

# IDENTIFICATION AND CHARACTERIZATION OF PROTEIN *GROWTH DIFFERENTIATION FACTOR-9* (GDF-9) ISOLATED FROM OOCYTES DOMINANT FOLLICLES OF BOVINE OVUM

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## ABSTRACT

This research comprises a series of researches on protein *Growth Differentiation Factor-9* (GDF-9) fraction in *in vitro* maturation process to improve the quality of oocytes as oocyte bank for *in vitro* embryo production. The research is aimed at identification and characterization of protein *Growth Differentiation Factor-9* (GDF-9) isolated from oocytes dominant follicles of bovine ovum. Bovine ovary obtained from a slaughterhouse was aspirated in its ovary follicles then extracted by sonication technique. Identification of protein *Growth Differentiation Factor-9* (GDF-9) fraction was carried out by means of *Sodium Dodecyl Sulphonate Polyacrylamide Gel Electrophoresis* (SDS-PAGE). From the results of research, several protein fractions were obtained. Based on the calculation of regression equation resulting from protein marker to determine the molecular weight of *Growth Differentiation Factor-9* (GDF-9) protein, 8 protein fractions were determined, they are : 146.46 kDa, 116.12 kDa, 101.02 kDa, 51.06 kDa, 39.94 kDa, 34.75 kDa, 31.67kDa, 15.07kDa. Protein appearing in the protein band the molecular weight of 51.06 kDa was identified as *Growth Differentiation Factor-9* (GDF-9) protein fraction playing a role in follicle development.

**Keywords :** *Growth Differentiation Factor-9* (GDF-9), oocyte, dominant follicle