



## Effect of methanolic extract of *Hedera nepalensis* K. Koch on reproductive system of male rats: A histological and biochemical study

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### Abstract:

**Statement Background:** Traditionally, herbal medicines have long been practiced worldwide to prevent different diseases for centuries. *Hedera nepalensis* is a genus of flowering plant used against diabetes, fever, pulmonary infections and rheumatism. It is also used as antifertility agent in men in different regions of the world. However, the knowledge about antifertility potential of the plant is unknown. **Purpose:** This study was designed to evaluate effects of methanolic leaf extract of *Hedera nepalensis* K. Koch on reproductive system of male rats. **Study design:** For this, in vitro experimental approach was used to see direct effect of different concentrations of plant extract on testicular antioxidant status, testosterone secretion and sperm DNA integrity. In sub chronic experiment, rats were exposed to different doses of plant extract for twenty eight days. **Methods:** Fertility test, Sperm DNA integrity, biochemical parameters (catalase, superoxidase dismutase, peroxidase, ROS and TBARS) and plasma hormonal concentrations (testosterone, LH and FSH) were evaluated. In addition, histology of testicular and epididymal (caput and cauda) tissues was performed.

### Biography:

Miss Mehwish David is a competent and dedicated to her work. She is a PhD scholar and visiting lecturer at Quaid-i-Azam University Islamabad, Pakistan. She is currently doing research in Reproductive physiology laboratory, Quaid-i-Azam University Islamabad. Her area of interest is reproductive toxicology, neuroendocrinology, androgen receptors, infertility, andrology, contraception and neuroendocrine control of reproduction. She has expertise in animal handling, dissection and performing various laboratory protocol. Moreover her outstanding academic and practical experiences make her diligent and different from others.

### Recent Publications:

1. Ain, QuratUl, Mehwish David, Qasim Shah, Mushtaq Ahmad, and Sarwat Jahan. "Antifertility effect of methanolic leaf extract of *Chenopodium ambrosioides* Hook. in male Sprague Dawley rats." *Andrologia* 50, no. 10 (2018): e13129..



2. David, Mehwish; Ain, Qurat; Ahmad, Mushtaq; Zaman, Wajid; Jahan, Sarwat. "A biochemical and histological approach to study antifertility effects of methanol leaf extract of *Asplenium dalhousiae* Hook. in adult male rats." *Andrologia*. (Accepted)
3. Naham, Waheed Ullah, Mehwish David, Humaira Rehman, Sarwat Jahan. "Comparative Study of Environmental Pollutants Bisphenol A and Bisphenol S on Sexual Differentiation of Anteroventral Periventricular Nucleus and Spermatogenesis: A Focus on their Potential Involvement as an Estrogenic Endocrine Disruptor. Toxicology reports (2018). Under Review
4. Humaira Rehman; Qurat-ul- Ain; Mehwish David; Imdad Ullah, Sarwat Jahan. "Neonatal exposure to furan alters development of reproductive systems in adult male Sprague Dawley rats." *Food and Chemical Toxicology* (2019) Under Review
- 5 . David, Mehwish; Ain, Qurat; Ahmad, Mushtaq; Zaman, Wajid; Jahan, Sarwat. "A biochemical and histological approach to study antifertility effects of methanol leaf extract of *Asplenium dalhousiae* Hook. in adult male rats." *Andrologia*. (Accepted)

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