

Study on cytotoxic effects of *Euphorbia milii*, Des Moul. extracts on *Allium cepa*, Linn. root tips

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**Dissertation submitted to the Mahatma Gandhi University,
Kottayam in partial fulfilment for the degree of
Master of Science in Botany**

By

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2015



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CERTIFICATE

This is to certify that the dissertation entitled '**Study on cytotoxic effects of Euphorbia millii, Des Moul. extracts on Allium cepa, Linn. root tips**' submitted 23 to Mahatma Gandhi University, Kottayam, in partial fulfilment of the requirements for the award of the degree of Master of Science in Botany is a bonafide record of the original project work done by **Sajeenath Beevi A.J. (Reg.No.130011005892)** during her period of study in the Department of Botany, S.H. College, Thevara, 20 under the guidance and supervision of Dr.Fr.Jose John and that this project report has not previously formed the basis for the award of any degree, diploma or other similar titles to the best of my knowledge.

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Thevara
20.07.2015

Dr. Fr.Jose John
(Supervising Teacher)

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DECLARATION

I hereby declare that the dissertation entitled '**Study on cytotoxic effects of Euphorbia milii, Des Moul. extracts on Allium cepa, Linn. root tips**' submitted to Mahatma Gandhi University, Kottayam, Kerala in partial fulfilment for the Degree of Master of Science in Botany, is a record of original project work done by me during the course of M.Sc. degree and has not been formed the basis for any other degree, diploma before.

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% **27**
PUBLICATIONS

% **17**
STUDENT PAPERS

PRIMARY SOURCES

- | | | |
|---|---|------------|
| 1 | www.euphorbia.de
Internet Source | % 4 |
| 2 | en.wikipedia.org
Internet Source | % 2 |
| 3 | www.raintreenutrition.com
Internet Source | % 1 |
| 4 | www.ijppsjournal.com
Internet Source | % 1 |
| 5 | www.topclassglobaljournals.org
Internet Source | % 1 |
| 6 | Submitted to Higher Education Commission
Pakistan
Student Paper | % 1 |
| 7 | www.ejobios.com
Internet Source | % 1 |
| 8 | www.psr.org
Internet Source | % 1 |
| 9 | carecalicut.org | |

Internet Source

% 1

10 www.ajtmh.org

Internet Source

% 1

11 academicjournals.org

Internet Source

% 1

12 www.tm.mahidol.ac.th

Internet Source

% 1

13 www.chemweb.com

Internet Source

% 1

14 Sumitha, K. V., and J. E. Thoppil. "Genotoxicity assessment of two common curing weeds: *Hyptis suaveolens* (L.) Poir. and *Leucas indica* (L.) R. Br.", *Cytotechnology*, 2015.
Publication

% 1

15 www.sciencepub.net

Internet Source

% 1

16 Oliveira-Filho, E.C.. "Toxicity of *Euphorbia milii* Latex and Niclosamide to Snails and Nontarget Aquatic Species", *Ecotoxicology and Environmental Safety*, 200007
Publication

% 1

17 www.britannica.com

Internet Source

% 1

Submitted to Christ University

18

Student Paper

% 1

19

Leme, D.M.. "Allium cepa test in environmental monitoring: A review on its application", Mutation Research-Reviews in Mutation Research, 200907/08

Publication

% 1

20

ageconsearch.umn.edu

Internet Source

% 1

21

bbelectronica.cpac.embrapa.br

Internet Source

<% 1

22

alttox.org

Internet Source

<% 1

23

Submitted to Indus International School, Pune

Student Paper

<% 1

24

Analytical Techniques in Biochemistry and Molecular Biology, 2011.

