



Université catholique de Louvain
Faculté de Médecine

Laboratoire de chimie physiologique
de Duve Institute



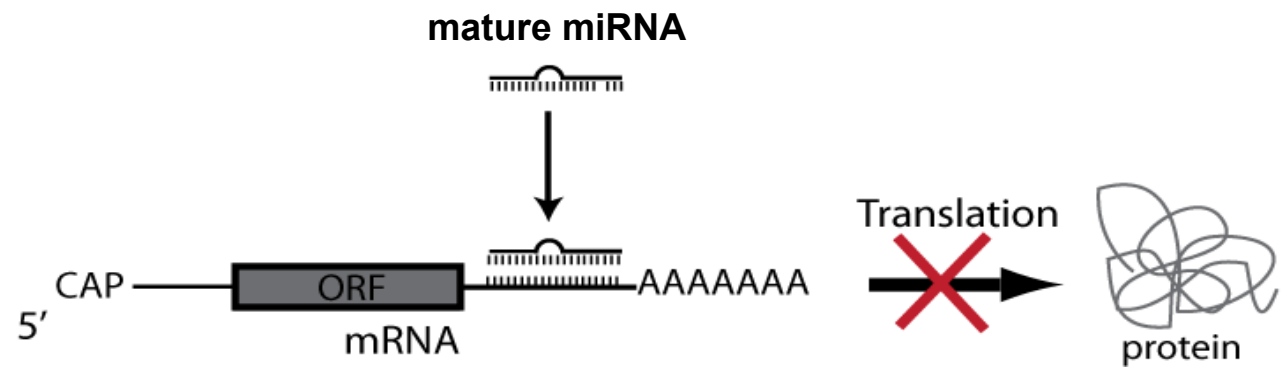
microRNA33 targets the ABCA1 pump and regulates cholesterol metabolism

