

# iGRC 2013

International Graduate Research Conference 2013  
The Graduate School, Chiang Mai University  
December 20, 2013

## Global Issues and Awareness



Final Program Book

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### ***Nelumbo nucifera* Improves Male Sexual Function in Animal Model of Sexual Dysfunction Induced by Immobilization Stress**

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#### **Abstract**

Stress induced sexual dysfunction is one of the important health problems affecting men and their partners worldwide. In Asia, many medicinal plants have been used for sexual health without the supported scientific data including *Nelumbo nucifera* Gaertn (sacred lotus), a plant in a family of Nelumbonaceae. Therefore, the present study aimed to determine whether *N.nucifera* could improve stress-induced sexual dysfunction in male rat. The possible underlying mechanism was also further investigated. Male Wistar rats were divided into control or vehicle (distilled water) treated group plus stress, positive treated group or Sildenafil citrate (5 mg.kg<sup>-1</sup>) plus stress and 3 groups of experimental treated groups which received *N.nucifera* extract at doses of 10, 100 and 200 mg.kg<sup>-1</sup>. They were daily given the assigned substances via oral gavage needle once daily 30 min prior to the exposure to 12-hr immobilization stress for 14 days. Sexual behaviors including latency and frequency of mounting, intromission and ejaculation were determined every 7 days throughout study period. At the end of experiment, they were determined the phosphodiesterase-5 (PDE-5) activity in penis and the serum corticosterone and testosterone levels. The decreased mounting latency together with the increased mounting frequency were observed in rats subjected to *N.nucifera* at dose of 200 mg.kg<sup>-1</sup> after single administration. Rats subjected to *N.nucifera* at doses of 100 and 200 mg.kg<sup>-1</sup> showed the decreased mounting latency but increased the intromission frequency while rats subjected to low dose of extract showed only the increased intromission. All doses of extract produced the decreased mounting latency while only *N.nucifera* at dose of 200 mg.kg<sup>-1</sup> produced the intromission number at 14-day period. In addition, *N.nucifera* showed the decreased corticosterone level and the suppression of PDE-5 activity. In conclusion, the current findings support the traditional use of this plant as an aphrodisiac herb.

**Keywords :** *Nulumbo nucifera* Gaertn, Aphrodisiac, Sexual Function, Stress

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