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## Effects of *Cassia occidentalis* extract treatment on reproduction and fertility in male rats

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**Objective:** Many plants have been explored to control fertility and birth across the world. The present study was designed to investigate the effects of *Cassia occidentalis* on fertility potential of male albino rats aiming to develop a safe and reversible herbal male contraceptive.

**Methods:** Hydroalcoholic extract of *Cassia occidentalis* fruits was administered orally in the male rats at different doses for 60 days. Animals were maintained on controlled conditioned by following CPCSEA and IAEC guidelines for the experiments. The effects of the treatment on body weight, reproductive organs weight, biochemical profiles, sperm counts and motility, hormones and fertility potential was measured. Data were analyzed statistically.

**Results:** Data reveals that weights of testes and sex accessory reproductive organs were significantly reduced in the rats followed drug treatment. Level of testosterone hormone, sperm motility and density, protein, fructose, ascorbic acid, and sialic acid contents were significantly declined in the extract-treated rats as compared to vehicle-treated controls. Histopathology study of testes of the extract treated rats showed degenerative changes in the structure of testes and spermatogenic process resulted reduction of fertility.

**Conclusions:** It can be concluded that *Cassia occidentalis* extract treatment reduced fertility of rats might be due to antiandrogenic nature of the treatment.

**Key Words:** *Cassia occidentalis*, Contraceptive, Fertility, Rats, Hormones.

### Speaker Biography

Pratap Chand Mali did M.sc in Zoology and Ph D in Reproductive Biology. Prof. Mali main research interest is to develop a male contraceptive from traditional medicinal plants to control fertility; he published 100 research papers in the journals of international repute. He is an active Member of (i) Indian Science Congress Association (ii) Indian Society for the Study of Reproduction and Fertility (ISSRF) (iii) Society for Reproductive Biology and Comparative Endocrinology (SRBCE) and associated with the 12 Journals includes Frontiers in Reproductive Bioscience, Journal of Life Medicine (JLM), International Journal of Zoology Research, Agricultural and Biological Sciences Journal, International Journal of Plant Research, International Journal of Life Science and Engineering, International Journal of Life-Sciences Scientific Research, International Journal of Pharmacology and Biological Science and Journal of Medical Science and Clinical Research. He has been participated in more than 75 Seminars/ Symposium / Conferences / Workshops in India and abroad. He organized International Conference on Multidisciplinary Approaches to Diabetes Research & Health (ICMADRH - 2010), University of Rajasthan, Jaipur, India, November 14-16, 2010 and National Workshop on Biomedical Instruments & Technologies (NWBIT- 2015) organized at Department of Zoology, University of Rajasthan, Jaipur on March 13-14<sup>th</sup> 2015. He is recipient of 2 Awards 1. Asia-Pacific Council on Contraception (APCOC) Talents Encouragement Award by organizer of the Second Congress of the Asia-Pacific Council on Contraception on "Contraception for all: how, why, what and when?" held at Macau, China on December 4-6, 2008 and 2. Conferred: Best Citizen of India Award, 2010. Dr. Mali supervised seven research scholars have been awarded Ph. D degree and 2 are pursuing.

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