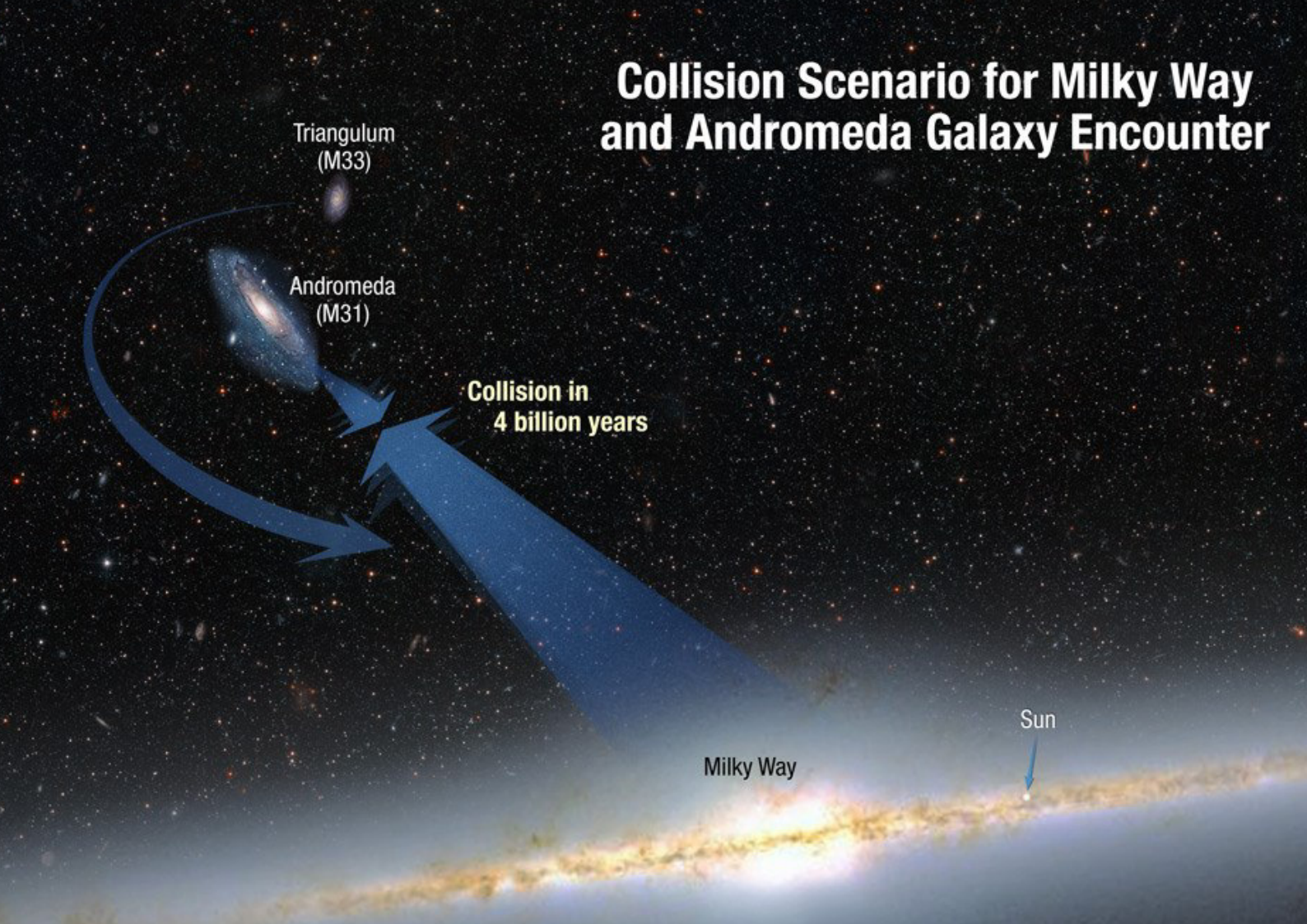


Collision Scenario for Milky Way and Andromeda Galaxy Encounter



Human hTERT immortalized cells

Relevant and standardized in vitro model systems for eternity

Good experiments start with the right choices – hTERT immortalized cell lines retain the cell-type specific phenotype while constantly growing. No more lot-to-lot variability. No more growth arrest.

