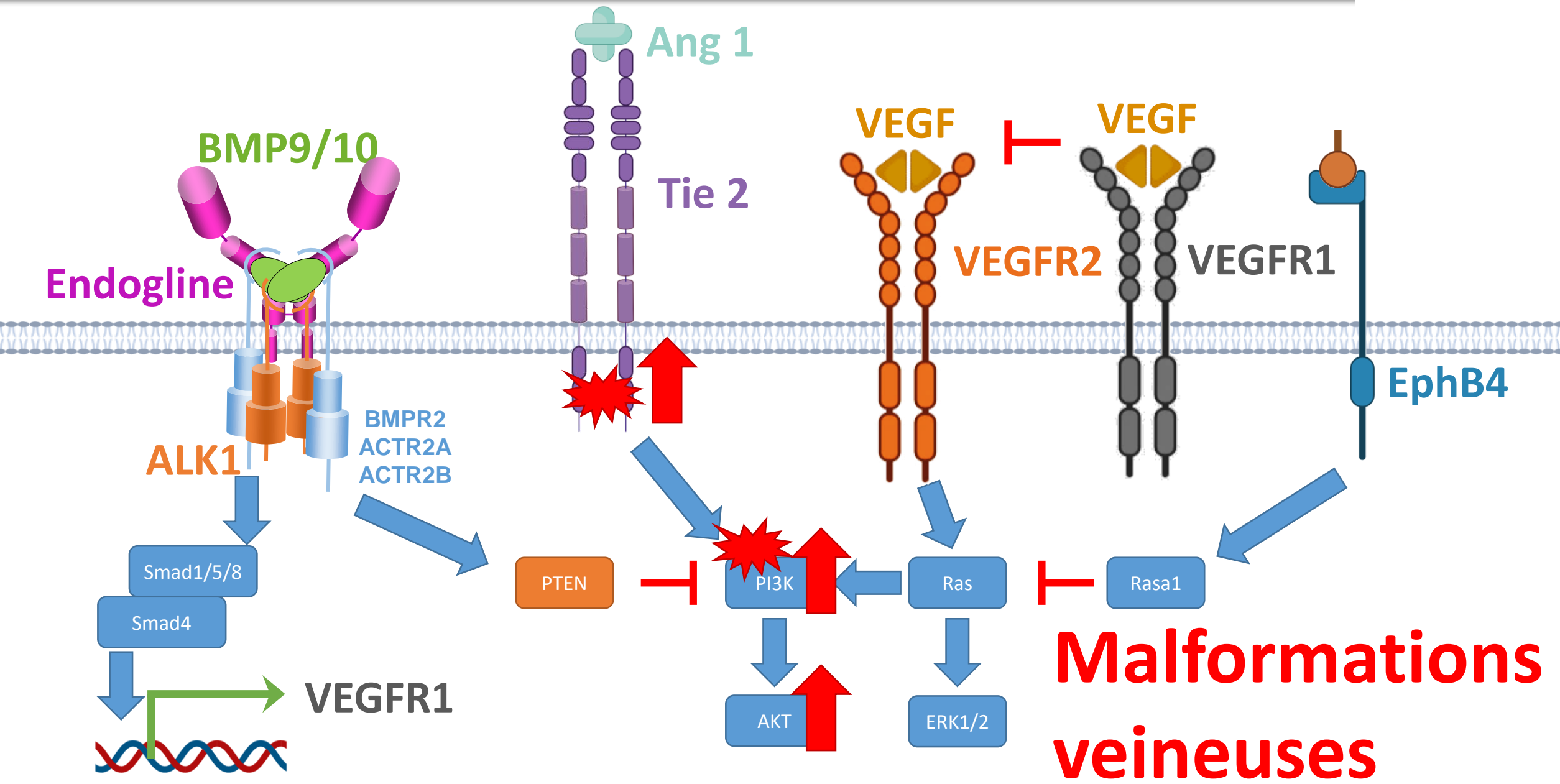
Crosstalks entre toutes ces voies



