ABSTRACT

The present invention provides an apparatus for evaluating a drug effect enabling on-chip evaluation of the effect of a drug while the drug is acting on hERG-expressing cells. The present invention also provides a myocardial toxicity test apparatus and method therefor enabling *in vitro* myocardial toxicity testing that has previously been performed *in vivo*.

A pulsating cell population and hERG-expressing cells (target model cells) are suitably isolated and arranged on a transparent substrate so that the two form gap junctions. The hERG-expressing cells are arranged on transparent electrodes provided on the transparent substrate. The hERG-expressing cells are exposed to a flow of a liquid containing a drug such that the drug acts thereon. The difference between the normal pulsation of hERG-expressing cells and the pulsation when a drug is acting thereon is captured via electric signals obtained from electrodes, and the properties of the change in potential are evaluated.

162162

G00002