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Co-administration of *Gynura Procumbens* aqueous extract and kelulut honey enhances the sperm quality and spermatogenesis of diabetic induced male rats

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Gynura Procumbens (GP) and kelulut honey are known for their benefits in treating various types of diseases such as diabetes mellitus, cardiovascular and fertility. The aim of this study was to evaluate the effects of co-administration of GP and kelulut honey on the sperm quality and spermatogenesis in diabetic induced male rats. The rats were induced with 55 mg/kg of streptozotocin to imply diabetic condition. All of the rats were divided into four groups, orally co-administered for seven days with four combinations: (450 mg/kg GP: 300 mg/kg honey), (450 mg/kg GP: 600 mg/kg honey) and (450 mg/kg: 1200 mg/kg honey) and the control group was administered with normal saline. On the 8th day, the rats were sacrificed for sperm quality and testes histology analyses. The co-administration of GP and kelulut honey showed that the sperm quality of the treated groups increased significantly compared to the control group. The sperm count of the treated groups also showed significant increment as well as the sperm motility in dose-dependent manner. Testes histology showed that there were significant damages on Leydig and Sertoli cells in the testes of the control group. However, co-administration of GP and kelulut honey showed regeneration of Leydig and Sertoli cells in the testes. In conclusion, the co-administration of GP and kelulut honey is a potential pro-fertility agent for diabetic patients.

Biography

Mahanem Mat Noor has graduated from University of Malaya and obtained her PhD degree in Reproductive Biology from University of Sheffield. She is currently an Associate Professor and Researcher at the School of Biosciences and Biotechnology, Universiti Kebangsaan Malaysia. Her current research interests include development of potential herbal supplement for fertility and libido effect in male, molecular characterization of sperm protein that is crucial in fertilization and development of contraceptive agent. She is also a Member of the European Society of Contraception and Reproductive Health.

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