upcyte® solutions
for meaningful
cell-based assays

upcyte® - expanded primary cells
the upcyte® solution
finding the best cellular model – market position

Astrid Nörenberg
Astrid Nörenberg

the upcyte® solution
technology & cell production

cell isolation

selection of the optimal
gene combination that
induces proliferation

lentiviral
transduction
of primary cells

proliferation

quality control of
genetically modified
proliferating primary cells

upcyte®
cells
the upcyte® solution

advantages

✓ extensive availability
  • virtually unlimited cells from single donors
  • supply for screening applications

✓ easy & safe handling
  • quality controlled cells
  • detailed information on cell type specifications
  • assay-ready format
  • standardized PFUs
  • optimized media

✓ primary cell features
  • generated from healthy human adult cells
  • karyotypically stable
  • physiologically relevant profile
  • cell type specific phenotype

✓ wide range of applications
  • basic R&D
  • pharmaceutical preclinical development
  • e.g. ADMET, viral infections

✓ flexible use
  • option for transient transfections
  • 2D & 3D co-culture with other cell types
  • High throughput screenings
  • long term cultures

✓ donor selection
  • healthy or diseased tissue
  • distinct tissue subtypes
  • custom upcyting of primary cells
brief history of upcytes
publications

• 2016 Tolosa et al. – Toxicological Sciences (doi: 10.1093/toxsci/kfw078)
human upcyte hepatocytes: characterization of the hepatic phenotype and evaluation for acute and long-term hepatotoxicity routine testing
University of Valencia

• 2016 Schaefer et al. – Drug Metabolism & Disposition (DMD # 67348)
upcyte® human hepatocytes: a potent in vitro tool for the prediction of hepatic clearance of metabolically stable compounds
Boehringer Ingelheim Biberach (DMPK)

• 2015 Levy et al. – Nature Biotechnology (NBT-doi:10.1038/nbt.3377)
long term culture and expansion of primary human hepatocytes
The Hebrew University of Jerusalem (Israel) / upcyte technologies GmbH

• 2015 Ramachandran et al. – Pharma Res Per 3(5) 2015
applicability of 2nd generation upcyte® human hepatocytes for use in CYP inhibition & induction studies

Astrid Nörenberg
the upcyte® solution
ready-to-use cells & media // upcyte® services

cells & media

• Ready-to-use cells
  • 5 Mill cells, cryovial ready-to-use
  • license model – expand your own

• Medium
  • 100mL / 500mL
  • especially designed for upcyte cells
  • medium for primary cells

→ come along with PFU, CoA and technical support

upcyte service

• You have a specific cell type?
• You have a favourite donor?
• You have patient derived disease material?

• milestone dependent offer
• basic characterization of upcyted cells
• supply of Master Cell Bank with full expansion capacity
• unlimited license to use the upcyted cells
• expression of recombinant & reporter genes by lentiviral transduction
upcyte® cells

generation of proliferating cells from healthy primary human cells

available cells types
• upcyte® hepatocytes (5 different donors)
• upcyte® liver sinusoidal endothelial cells
• upcyte® microvascular endothelial cells

Looking for partners:
• upcyte® bronchial epithelial cells
• upcyte® skeletal & smooth muscle cells
• upcyte® keratinocytes

current customer „upcyte“ projects
• upcyte® macrophages

grant project
• upcyte® Kupffer cells

Astrid Nörenberg
Discover more!

astrid@upcyte.com