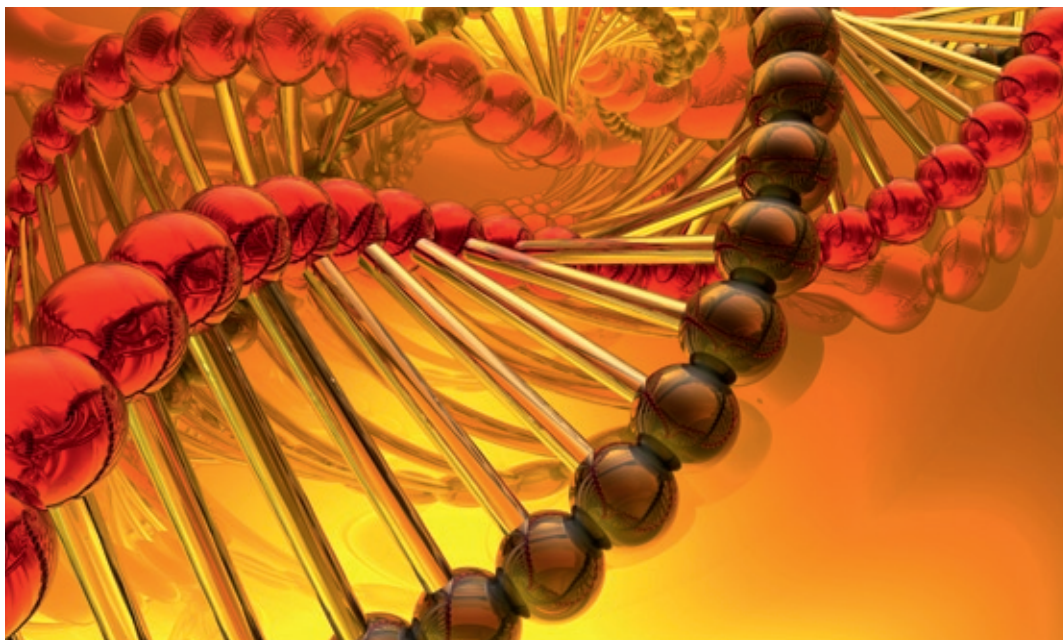


# GENOTOXICITY & *IN VITRO* TOXICOLOGY TESTING



**TNO** triskelion bv

One of the first steps in the (pre-clinical) development of your drug candidate is a genotoxicity assessment. Determining the genotoxic potential can be crucial for the further development of your candidate. During the lead optimisation/selection phase, *in vitro* (geno)toxicity screening assays can be very useful in selecting the most promising leads for further development.

TNO Triskelion offers extensive experience and expertise in both regulatory driven and non-standard assays to perfectly fulfil your specific needs. Our state-of-the-art study designs are in full compliance with GLP and international guidelines. In addition, we can screen series of compounds with respect to genotoxicity and cytotoxicity and develop (screening) assays that study the endpoint of your specific interest. Furthermore, we offer scientific consultation and regulatory guidance on how to perform the assessment in the most efficient and effective way.

#### **CONSULTANCY**

We can prepare comprehensive evaluations (position papers) for genotoxicity and carcinogenicity data available for your drugs. We have extensive knowledge of regulatory affairs and can recommend efficient testing strategies for safety assessment that optimally combine *in silico* approaches, *in vitro* and *in vivo* testing.

### OUR REGULATORY SERVICES

All of our studies can be carried out under Good Laboratory Practice (GLP).

- [OECD 431](#) *In vitro* skin corrosion in 3D skin models
- [OECD 432](#): 3T3 Neutral Red Uptake Phototoxicity Test
- [OECD 439](#) *In vitro* skin irritation in 3D skin models
- [OECD 471](#) Bacterial reverse mutation test (Ames test)
- [OECD 473](#) *In vitro* mammalian chromosome aberration test (CAT)
- [OECD 474](#) Mammalian erythrocyte micronucleus (MN) test
- [OECD 475](#) Mammalian bone marrow chromosome aberration test
- [OECD 476](#) *In vitro* mammalian cell gene mutation test (MLA) with mouse lymphoma cells (TK-locus)
- [OECD 486](#) Unscheduled DNA synthesis (UDS) test in mammalian liver cells *in vivo*
- [OECD 487](#) *In vitro* mammalian cell micronucleus (MN) test

### OUR ADVANCED ASSAYS INCLUDE

- Comet assay *in vivo* in various different target organs/ *in vitro*/ex vivo (human biomonitoring)
- Incorporation of genotoxicity endpoint in 28-d or 90-d repeated dose toxicity studies
- BlueScreen HC genotoxicity screening assay
- Screening versions of the regulatory genotoxicity assays
- *In vitro* screening assays, such as cytotoxicity or release of inflammatory mediators
- *In vivo* oral photosafety study in rodents
- *In vivo* dermal photosensitisation test in guinea pigs
- *In vitro* 3D skin phototoxicity test using human reconstructed skin models

As the *in vitro* assays currently available to assess photogenotoxicity are considered oversensitive, we therefore offer assays using alternative models, such as ex vivo human skin and *in vivo* rat skin. Such alternatives may allow exploration of the mechanisms of the photo-induced effect in addition to phototoxicity evaluation.

In addition to our toxicology services, we offer analytical services to demonstrate exposure in both *in vitro* and *in vivo* studies.

### ADVANTAGES FOR CONTRACTING STUDIES AT TNO TRISKELION

TNO Triskelion has a strong *in vitro* and genotoxicity team consisting of experimental practitioners, backed up by regulatory scientists with previous experience in the pharmaceutical industry. We understand the needs of our customers and can offer support and (the development of) customised study designs to answer your question. We will be happy to discuss your specific study requirements in person and in more detail.

## WWW.TRISKELION.NL

### TNO TRISKELION BV

TNO Triskelion is a contract research organization active in toxicology research, analytical chemistry and chemical risk analyses. The mission of TNO Triskelion is to guarantee the quality and safety of food ingredients, chemical substances and medicines. TNO Triskelion is a subsidiary of TNO, the Netherlands Organisation for Applied Scientific Research.

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