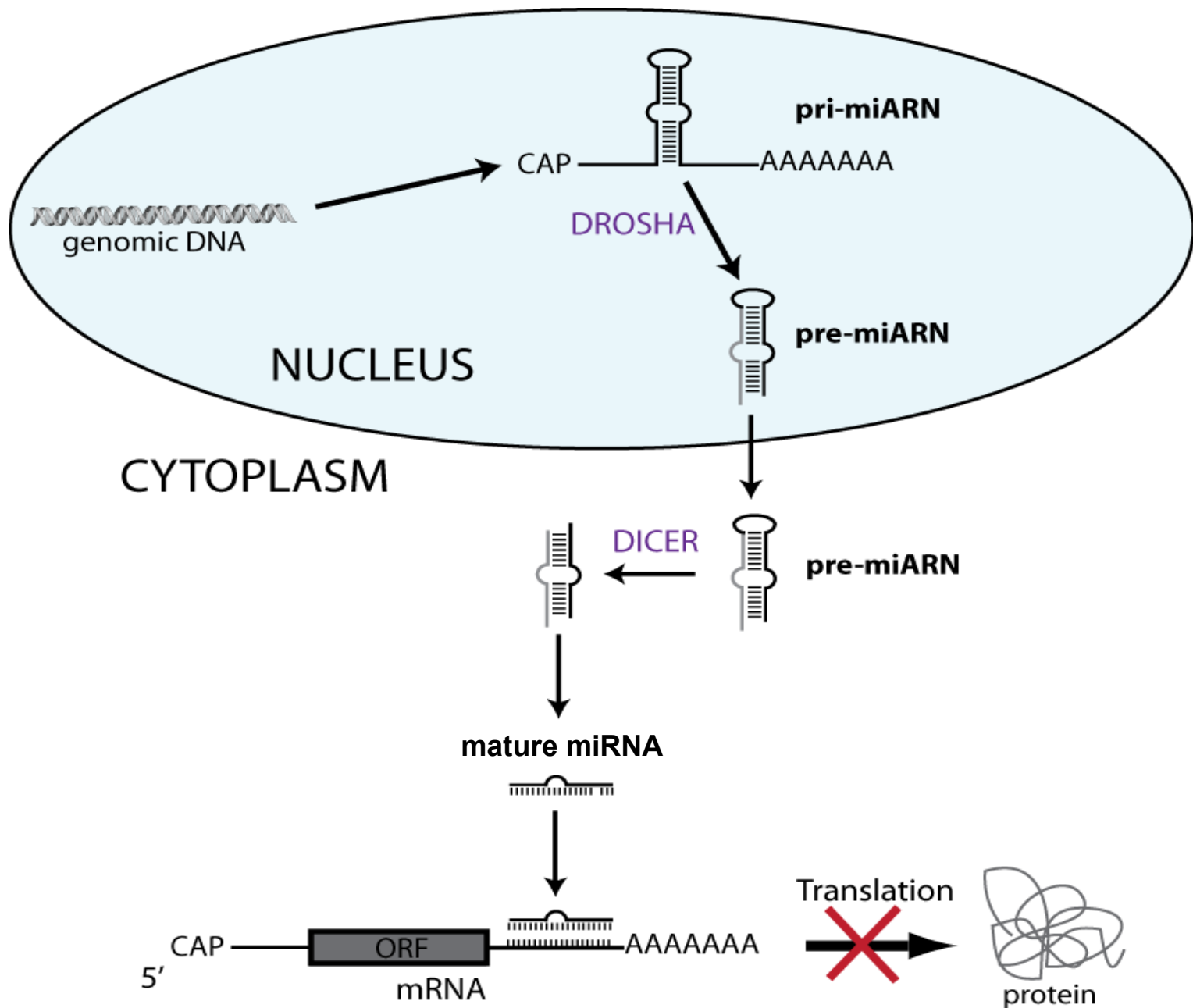
Laure-Alix Clerbaux

Promoter : Guido Bommer

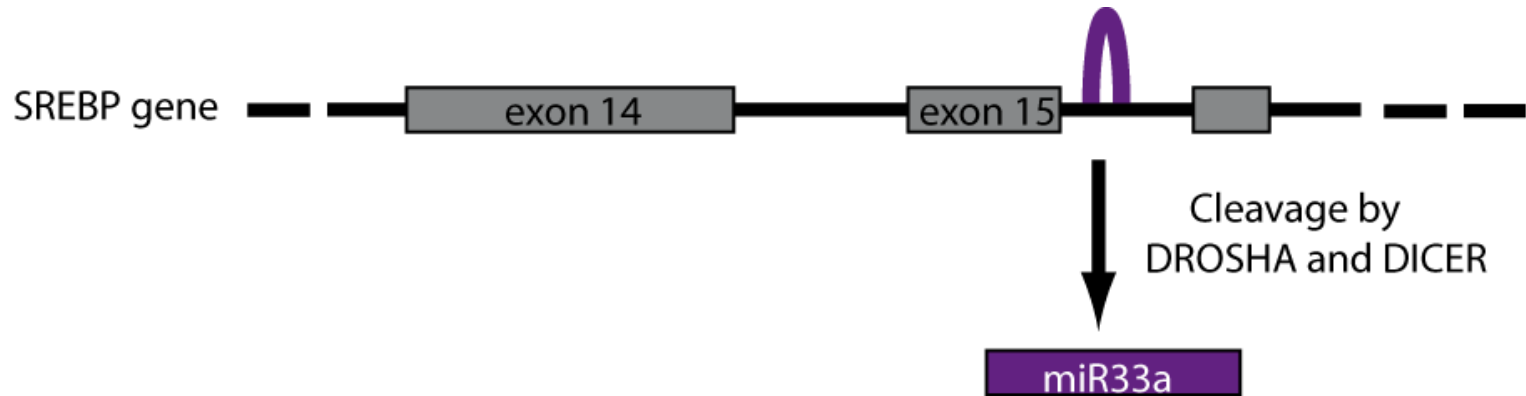
Co-promoter : Emile Van Schaftingen

microRNA inhibits translation of their target transcript

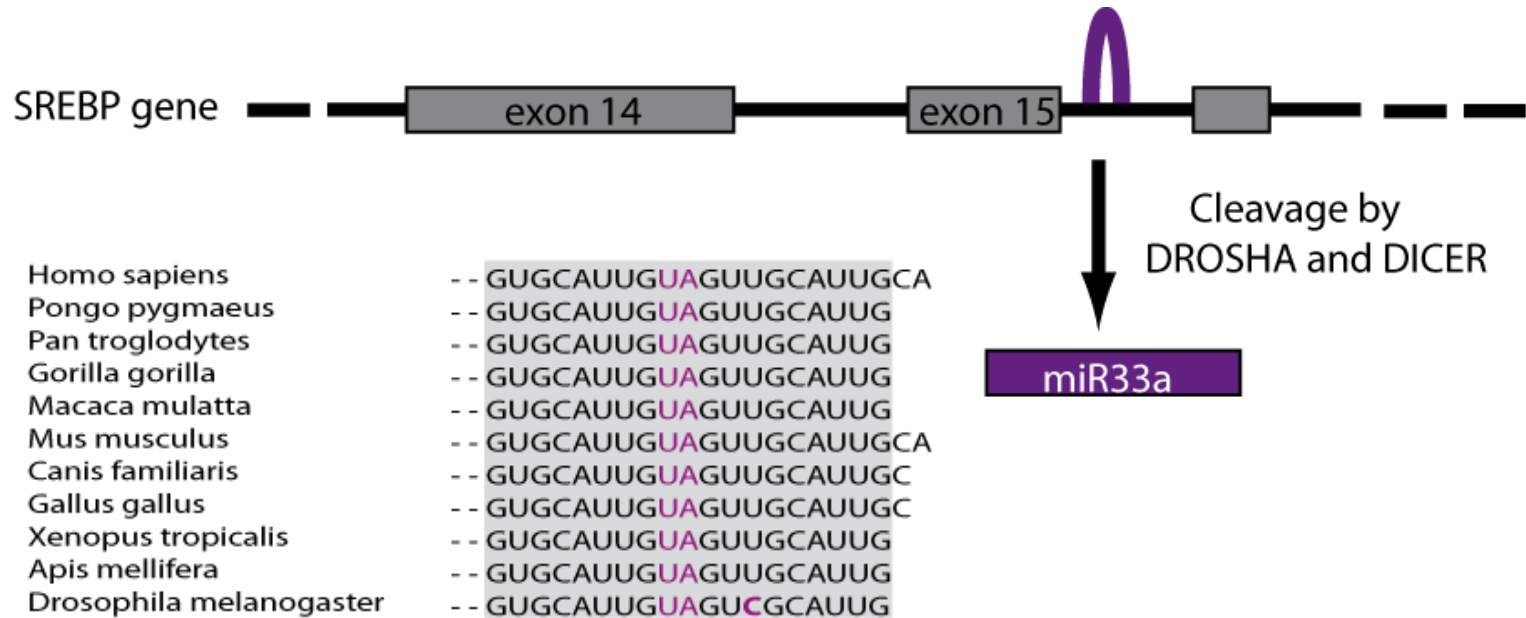




miR33 is located in an intron of SREBP gene

