STEROID INDUCED GLAUCOMA IN MICE: A MODEL WITH POTENTIAL FOR STUDYING DISEASE MODIFICATION/REVERSAL

David F Woodward,
Darryl R Overby,
Jacques Bertrand,
Elke Lütjen-Drecoll,
W Daniel Stamer
FUTURE ANTI-GLAUCOMA DRUGS: COLLABORATORS

DF Woodward

WD Stamer

DR Overby, J Bertrand

E Lütjen-Drecoll
FUTURE DRUGS FOR GLAUCOMA: WHAT WILL THEY LOOK LIKE?

- Better IOP lowering
- Ultra-long acting IOP drug (slow release drugs, gene therapy)
- Reverse the morphological changes that increase IOP
- Revert to normal the phenotypic (genotypic) glaucomatous cell changes
NEW MODELS OF GAUCOMA WILL BE NECESSARY
FUTURE DRUGS FOR GLAUCOMA: WHAT MODELS WILL BE REQUIRED?

Past/Present: Ocular hypotensive agents
Model = Laser induced ocular hypertension in monkeys

Reverse the morphological changes that increase IOP / Revert to normal the phenotypic (genotypic) glaucomatous cell changes
Model = Permits morphological changes to be monitored; tissues involved in aqueous humor outflow structurally similar to primates

= steroid induced glaucoma in mice
STEROID-INDUCED GLAUCOMA

• Hallmarks of steroid-induced glaucoma:
  • Elevated IOP with open angle
  • Decreased outflow facility
  • Accumulation of ECM
  • Myofibroblasts

• POAG patients at higher risk of steroid response

• Animal models of Steroid-induced OHT: cow, sheep, mice, ...

Why Mice?
- True Schlemm’s canal
- Human-like physiology
- Transgenic potential
- Fresh tissue

ATTENTION!

This entire presentation will be available to delegates registered for the conference.

To view the rest of this presentation and others, please register for the conference at www.gtcbio.com