

Accepted Manuscript

Title: Assessment of estrogenic potential of diethyl phthalate in female reproductive system involving both genomic and non-genomic actions

Author: Narender Kumar Shruti Sharan Swati Srivastava
Partha Roy



PII: S0890-6238(14)00109-9
DOI: <http://dx.doi.org/doi:10.1016/j.reprotox.2014.06.008>
Reference: RTX 6979

To appear in: *Reproductive Toxicology*

Received date: 8-8-2013
Revised date: 9-6-2014
Accepted date: 23-6-2014

Please cite this article as: Kumar N, Sharan S, Srivastava S, Roy P, Assessment of estrogenic potential of diethyl phthalate in female reproductive system involving both genomic and non-genomic actions, *Reproductive Toxicology* (2014), <http://dx.doi.org/10.1016/j.reprotox.2014.06.008>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Abstract

Phthalates are the diverse group of compounds abundantly present in environment. The present study shows the estrogenic potential of diethyl phthalate (DEP). The data showed that DEP increased the transactivation of ER in CHO and MCF-7 cells suggesting its interaction with ER. In vivo parameters like increased uterine epithelial cell height and up regulation of various steroidogenic genes were also observed in adult female rats. Our uterotrophic assay data from immature female rats suggested that DEP treatment resulted in augmentation of uterine weight as well as luminal epithelial cell heights in both vaginal and uterine tissues. Further, DEP was able to upregulate *pS2* gene expression with simultaneous activation of MAPK pathway as demonstrated by increased p-ERK/ERK ratio. Taken together, the present data suggests that DEP acts as an estrogenic compound and based on these data further detailed studies would reveal its mode of action at cellular levels.

Download English Version:

<https://daneshyari.com/en/article/5858823>

Download Persian Version:

<https://daneshyari.com/article/5858823>

[Daneshyari.com](https://daneshyari.com)