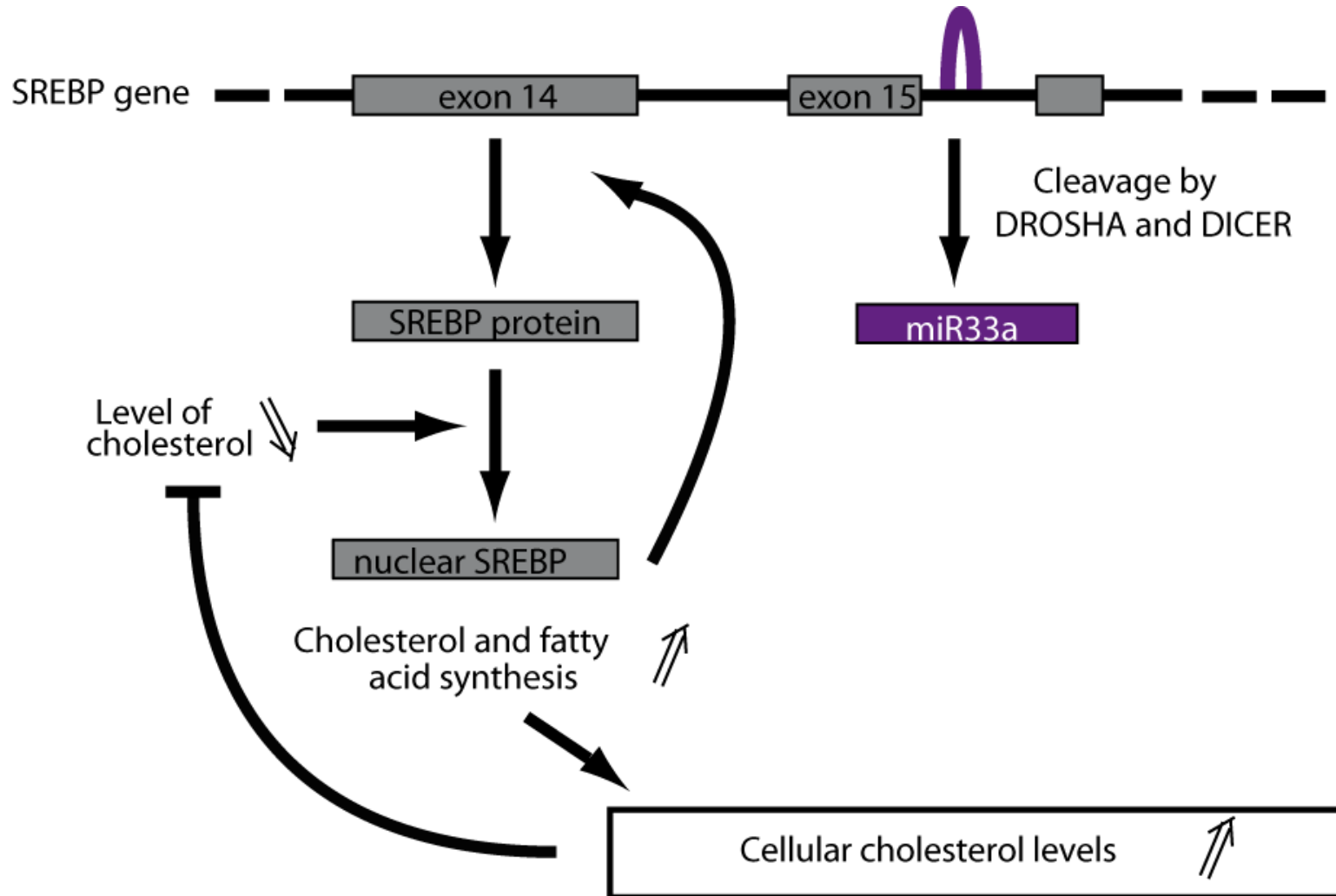


This location and miR33a sequence is well conserved

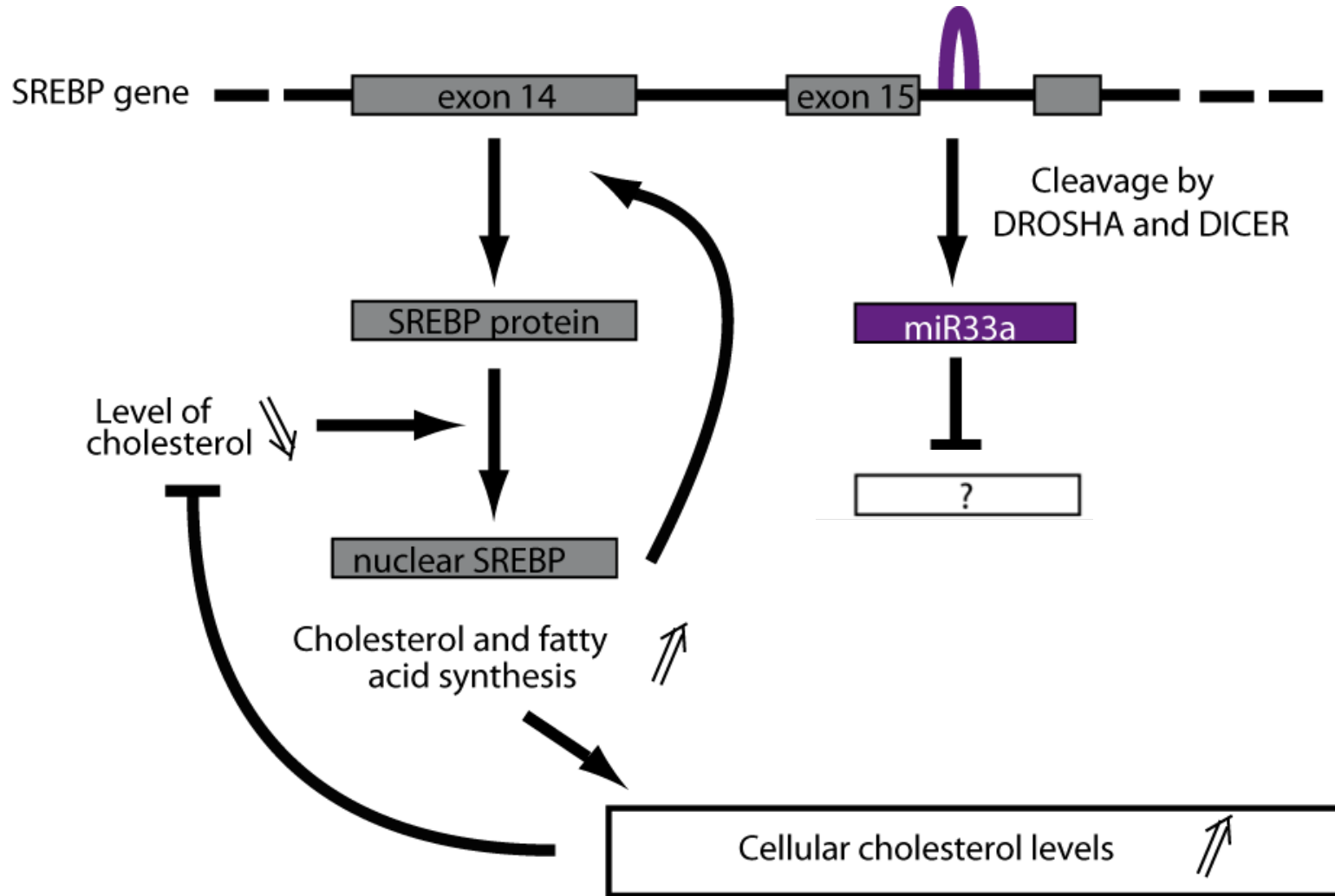


→ Collaboration between coding-protein gene and miR ?

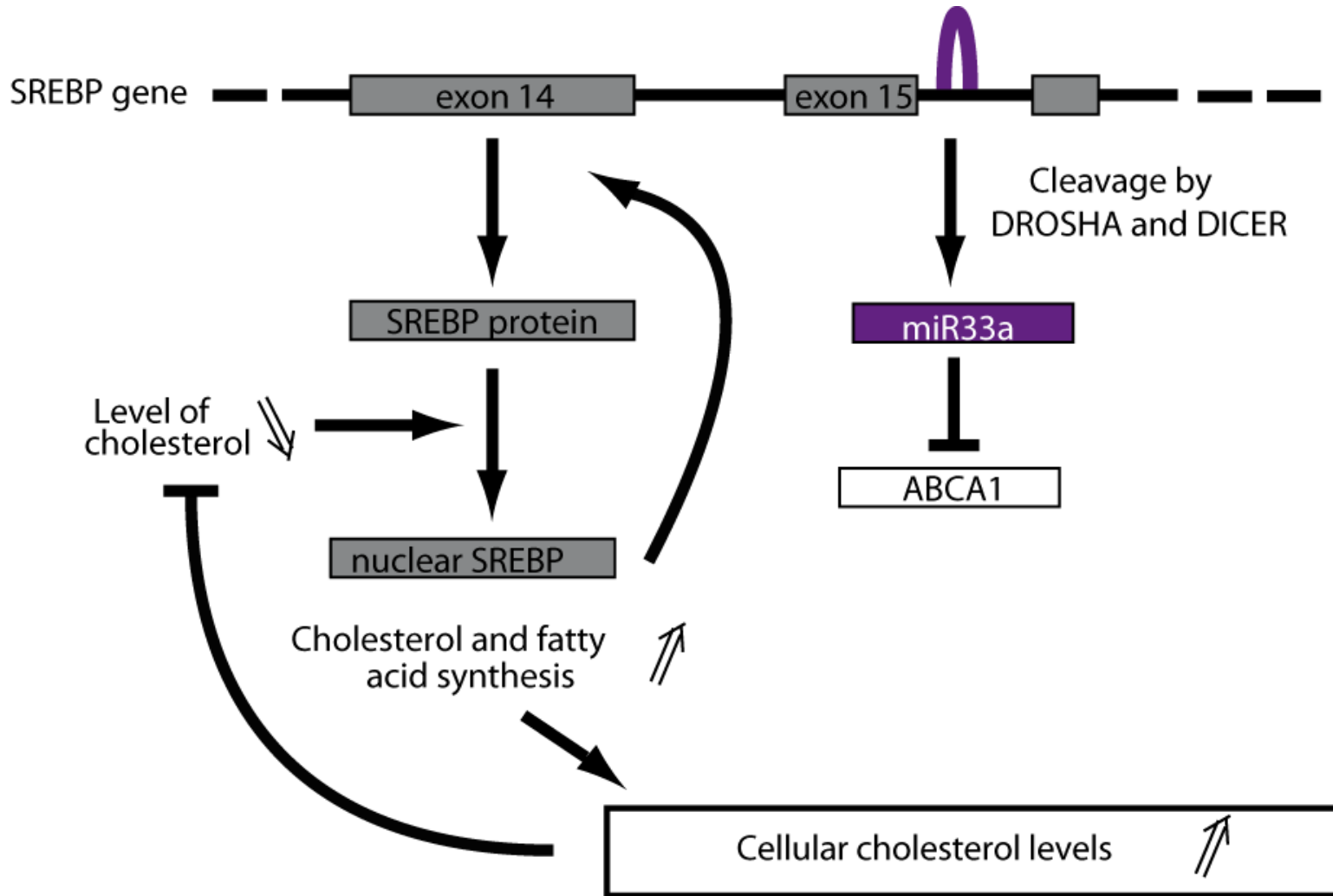
SREBP protein plays a role in lipid homeostasis