Publication

<% 1

25

www.succulent-plant.com

Internet Source

<% 1

26

Abu Kausar. "Photocontrolled Manipulation of a Microscale Object: A Rotational or Translational Mechanism", Chemistry - A European Journal, 01/10/2011

Publication

<% 1

- 27 Prajitha, V., and J.E. Thoppil. "Genotoxic and antigenotoxic potential of the aqueous leaf extracts of Amaranthus spinosus Linn. using Allium cepa assay", South African Journal of Botany, 2016. <% 1
Publication
-
- 28 www.abstrichy.com <% 1
Internet Source
-
- 29 www.scielo.br <% 1
Internet Source
-
- 30 Submitted to Kingston University <% 1
Student Paper
-
- 31 www.omicsonline.org <% 1
Internet Source
-
- 32 www.jofamericanscience.org <% 1
Internet Source
-
- 33 link.springer.com <% 1
Internet Source
-
- 34 www.johronline.com <% 1
Internet Source
-
- 35 Sousa, Saulo M., and Lyderson F. Viccini. <% 1
"Cytotoxic and genotoxic activity of Achillea millefolium L., Asteraceae, aqueous extracts", Revista Brasileira de Farmacognosia, 2011.
Publication

- 36 journals.tubitak.gov.tr <% 1
Internet Source
-
- 37 www.authorstream.com <% 1
Internet Source
-
- 38 base.repositorio.unesp.br <% 1
Internet Source
-
- 39 www.pakbs.org <% 1
Internet Source
-
- 40 biblio.ugent.be <% 1
Internet Source
-
- 41 "Author Index(Volume 145)", Toxicology Letters, 20031210 <% 1
Publication
-
- 42 Submitted to University of Lincoln <% 1
Student Paper
-
- 43 ijppr.com <% 1
Internet Source
-
- 44 globalresearchonline.net <% 1
Internet Source
-
- 45 www.journalajst.com <% 1
Internet Source
-
- 46 Submitted to Canakkale Onsekiz Mart University <% 1
Student Paper

- 47 Ali, Özmen. "Cytotoxicity of Hibiscus rosa-sinensis flower extract", Caryologia, 2010. Publication <% 1
- 48 Bernardes, Paula Mauri, Larissa Fonseca Andrade-Vieira, Francielen Barroso Aragão, Adésio Ferreira, and Marcia Flores da Silva Ferreira. "Toxicity of Difenoconazole and Tebuconazole in Allium cepa", Water Air & Soil Pollution, 2015. Publication <% 1
- 49 www.biomedexperts.com Internet Source <% 1
- 50 pharmacy.dypvp.edu.in Internet Source <% 1
- 51 kutuphane.dogus.edu.tr Internet Source <% 1
- 52 www.bioline.org.br Internet Source <% 1
- 53 www.arkive.org Internet Source <% 1
- 54 www.inaturalist.org Internet Source <% 1
- 55 amec.glp.net Internet Source <% 1

- 56 www.ncbi.nlm.nih.gov <% 1
Internet Source
-
- 57 Delgado, I.. "Absence of tumor promoting activity of Euphorbia milii latex on the mouse back skin", Toxicology Letters, 20031130 <% 1
Publication
-
- 58 www.wudpeckerresearchjournals.org <% 1
Internet Source
-
- 59 Panda, Brahma B., and Kamal K. Panda. "Genotoxicity and Mutagenicity of Metals in Plants", Physiology and Biochemistry of Metal Toxicity and Tolerance in Plants, 2002. <% 1
Publication
-
- 60 ejje.weblio.jp <% 1
Internet Source
-
- 61 www.researchgate.net <% 1
Internet Source
-
- 62 Submitted to Pondicherry University <% 1
Student Paper
-
- 63 Turkoglu, S.. "Evaluation of genotoxic effects of sodium propionate, calcium propionate and potassium propionate on the root meristem cells of Allium cepa", Food and Chemical Toxicology, 200806 <% 1
Publication
-

64	www.scialert.net	<% 1
Internet Source		
65	www.niscair.res.in	<% 1
Internet Source		
66	www.antiessays.com	<% 1
Internet Source		
67	www.ijpcbs.com	<% 1
Internet Source		
68	insipub.org	<% 1
Internet Source		
69	www.jstage.jst.go.jp	<% 1
Internet Source		
70	www.plantcell.org	<% 1
Internet Source		
71	P. N. Rao. "Chromosome elimination in trisomics of <i>Coix aquatica Roxb.</i> ", <i>Theoretical and Applied Genetics</i> , 1976	<% 1
Publication		
72	www.uwo.ca	<% 1
Internet Source		
73	jiarm.com	<% 1
Internet Source		
74	ujpah.in	<% 1
Internet Source		

