GENOME WIDE EXPRESSION ANALYSIS OF THE EFFECT OF *BANHAHOOBAK-TANG* EXTRACT (BHTE), A TRADITIONAL KOREAN HERBAL FORMULA, ON PSYCHOLOGICAL STRESS IN MICE

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Banhahoobak-tang (Table) has been used to treat symptoms caused by repeated emotional stress (1). Stress triggers important adaptive responses that enable an organism to cope with a changing environment. However, when prolonged or repeated, stress can be extremely harmful (2). In present report, anti-psychological effects of *Banhahoobak-tang* extract (BHTe) were observed. BHTe decreased serum level of corticosterone compared with control group. Genes up-regulated by psychological stress and restored by BHTe were involved in different pathways compared with that of genes down-regulated by psychological stress and restored by BHTe. Pathways significantly enriched in genes up-regulated (A) and down-regulated (B) by psychological stress and restored by BHTe were analyzed via the SPIA program in the brain of mice (Figure). The horizontal axis shows the over-representation of a pathway (P_{NDE}) and the vertical axis, the perturbation of a pathway (P_{PERT}). Pathway analysis shows that genes up-regulated by psychological stress and restored by BHTe were involved in different pathways compared with that of genes down-regulated by psychological stress and restored by BHTe.

References: (1) Lee, GK (1994) Gumgyeyoryak from Aulos publishing company 600–1.
(2) Esther LS and Richard K (2001) TRENDS in Neurosciences 24 (2):91–98.

Herbal Name	Scientific Name	Weight (g)
Pinelliae Rhizoma	Pinellia ternata	6
Magnoliae Cortex	Magnolia officinalis	6
Hoelen	Poria cocos	9
Zingiberis Rhizoma Crudus	Zingiber officinale	2
Perillae Herba	Perilla frutescens	6
Total Amount		29

Table. Prescription of *Banhahoobak-tang*

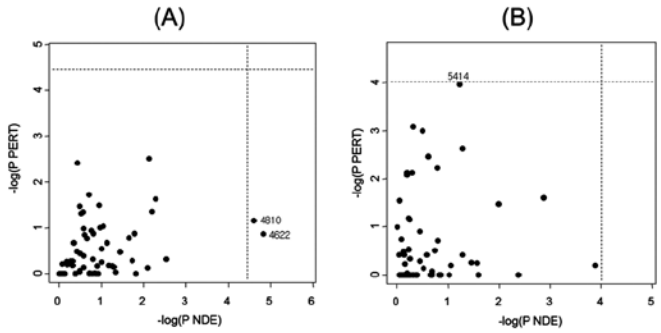

Figure. Pathway analysis of genes

ANGELICAE GIGANTIS RADIX AMELIORATES GENE EXPRESSION IN OVARIAN TISSUE ON POLYCYSTIC OVARY SYNDROME IN RATS

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Angelicae gigantis Radix (AGR) is one of the most useful herbal-drug to treat patients with Polycystic Ovary Syndrome (PCOS) in Korean Traditional Medicine (1, 2). The present authors investigated the effects of AGR on gene expression of ovary tissue resected from PCOS induced rats using single injection of beta-Estradiol 17-Valerate (EV). Total 2,812 genes were up-regulated or down-regulated, and expression levels of 1,442 genes were restored to those of naïve animals by administration of AGR (A and B in left