Results: The birds belonged to a variety of species, such as Order *Passeriformes, Columbiformes, Ciconiiformes, Strigiformes, Falconiformes* and so on and had various histories taken including physical injury, malnutrition, carcass, euthanasia, astasia and collision. The non-infectious causes of death were trauma, emaciation, and visceral gout. In addition, infectious diseases were pigeon poxviral infection, parasitic infestation, colibacillosis, salmonellosis and fungal infection, occupying twelve percentages of all the diagnosis. Each bird species showed characteristic histories and diagnosis, reflecting its ecological status.

Conclusions: This study overviewed the health status of the wild birds in Korea from 2011 to 2013. There found to be various infectious and non-infectious diseases, which showed that each bird species had its own ecological and pathophysiological characteristics. In addition, various infections of wild birds need to be further studied to understand the epidemiology of transmissible pathogens within the overall ecosystem including wild birds, poultry and humans.

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The Identifycation of Gene trapping in mouse 2410006H16 gene Expression pattern in adult mouse tissues

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Introduction: Gene trapping in mouse embryonic stem (ES) cells offers a method to create random development of mutant mouse. In this study, we used an embryonic stem cells (KTPU8) and promotorless gene trap vector (pU-21T) those were kindly provided by Prof. Yamamura at Kumamoto University. We investigate the function of Mus musculus RIKEN cDNA 2410006H16 gene (2410006H16Rik), Non-coding RNA (ncRNA) genes produce functional RNA molecules rather than encoding proteins. We development 2410006H16 gene mutant embryonic stem cell clone (ES cell) by gene trapping. Embryo micro-injected with the ES cells was transferred to surrogate mouse for producing chimeric mice. Chimeric mouse was crossed C57BL/6J to obtain germ-line transmitted 2410006H16 gene -mutant mouse. The 2410006H16 gene expression pattern in the adult mouse tissues was analyzed by 5-bromo-4-chloro-3-indolyl-β -D-galactopyranoside (X-gal) staining. We could observe that 2410006H16Rik gene expression pattern in adult mouse tissue could be analyzed by X-gal staining. The results are shown that this 2410006H16Rik gene mutant mouse would be very useful for the phenotypical analysis of 2410006H16Rik gene function. We will present the expression pattern of 2410006H16Rik gene in mouse tissue in the present study.

Materials and Methods: A mutant mouse was produced from a ES cell clone with mutant *2410006H16Rik* gene. The *2410006H16Rik* expression in adult tissues was analyzed X-gal staining. The embryonic stem cells (KTPU8) and promotorless gene trap vector (pU-21T) those were kindly provided by Prof. Yamamura at Kumamoto University.

Results: The results indicated that *2410006H16Rik* gene may have some functions and that this mutant mouse would be very useful for the functional analysis of *2410006H16Rik* gene.

Conclusions: *24100061H16Rik* gene is preferentially expressed in glandular tissues such as prostate gland, salivary gland and uterine glands.

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Expression of Beta-oxidation Related Genes under Hypoxic Stress Induced Preeclampsia

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Introduction: Pre-eclampsia (PE) isa medical condition characterized by highblood pressure and significant amounts of protein in the urine of a pregnant woman. In many cases PE syndrome is thought to be caused by a shallowly implanted placenta that becomes hypoxic. Hypoxia can result from a failure at any stage in the delivery of oxygen to cells. In peripheral tissues, oxygen again diffuses down a pressure gradient into cells and their mitochondria, where it is used to produce energy in conjunction with the breakdown of glucose, fats, and some amino acids.

Materials and Methods: As an expression of beta-oxidation related gene, ACADVL was detected by gene-fishing technology using the placenta of human. First, we conducted in vitro experiments to confirm preliminary study. We induced hypoxic stress in BeWo cells cultured under 1% O_2, 5% CO_2, and balanced with N_2.Continually, we maintained hypoxic condition for mice from GD 6.5 to GD 17.5under 10%

O_2, 5% CO_2, and balanced with N_2.Expression of beta-oxidation related genes (ACADVL, EHHADH, HADH, ACAA) was observed using real-time PCR.

Results: Expression of genes known as biomarkers for hypoxia, HIF-1α, was increased both in vitro and in vivo. The elevated level of HIF-1α is indicative that our experimental conditions closely mimicked those associated with preeclampsia. Expression of beta-oxidation related genes, ACADVL, EHHADH, and HADH was significantly increased by hypoxic stress in BeWo compared with normoxic control. Also, expression of ACADVL and EHHADH was increased in hypoxic pregnant mice.

Conclusions: Further study is being conducted on the release of HIF-1α and its effect on the metabolism of beta-oxidation in vitro and in vivo. Taken together, these results indicate that changes of beta-oxidation related genes observed under hypoxic condition are similar to those associated with preeclampsia, and expression of beta-oxidation related genes was up-regulated by hypoxic stress. It may be involved in pathogenesis of preeclampsia during gestation.

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Apoptotic and Autophagic Effect of 2-Methoxyestradiol (2-ME) in Human Uterine Leiomyosarcoma

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Introduction: 2-Methoxyestradiol(2-ME) is an endogenous metabolite of 17β-estradiol (E2), and has affinity for estrogen receptors. It was reported to be a promising antitumor drug due to antiproliferative activity on a wide range of tumor cell types with antiangionenic actions. It also has been used in a number of preclinical and clinical studies for the treatment of solid tumors. Thus, several studies have been conducted to investigate the cytotoxic effect of 2-ME on tumor cell lines that it induced G2/M cell cycle arrest and subsequent apoptosis. Uterine leiomyomas (fibroids) are the most frequency occurring tumor of the female reproductive tract. This tumor is also influenced on estrogen which acts aspromotor. The purpose of this study was to examine the anti-proliferative effect of 2-ME in vitro and in vivo, in a mouse xenograft model using human leiomyosarcoma SK-LMS-1 cell line.

Materials and Methods: To performed in vitro experiment, we evaluated anti-proliferative effect of 2-MEon SK-LMS-1 cells using MTT assay, TUNEL assay and western blot. In vivo experiment also investigated effect of 2-ME on uterine leiomyoma by measured tumor size and western blot.

Results: we confirm that 2-ME at high concentration (10^{-5}M) and flavopiridol have anti-proliferative influence on SK-LMS-1 cell line, but 10^{-7}M,10^{-6}M dose of 2-ME were not detected, rather these two doses showed little proliferative response through the MTT assay. Also, BAX/Bcl-2 and LC3expression was increased by the 2-ME (10^{-5}M)-treatment in western blot analysis.

Conclusions: In previous study, we found that 2-ME has an estrogen-like effect in *invitro* and *in vivo* model. So, we expect to 2-ME may be able to therapeutic reagent of human uterine leiomyoma but this chemical may have used adequate dose for estrogen receptor response tumor treatment due to has an estrogenic efficiency.

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BeWo Cell as In vitro Model : Influence of the EDCs Onplacenta Transporter

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Introduction: Oxygen, carbon dioxide, calcium, copper, iron, and glucose are essential factors in fetal growth. These molecules are transferred by specific receptors located oncell membrane or cytoplasm in placenta. Cation (ex> calcium, copper, iron, etc.) transfer genes are regulated by estrogen, vitamin D, and human placental lactogen. During pregnancy, expression of these receptors is controlled by the nutritional status of the maternal and fetal. Some synthetic plastics contain endocrine disrupting chemicals (EDCs), which have similar structures to steroid hormones or endogenous hormones related to reproduction. These substances disturb action of reproduction-related hormones (ex> estrogen, progesterone)by interacting with their receptors, or affecting