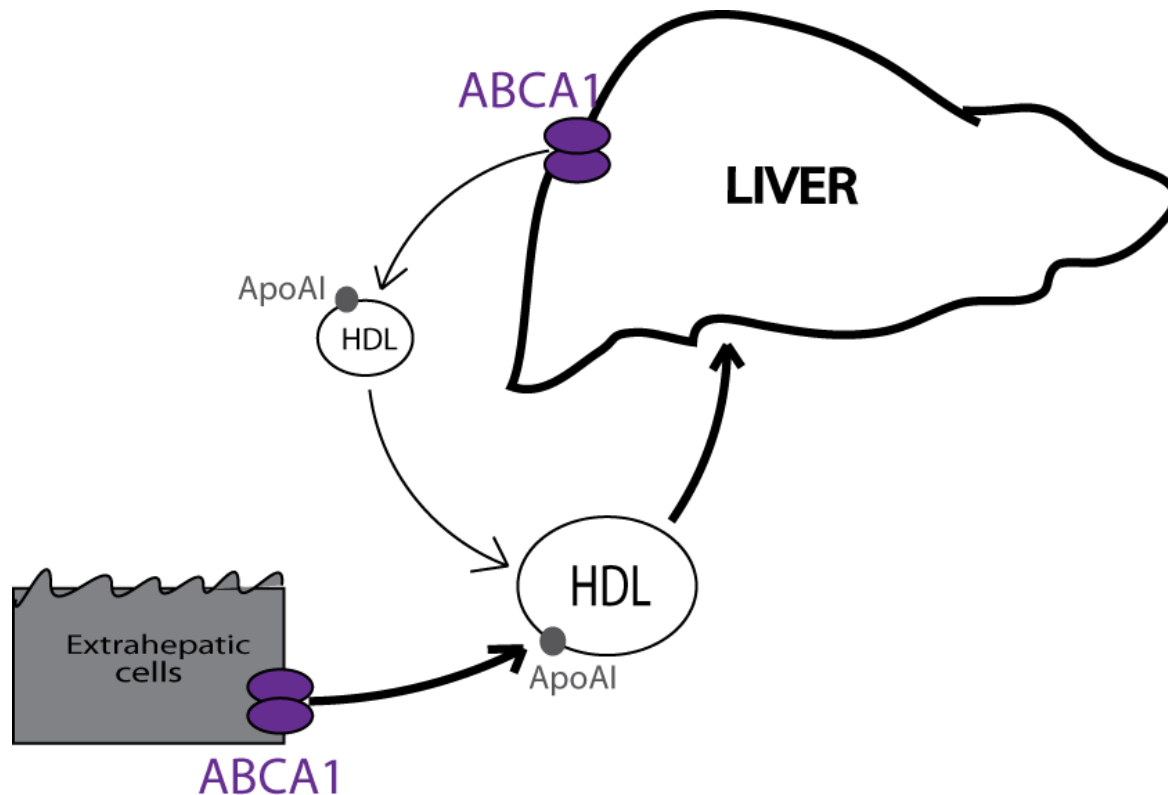
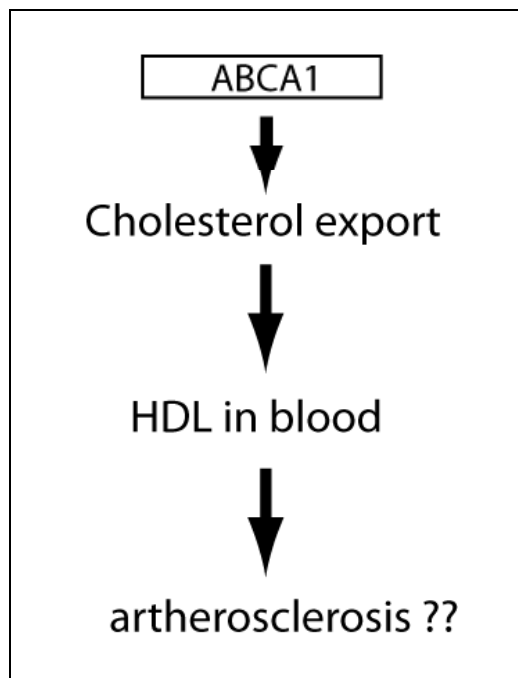
Does miR33 target genes implicated in lipid homeostasis ?