- 75 Mello-Silva, C.C.. "The influence of exposure to Euphorbia splendens var. hislopii latex on the concentrations of total proteins and nitrogen products in Biomphalaria glabrata infected with Schistosoma mansoni", Acta Tropica, 201102
Publication <% 1
-
- 76 connection.ebscohost.com Internet Source <% 1
-
- 77 Zamith, H.P.S.. "Evaluation of the mutagenicity of the mulloscicidal latex of Christ's Crown (Euphorbia milii var. hislopii) in mammalian cells in vitro and in vivo", Mutation Research/Genetic Toxicology, 199605
Publication <% 1
-
- 78 Smith, G.E.. "Is fluoride a mutagen?", Science of the Total Environment, 198801
Publication <% 1
-
- 79 www.science.gov Internet Source <% 1
-
- 80 maxwellsci.com Internet Source <% 1
-
- 81 euphorbiaingens.1-4-you.net Internet Source <% 1
-
- 82 www.chevronaustralia.com Internet Source <% 1

- 83 Submitted to University of Sheffield <% 1
Student Paper
-
- 84 George Roy Lane. "X-Ray fractionation and chromosome breakage", Heredity, 04/1951 <% 1
Publication
-
- 85 SAKARI KNUUTILA. "Chromosome pulverization in blood diseases", Hereditas, 09/1981 <% 1
Publication
-
- 86 Submitted to University of Queensland <% 1
Student Paper
-
- 87 kiachennai.com <% 1
Internet Source
-
- 88 ijset.net <% 1
Internet Source
-
- 89 Lucía Feijoo-Siota. "Native and Biotechnologically Engineered Plant Proteases with Industrial Applications", Food and Bioprocess Technology, 09/28/2010 <% 1
Publication
-
- 90 isgbrd.in <% 1
Internet Source
-
- 91 www.scribd.com <% 1
Internet Source
-
- Simi, S.. "Clastogenicity of anthraquinones in

- 92 V79 and in three derived cell lines expressing P450 enzymes", Mutation Research Letters, 199508 <% 1
Publication
-
- 93 Ekram, S. Ahmed ., Najia, A. Al-Zanbagi .. "Mammal Toxicity and Mutagenicity Assessment of the Methanol Extract of the Molluscicidal Plant Euphorbia schimperiana", Pakistan Journal of Biological Sciences, 2006 <% 1
Publication
-
- 94 Lazzeri, M.. "URODYNAMIC EFFECTS OF INTRAVESICAL RESINIFERATOXIN IN HUMANS: PRELIMINARY RESULTS IN STABLE AND UNSTABLE DETRUSOR", The Journal of Urology, 199712 <% 1
Publication
-
- 95 www.skintherapyletter.com <% 1
Internet Source
-
- 96 Submitted to National University of Singapore <% 1
Student Paper
-
- 97 www.i-scholar.in <% 1
Internet Source
-
- 98 Submitted to Oceanside Senior High School <% 1
Student Paper
-
- 99 ehp.niehs.nih.gov <% 1
Internet Source

- 100 CURT CARLBOM. "IN VITRO SEED CULTURE FROM EXCISED-PREANTHESIS GRASS INFLORESCENCES AND SOME APPLICATIONS IN BASIC AND APPLIED RESEARCH EMPLOYING IN VITRO CULTURE", Hereditas, 03/1969
Publication <% 1
- 101 goannasvencoop.com Internet Source <% 1
- 102 Kuchy, Aashiq H., Aijaz A. Wani, and Azra N. Kamili. "Cytogenetic effects of three commercially formulated pesticides on somatic and germ cells of Allium cepa", Environmental Science and Pollution Research, 2015.
Publication <% 1
- 103 www.eurasianjournals.com Internet Source <% 1
- 104 Submitted to Queen Margaret University College, Edinburgh Student Paper <% 1
- 105 Prajitha, V., and John E. Thoppil. "Induction of giant cells by the synthetic food colorants viz. lemon yellow and orange red", Cytotechnology, 2016.
Publication <% 1
- 106 Vogg, G.. "Tumor promoting diterpenes from <% 1

