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analyze. answer. advance.

Guinea Pig Model
for Early Cardiovascular Risk Assessment

Inotiv's Guinea Pig Model for Early CV Risk Assessment offers several advantages

SENSITIVE TO ION CHANNEL BLOCKERS

- Well-suited for detecting QT prolongation in drugs with potential cardiac effects, such as selective hERG blockers, multi-channel modulators, or compounds with unknown cardiac risk

TELEMETRY ENDPOINTS

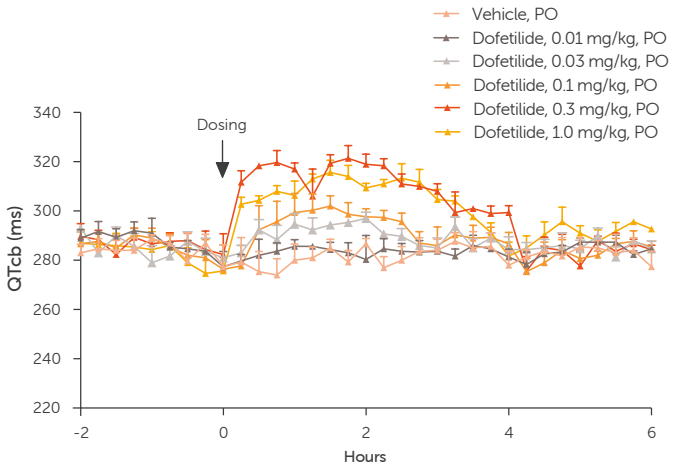
- ECG, Blood pressure, Heart Rate, Body Temperature and Activity

COST-EFFECTIVE AND EFFICIENT EXPLORATORY SOLUTION FOR EARLY-STAGE QT PROLONGATION CHARACTERIZATION

- Offering *in vivo* insight into cardiac safety to inform large animal IND-enabling studies
- Small body weight minimizes compound requirement
- Rapid study start and completion times
- Ideal for screening, refining dose ranges, and prioritizing compounds

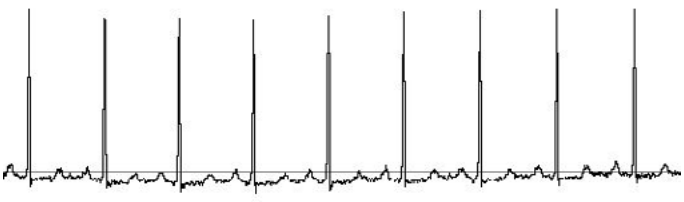
The data were generated using Harley Guinea Pigs (CRL), male, ~500 grams at surgery. The measurements collected were QTcb (Bazett's formula), QT-I, PR-I, QRS, Blood Pressure, Heart Rate and Core Body Temperature.

QTcb – Corrected for Heart Rate



The dose-response relationship and timing of peak QT prolongation observed in guinea pigs after dofetilide administration are consistent with findings in the canine, a well-established model for cardiovascular safety pharmacology. This supports the predictive reliability of the GP model for early identification of IKr-mediated effects.

Representative ECG Tracing



Early drug discovery necessitates rigorous cardiac risk assessment to identify potential pro-arrhythmic liabilities in lead compounds. Traditional approaches often involve early studies in canines, which can be resource-intensive and logistically demanding.

At Inotiv, we provide integrated solutions for telemetry, encompassing mice, rats, guinea pigs, canines and non-human primates.

This comprehensive platform enables a tiered approach to early cardiac risk assessment, starting with more resource-efficient models like guinea pigs. By integrating guinea pig telemetry studies early in the drug discovery process, researchers can efficiently assess potential cardiac liabilities, minimize the use of larger animals, and accelerate the development of safer and more effective therapeutics. This strategic approach optimizes resource allocation and streamlines the drug development timeline, ultimately advancing the translation of promising compounds into clinical candidates

Explore Inotiv's Innovative Telemetry Solutions