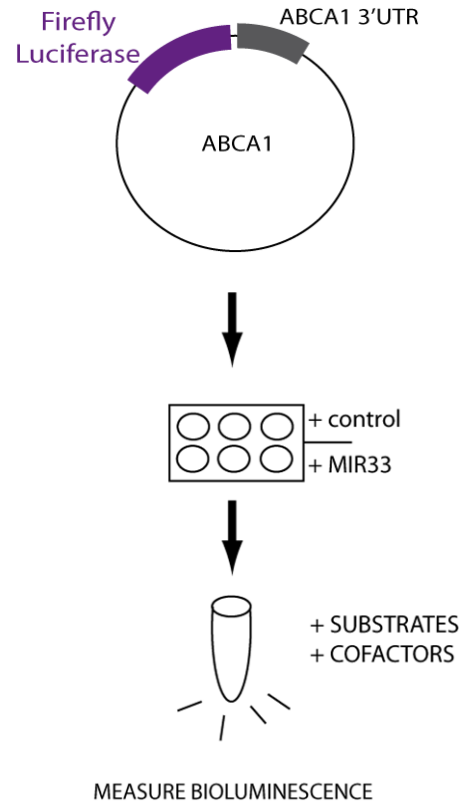
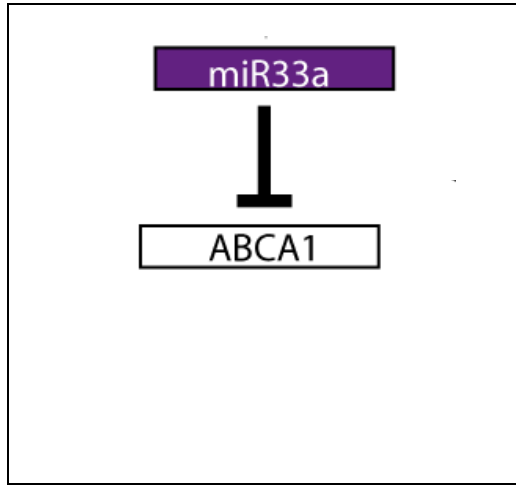
miR33 targets the ABCA1 pump



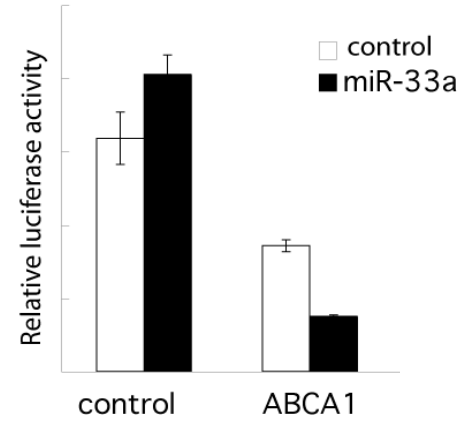
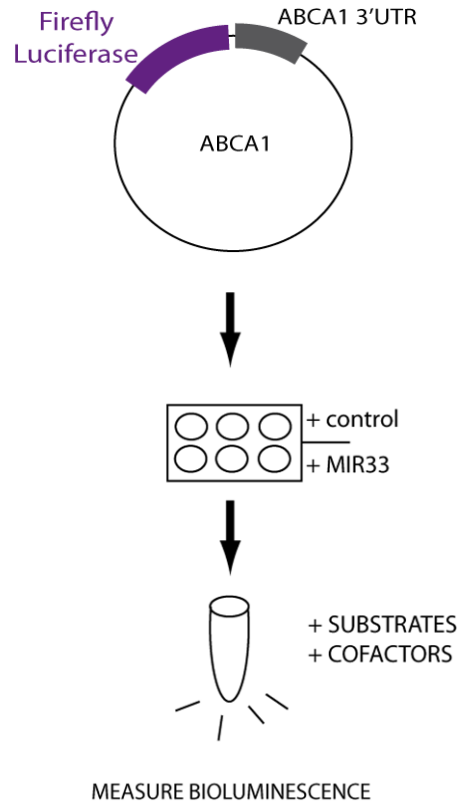
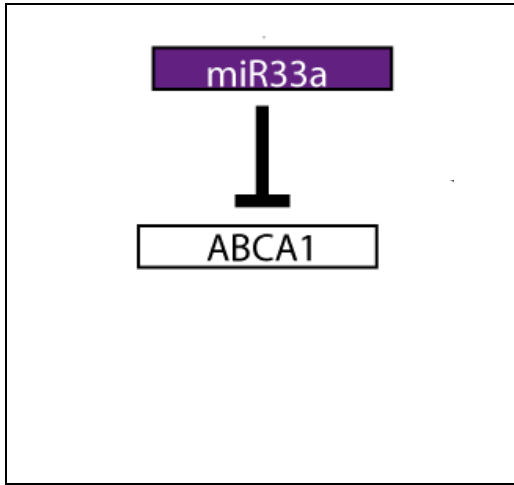
Transporter ABCA1 regulates the cellular cholesterol export



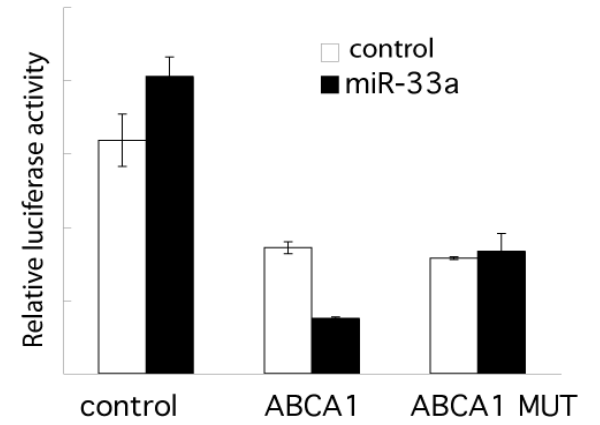
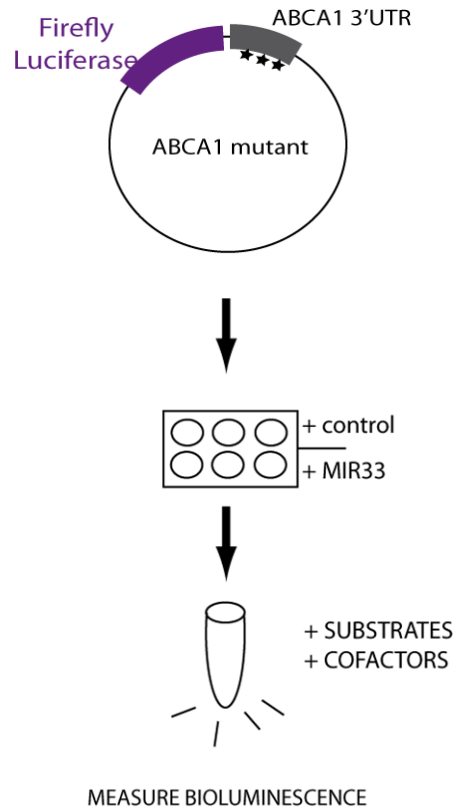
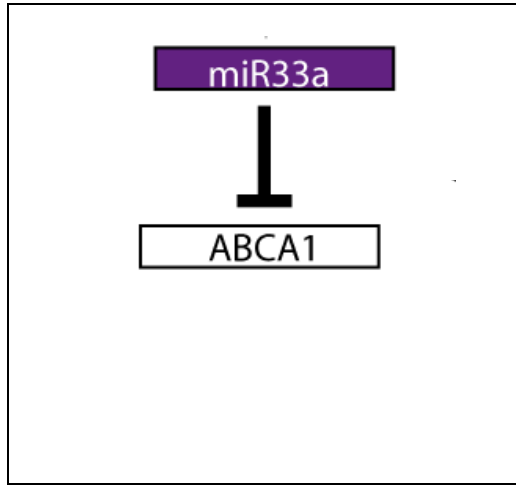
miR33 targets ABCA1