Euphorbia leuconeura L.", Phytochemistry,
199905

Publication

-
- 107 www.medlina.com <% 1
Internet Source
- 108 Oladiji, A.T.. "Anti-anaemic potentials of aqueous extract of Sorghum bicolor (L.) moench stem bark in rats", Journal of Ethnopharmacology, 20070522 <% 1
Publication
- 109 N. Bu. "Genotoxicity of Fenpropathrin and Fenitrothion on Root Tip Cells of Vicia faba", Bulletin of Environmental Contamination and Toxicology, 11/2011 <% 1
Publication
- 110 virtual.parkland.edu <% 1
Internet Source
- 111 ARAGÃO, F. B.; PALMIERI, M. J.; FERREIRA, A.; COSTA, A. V.; QUEIROZ, V. T.; PINHEIRO, P. F. and ANDRADE-VIEIRA, L. F.. "Phytotoxic and cytotoxic effects of Eucalyptus essential oil on lettuce (*Lactuca sativa L.*)", Allelopathy Journal, 2015. <% 1
Publication
- 112 Olorunfemi, DI, UM Ogieseri, and A Akinboro. "Genotoxicity Screening of Industrial Effluents using Onion bulbs (*Allium cepa L.*)", Journal of <% 1

Applied Sciences and Environmental Management, 2011.

Publication

-
- 113 arca.icict.fiocruz.br <% 1
Internet Source
- 114 bmcccomplementalternmed.biomedcentral.com <% 1
Internet Source
- 115 K.B. Jose. "The mechanism of aromatic nucleophilic substitution reaction between ethanolamine and fluoro-nitrobenzenes: an investigation by kinetic measurements and DFT calculations", Journal of Physical Organic Chemistry, 08/2011 <% 1
Publication
- 116 "Taxonomic Cross-Reference Index.", Illustrated Handbook of Succulent Plants: Dicotyledons, 20040101 <% 1
Publication
- 117 Application of Short-Term Bioassays in the Fractionation and Analysis of Complex Environmental Mixtures, 1979. <% 1
Publication
- 118 RENJANA, K.; ANJANA, S. and THOPPIL, JOHN E. "EVALUATION OF GENOTOXIC EFFECTS OF BAKING POWDER AND MONOSODIUM GLUTAMATE USING ALLIUM <% 1

CEPA ASSAY", International Journal of Pharmacy & Pharmaceutical Sciences, 2013.

Publication

-
- 119** Priya, Jayabalan; Thirumoorthi, Rajendran; Kumar, Natesan Senthil; Sumathi and Vijayakumar, Mannangatti. "Pharmacognostical and Preliminary Phytochemical Studies of Jasminum trichotomum Leaves", *Journal of Pharmacy Research*, 2011. <% 1
- Publication
-
- 120** Islam, Nazar Ul, Ibrahim Khan, Abdur Rauf, Naveed Muhammad, Muhammad Shahid, and Mohammad Raza Shah. "Antinociceptive, muscle relaxant and sedative activities of gold nanoparticles generated by methanolic extract of Euphorbia milii", *BMC Complementary and Alternative Medicine*, 2015. <% 1
- Publication
-
- 121** Tülay Aşkin Çelik. "Evaluation of Cytotoxicity and Genotoxicity of Inula viscosa Leaf Extracts with Allium Test", *Journal of Biomedicine and Biotechnology*, 2010 <% 1
- Publication
-
- 122** Vigneau, J., P. Bordel, and R. Geslot. "Reliability of Ceramic Cutting Tools", *CIRP Annals - Manufacturing Technology*, 1988. <% 1
- Publication
-

- 123 Bhujbal, Santosh Subhash; Deshmukh, Rucha Prayagadas; Bidkar, Jayant Subhashchandra; Thatte, Vidya Amit; Awasare, Shital Shivaji and Garg, Pratiksha Prahlad. "Evaluation of cytotoxic activity of barks of *Mimusops elengi*", EurAsian Journal of Biosciences, 2011. <% 1
Publication
-
- 124 U. C. Kanife. "Phytochemical Composition and Antifungal properties of Leaf, Stem and Florets of *Panicum maximum* Jacq. (Poaceae)", International Journal of Biology, 03/30/2012 <% 1
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-

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