Physiologic roles of PPAR α, β/δ, and γ

**PPARα**
- lipid catabolism and homeostasis (stimulate beta-oxidation of fatty acids)
- control of inflammatory processes and vascular integrity
- mediate the hiopolipidemic function of fibirtaes
- **Liver:** ↑FA oxidation
  ↑FA uptake, ↑ApoA-I, ↑Apo A-II ↑HDL
- **Vessels:** ↑TG ↓FFA
  ↑HDL ↓VLDL ↓Cytokines
  ↑ABCA1 ↓NF-kB ↑ApoE

**PPARβ/δ**
- responsible for insulin sensitivity and glucose homeostasis, vascular integrity
- **Adipocentric action:**
  ↓Cytokines ↓Resistin ↓FFA
  ↑ABCA1 ↓NF-kB ↑GLUT4
- **Skeletal muscle:**
  ↑Glucose uptake,
  ↑Glycogen synthesis

**PPARγ**
- **Glucose homeostasis and lipid storage**
  differentiation and maturation of adipocytes
  increase IS and glucose homeostasis (prevents hyperglicemia), vascular integrity,
- **Skeletal muscle/liver/adipocyte**
  ↑FA oxidation
  ↑UCP, ↓TG ↑HDL