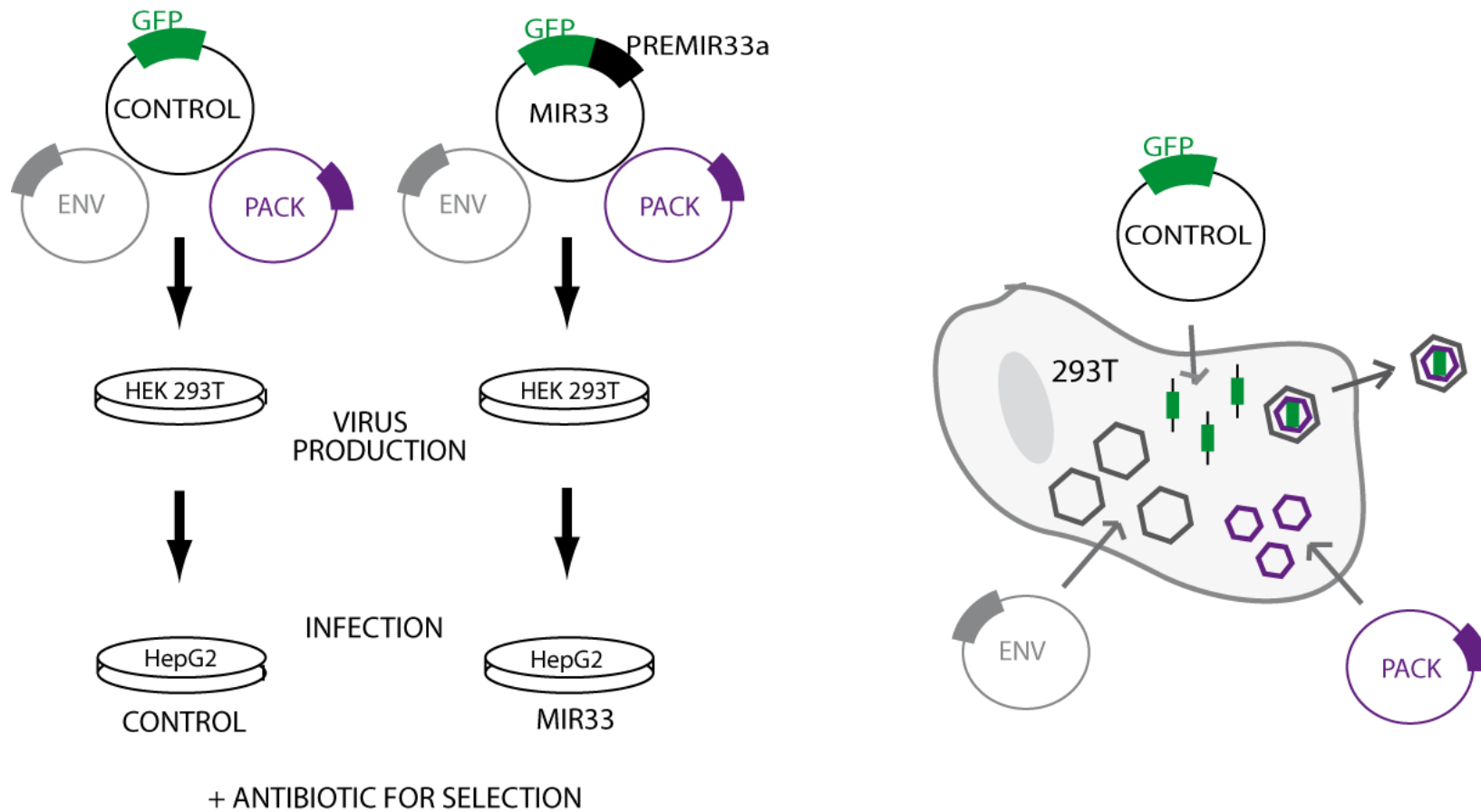
miR33 targets ABCA1



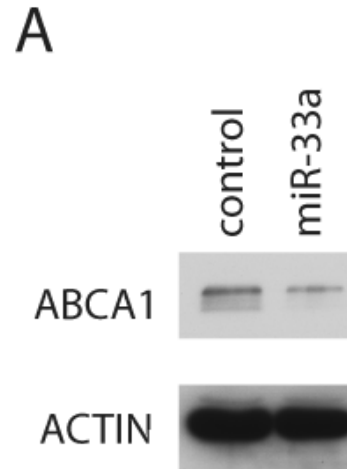
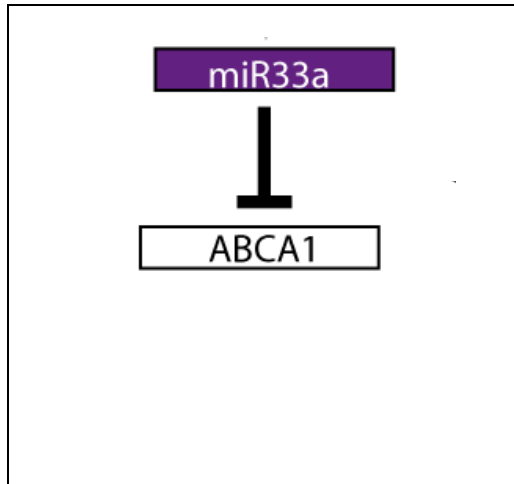
miR33 targets ABCA1



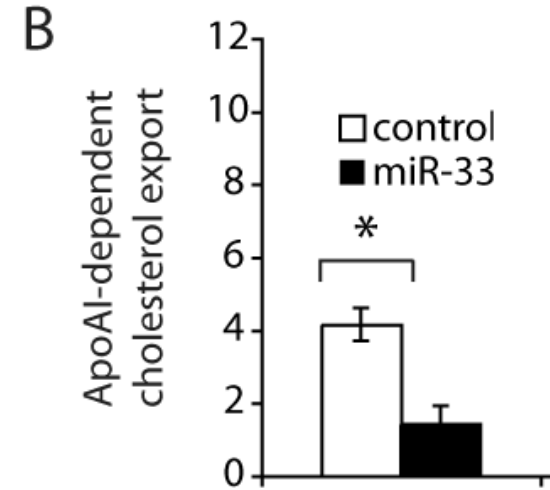
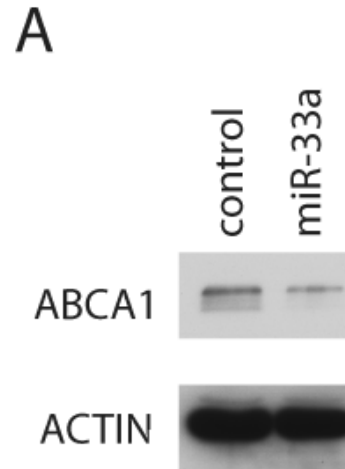
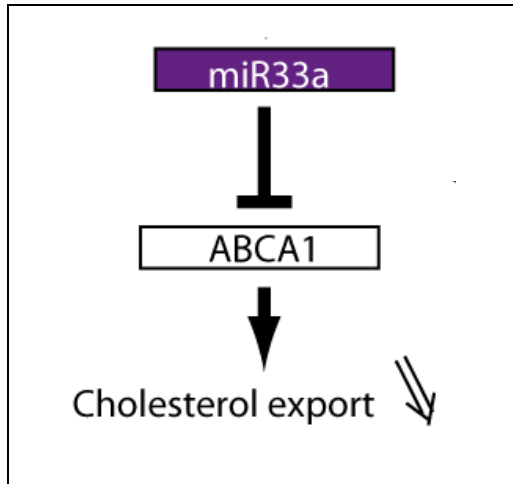
HepG2 cells overexpressing miR33



