Resource Summary Report

Generated by NIF on May 19, 2025

MARCAR

RRID:SCR_003755
Type: Tool

Proper Citation

MARCAR (RRID:SCR_003755)

Resource Information

URL: http://www.imi-marcar.eu/

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Description: Consortium to identify early biological indicators (biomarkers) that can be used to predict the development of cancer, as an unintended and adverse response to a new drug. The use of these biomarkers that detect early carcinogenicity will hopefully accelerate drug development and increase patient safety. The project focuses on non-genotoxic carcinogenesis (NGC) specifically looking at the role of epigenetic effects that could be caused as unintended consequences of new drugs. Using a combination of molecular analysis technologies, the consortium combines expertise in the field of biomarkers, human and rodent cancer models, imaging, molecular profiling and bioinformatics. Participants will focus on liver tumors, the organ most affected by non-genotoxic carcinogenesis, during the preclinical safety evaluations of candidate-medicines. Their findings aim to facilitate tumor identification in other organs as well, in hopes of providing insights in the mechanisms of tumor growth. The main objectives of the consortium are to: * Identify early biomarkers for predicting which compounds have a potential for later cancer development * Improve the scientific basis for assessing carcinogenic potential of non-genotoxic (NGC) drugs * Identify the molecular response to NGC exposure that underpins development of early exposure biomarkers * Improve drug safety and the efficiency of drug development by advancing the development of alternative research methods

Abbreviations: MARCAR

Synonyms: MARCAR - towards novel biomarkers for cancer risk assessment, bioMARkers and molecular tumor classification for non-genotoxic CARcinogenesis

Resource Type: organization portal, data or information resource, consortium, portal

Keywords: biomarker, tumor classification, non genotoxic carcinogen, drug-induced tumor, safety, drug development, drug, consortium, carcinogen, adverse response, liver, mri, gene interaction, dna modification, drug exposure, gene expression, mutation, nuclear receptor, drug safety, biological process, gene, imaging, molecular profiling

Funding: Innovative Medicines Initiative

Resource Name: MARCAR

Resource ID: SCR_003755

Alternate IDs: nlx_157986

Record Creation Time: 20220129T080220+0000

Record Last Update: 20250519T203303+0000

Ratings and Alerts

No rating or validation information has been found for MARCAR.

No alerts have been found for MARCAR.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 6 mentions in open access literature.

Listed below are recent publications. The full list is available at NIF.

Marcar VL, et al. (2024) Modulation of the neuronal response in human primary visual cortex by re-entrant projections during retinal input processing as manifest in the visual evoked potential. Heliyon, 10(10), e30752.

Sinton MC, et al. (2021) A human pluripotent stem cell model for the analysis of metabolic dysfunction in hepatic steatosis. iScience, 24(1), 101931.

Lyall MJ, et al. (2020) Non-alcoholic fatty liver disease (NAFLD) is associated with dynamic changes in DNA hydroxymethylation. Epigenetics, 15(1-2), 61.

Lyall MJ, et al. (2018) Modelling non-alcoholic fatty liver disease in human hepatocyte-like cells. Philosophical transactions of the Royal Society of London. Series B, Biological sciences, 373(1750).

Thomson JP, et al. (2015) DNA immunoprecipitation semiconductor sequencing (DIP-SC-seq) as a rapid method to generate genome wide epigenetic signatures. Scientific reports, 5, 9778.

Henderson CJ, et al. (2015) Evidence that the capacity of nongenotoxic carcinogens to induce oxidative stress is subject to marked variability. Toxicological sciences : an official journal of the Society of Toxicology, 145(1), 138.