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Data Article

Raw data of the effects of Chlorogenic acid in 3-Nitropropionic acid induced toxicity and genotoxicity



Alarcón-Herrera Norberto^a, Flores-Maya Saúl^a, Bellido Belén^b,
García-Bores Ana M.^c, Mendoza Ernesto^b,
Ávila-Acevedo Guillermo^c, Hernández-Echeagaray Elizabeth^{b,*}

^a Laboratorio de Recursos Naturales, UBIPRO, FES-Iztacala, Universidad, Nacional Autónoma de México, México

^b Laboratorio de Neurofisiología del desarrollo y la neurodegeneración UBIMED, FES-Iztacala, Universidad, Nacional Autónoma de México, México

^c Laboratorio de Fitoquímica, UBIPRO, FES-Iztacala, Universidad, Nacional Autónoma de México, México

ARTICLE INFO

Article history:

Received 9 May 2017

Received in revised form

12 June 2017

Accepted 5 July 2017

Available online 12 July 2017

Keywords:

3-NP

CGA

Toxicity

Genotoxicity

Data

ABSTRACT

The raw data showed in this article comes from the published research article entitled "Protective effects of Chlorogenic acid in 3-Nitropropionic acid induced toxicity and genotoxicity" Food Chem Toxicol. 2017 May 3. pii: S0278-6915(17)30226-0. <http://dx.doi.org/DOI:10.1016/j.fct.2017.04.048>. [1]. Data illustrates antitoxic and antigenotoxic effects of Chlorogenic acid (CGA) on toxicity and genotoxicity produced by the *in vivo* treatment with mitochondria toxin 3-Nitropropionic acid (3-NP) in mice. Toxicity and genotoxicity was evaluated in erythrocytes of peripheral blood through the micronuclei assay. Data was share at the Elsevier repository under the reference number FCT9033.

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DOI of original article: <http://dx.doi.org/10.1016/j.fct.2017.04.048>

* Corresponding author.

E-mail address: aehe67@gmail.com (H.-E. Elizabeth).

<http://dx.doi.org/10.1016/j.dib.2017.07.004>

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Specifications Table

| | |
|----------------------------|--|
| Subject area | <i>Biology</i> |
| More specific subject area | <i>Toxicology</i> |
| Type of data | <i>Tables</i> |
| How data was acquired | <i>Data from erythrocytes from peripheral blood, stained with H&E were classified in Normochromatic, Polychromatic or Polychromatic with micronuclei cells. 1000 cells per each condition were counted with the aid of by the aid of an optic microscope (Leica, Microsystems AG).</i> |
| Data format | <i>Raw data</i> |
| Experimental factors | <i>In order to determine toxicity and genotoxicity of 3-NP, as well as protective effects of CGA, 6 experimental groups were evaluated; Negative control, Control (PB), 3-NP, CGA, 3-NP + CA, P/CA, 3-NP + CA and P/CA, 3-NP Each treatment lasted for 5 days except those where 5 days of pretreatment was present.</i> |
| Experimental features | <i>To evaluate toxic and genotoxic effect of 3-NP and the antitoxic and antigenotoxic effects of CGA in erythrocytes.</i> |
| Data source location | <i>México City, México</i> |
| Data accessibility | <i>Data are available in this article and were place also in a public repository provided by Elsevier submission system, under reference number FCT9033</i> |

Value of the data

- Data displays Normochromatic, Polychromatic or Polychromatic cells with micronuclei in the different experimental conditions and can be used by other research groups.
- Toxicity and Genotoxicity were measured in peripheral blood by using the micronuclei assay.
- These data are important because few studies have carried out to evaluate toxicity and genotoxicity of 3-NP which can be found in plants like sugar cane that are eaten by cattle and humans.
- Data about CGA protective effects are important because CGA is found in a variety of food products which can help to protect the health of living organisms.

1. Data

Raw data presented in this paper gives information about protective role of CGA on toxic and genotoxic effects of 3-NP in erythrocytes from peripheral blood. Data are shown in [Tables 1–7](#) which illustrate the effect in each evaluated time.

2. Experimental design, materials and methods

To evaluate toxic effect of 3-NP and the antitoxic effect of Chlorogenic acid, mice were randomly assigned to one of the following experimental groups: negative control, ifosfamide (positive control), buffer, 3-nitropropionic acid (3-NP), Chlorogenic acid (CGA), 3-NP + Chlorogenic acid without pretreatment (3-NP + CA, W/P), 3-NP + Chlorogenic acid together with pretreatment of CA per 5 days (P/CA, 3-NP + CA), pretreatment with CA for 5 days and later treatment of 3-NP alone, (P/CA, 3-NP).

All groups were treated for 5 days with i.p. doses of 3-NP (15 mg/kg), CGA (100 mg/kg).

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