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Investigation on Porcine Follicular Fluid Protein Pattern of Medium and Large Follicles

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Abstract : Ovaries of reproductive female pigs were obtained from local slaughterhouses in Nakorn Pathom Province, Thailand. Follicular fluid of medium follicle (5-6 diameters) and large follicles (7-8 mm and 10 mm in diameter) were aspirated and collected by sterile technique and analyzed protein pattern. The follicular fluid protein bands were found by SDS-PAGE which has no protein band in difference compared to standard protein band. So we chose protein band molecular weight 50, 62-65, 75-80, 90, 120-160, and >220 kDa were analyzed by LC/MS/MS. The result was found immunoglobulin gamma chain, keratin, transferrin, heat shock protein, and plasminogen precursor, ceruloplasmin, and hemopexin, and protease, respectively. All proteins play important roles in promotion and regulation on growth and development of reproductive cells. The result of this study found many proteins which were useful and important for in vitro oocyte maturation and embryonic development of cell technology in animals. The further study will be use porcine follicular fluid protein of medium and large follicles as feeder cells in in vitro condition to promote oocyte and embryo maturation.

Keywords : follicular fluid protein, LC/MS/MS, porcine oocyte, SDS-PAGE
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