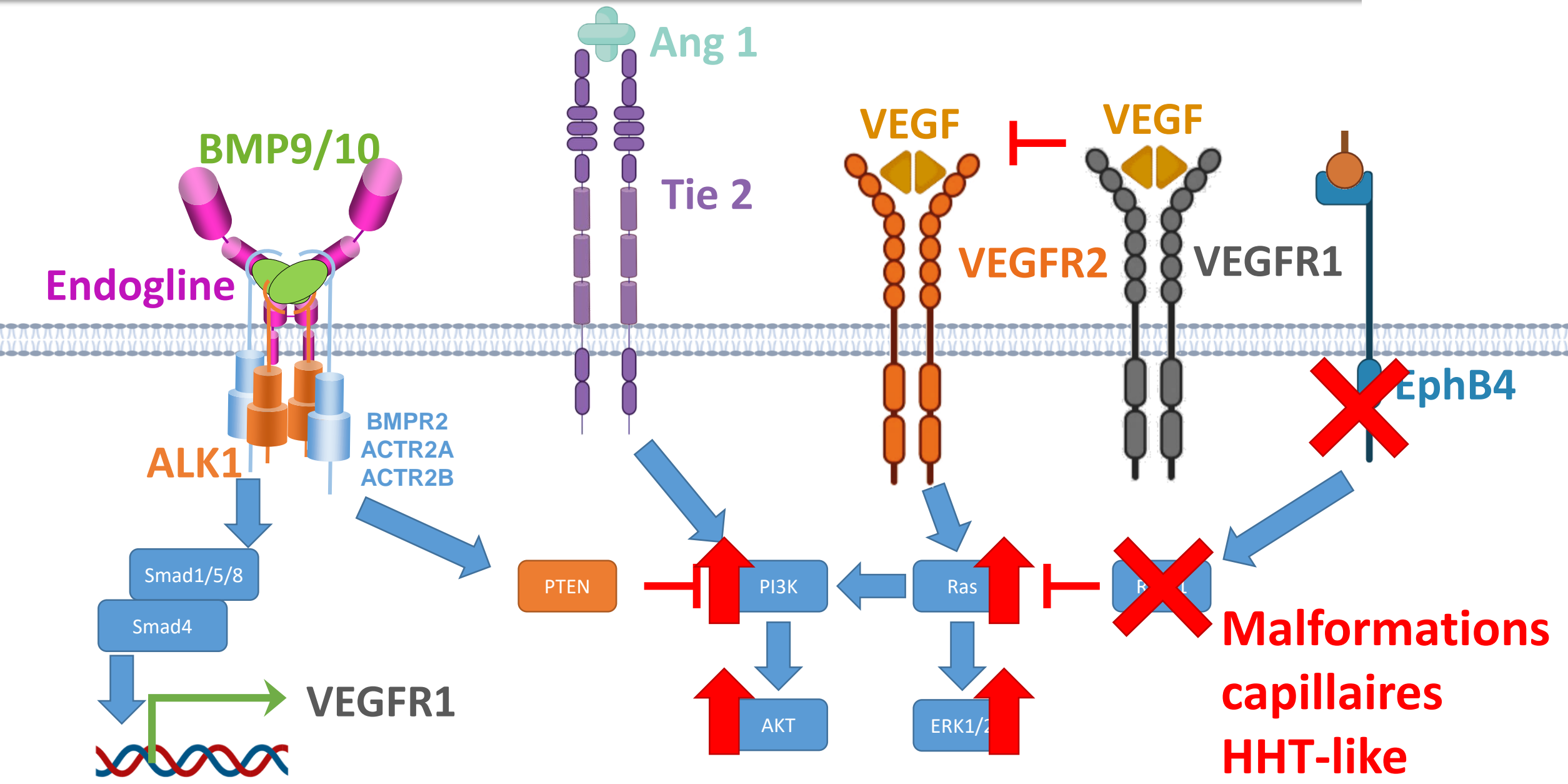
Quand l'équilibre est rompu...