Just the perfect choice!

Human hTERT immortalized cell lines

Highly differentiated cells are of ever increasing importance as in vitro test systems in various fields of biomedicine, toxicology and biotechnology. However, currently used in vitro cell cultures show significant disadvantages. Although normal human cells are characterized by a phenotype similar to the corresponding cells in vivo, cellular proliferation is limited by replicative senescence so that donors have to be repeatedly exchanged, and with each different donor the bioassays have to be re-evaluated and re-adjusted. On the other hand, tumor cells have lost many cell-type specific functions in favor of continuous growth. Thus, these cells do not represent the in vivo situation accurately.

In order to circumvent these limitations, Evercyte has focused on the establishment of continuously growing human cell lines by reactivation of telomerase and thereby provides cells with highest similarities to primary cells in function and behavior.

_in a nutshell

- **Primary cells** isolated from biological waste material (surgical waste or urine)
- Extension of cellular life span of primary cells by **ectopic expression of hTERT**
- Concomitant expression of cdk-4 or oncogenes if necessary for full immortalization
- **Characterization of cellular phenotype** (marker expression and function)
- **Cell banking and quality control testing** for standardized use

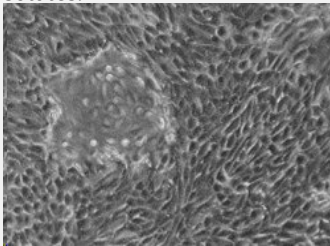


_cell-type specific characteristics

hTERT immortalized cells are characterized by a morphology, a phenotype and functions that are similar to the parental primary cells. Simultaneously, the cells show a cellular life span that is at least double of the normal cells with growth rates that are stable and comparable to that of the primary cells. Additionally, hTERT immortalized cells show a stable karyotype.

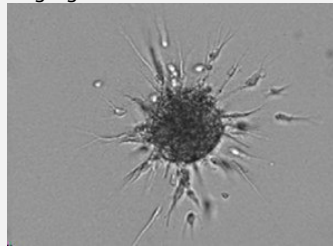
► Renal transport model

hTERT immortalized RPTECs when grown to high cell densities form domes showing active transport of water and solutes.



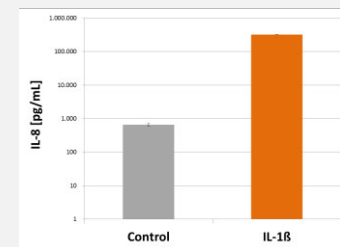
► Angiogenesis model

hTERT immortalized endothelial cells form sprouts when grown as 3D spheroids that have been treated with pro-angiogenic factors.



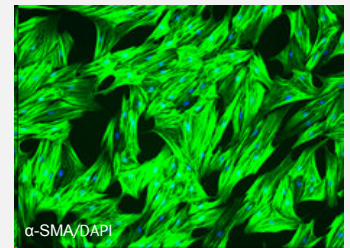
► Inflammation model

hTERT immortalized colon epithelial cells secrete significant amounts of IL-8 upon IL-1 β treatment.



► Fibrosis model

hTERT immortalized fibroblasts respond to TGF β treatment by induction of α -smooth muscle actin expression.



_applications

any cell based assay including

- In vitro toxicity studies
- Phenotypic drug screening
- Target screening
- Testing of drug delivery and barrier functions
- Gene function studies using CRISPR/Cas9 including orthogonal drug screening
- Advanced batch release assays

_adherence to GCCP-Standards!

Evercyte is committed to follow the principles of Good Cell Culture Practice (GCCP, Coecke et al., 2005). Therefore, our cell lines are:

- ✓ **established following ethical standards** (approved by IRB in accordance with the Declaration of Helsinki)
- ✓ **quality tested** (sterility, absence of specific human-pathogenic viruses, STR-profile, longevity)
- ✓ **characterized for expression of cell type specific markers and functions**

_product range comprises

renal epithelial cells ♦ bronchial epithelial cells ♦ mammary epithelial cells ♦ colonic epithelial cells ♦ corneal epithelial cells ♦ thymic epithelial cells ♦ skin cells ♦ endothelial cells ♦ myoblast cells