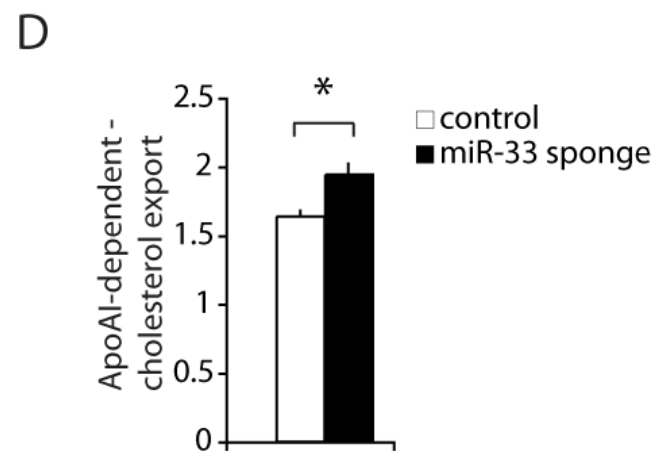
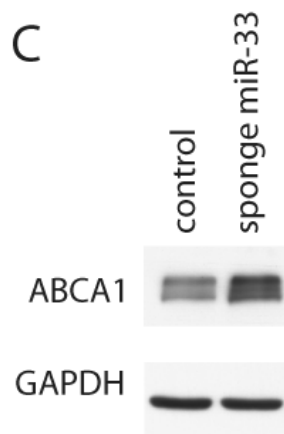
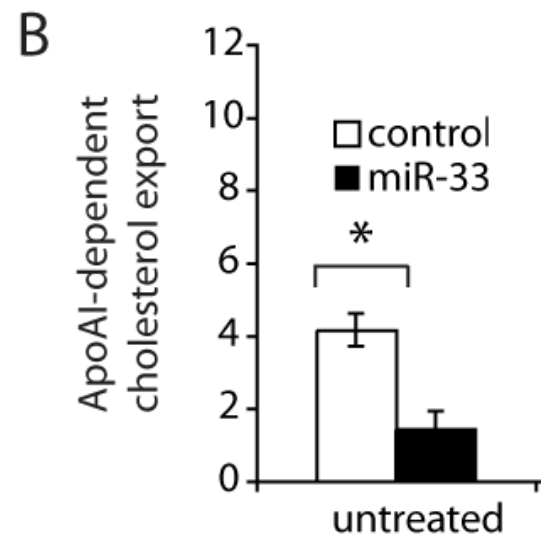
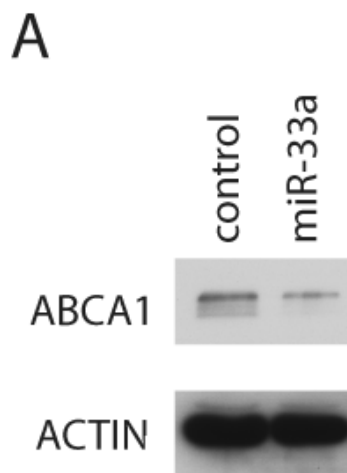
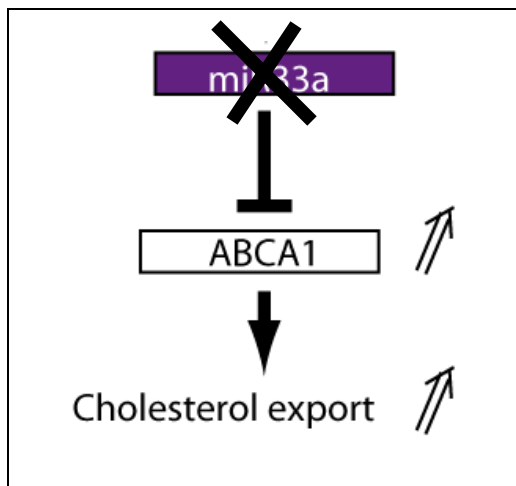
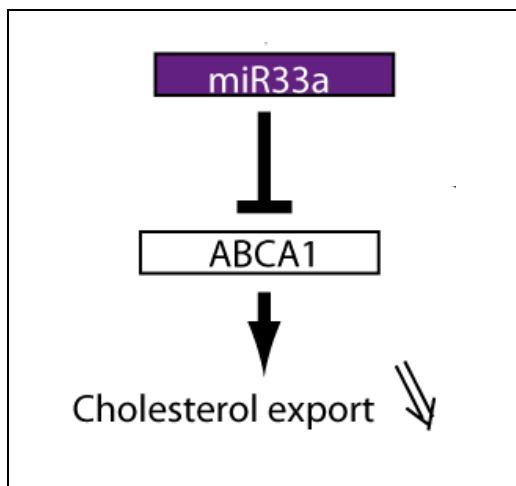
miR33 targets ABCA1 and regulates cholesterol export