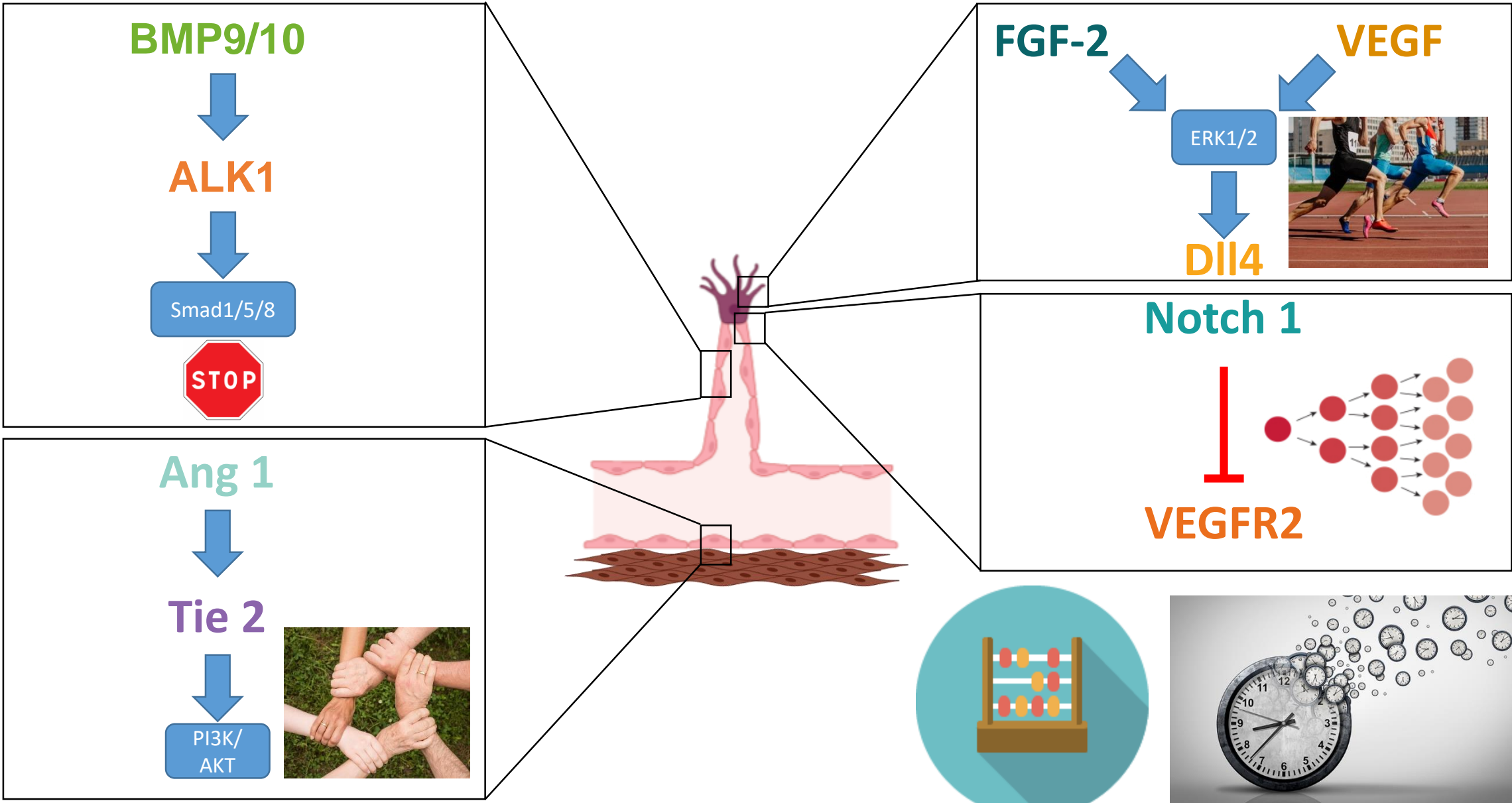


Quand l'équilibre est rompu...



Quand l'équilibre est rompu...





Remerciements

Sabine BAILLY (DR, INSERM)
Nicolas RICARD (CR, INSERM)
Agnès DESROCHES-CASTAN (IR, INSERM)
Emmanuelle TILLET (PU, UGA)
Claire BOUVARD (MCU, UGA)
Sophie DUPUIS-GIROD (PH, HCL)
Aude SALOMON (IE, INSERM)
Nicolas CHAUMONTEL (Tech, CEA)
Valentin AZEMARD (IE, INSERM)
Léa BEURIER-SOULAT (AI, INSERM)
Yasmin RIDA (Doctorante)
Léa VIALET (Doctorante)