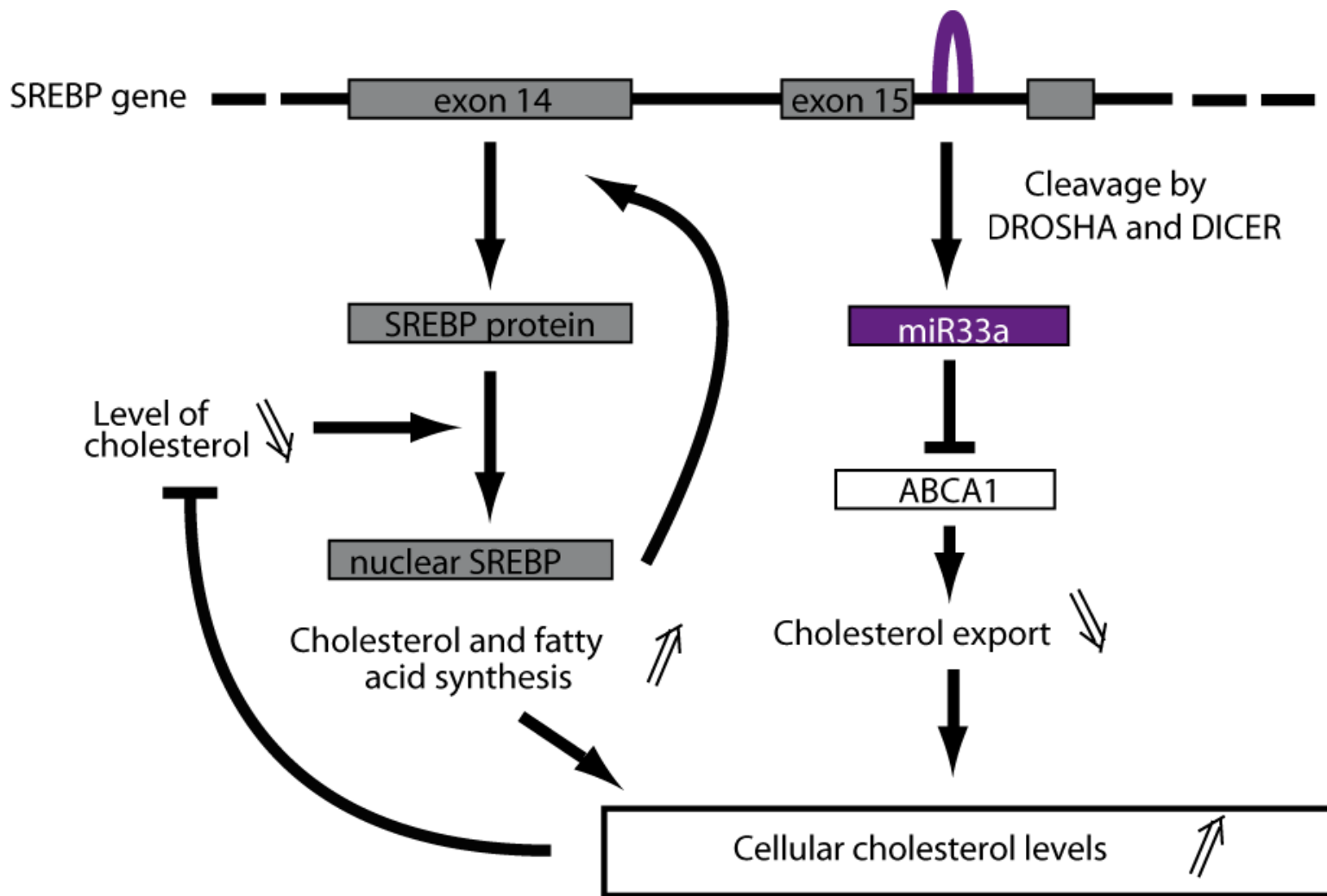
miR33 targets ABCA1 and regulates cholesterol export



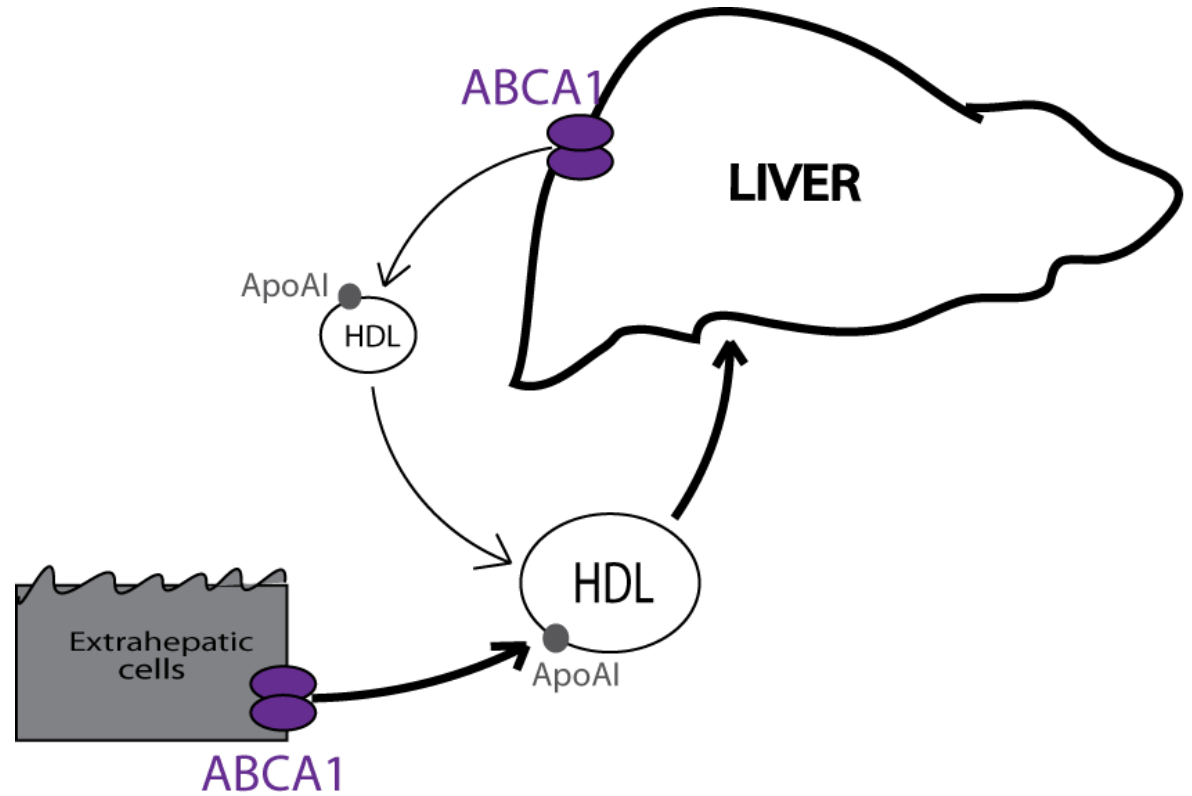
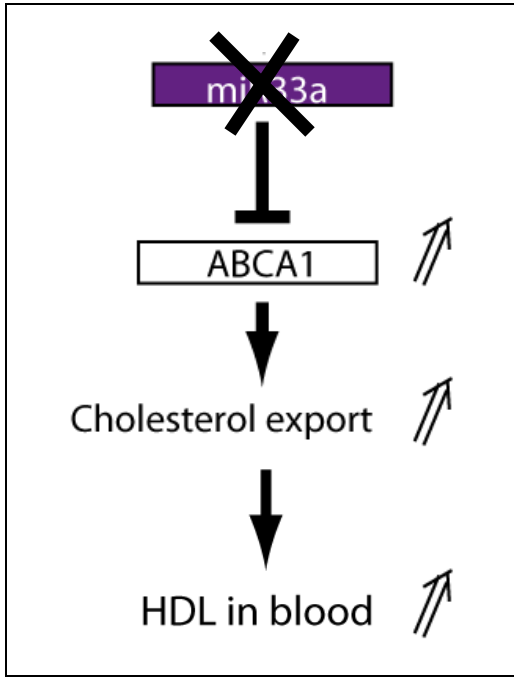
miR33 targets ABCA1 and regulates cholesterol export



miR33 collaborates with SREBP to maintain cholesterol homeostasis



miR33 increases plasma HDL levels



QuickTime™ et un lecteur compatible sont requis pour visualiser cette image.