3936471 SCAN/M : MAJOR: ANATOMY; M.Sc. (ANATOMY)
KEY WORDS : PARS DISTALIS / RANA TIGERINA / HORMONE CELLS/ IMMUNOCYTOCHEMISTRY
SRIRATH PAKDEERONACHIT : CLASSIFICATION AND DISTRIBUTION OF HORMONE-PRODUCING CELLS IN PARS DISTALIS OF RANA TIGERINA. THESIS ADVISORS : PRAPEE SRETARUGSA, Ph.D., PRASERT SOBHON, Ph.D., MALEEYA KRUATRACHUE, Ph.D., PRAYAD KOMARATAT, Ph.D. 97 p. ISBN 974-662-535-7

The classification and distribution of cells producing growth hormone (GH), prolactin (PRL), adrenocorticotropin (ACTH), thyrotropin (TSH), luteinizing hormone (LH) and follicle-stimulating hormone(FSH) in pars distalis of *Rana tigerina* were investigated during breeding season by immunocytochemical and immunoelectronmicroscopic techniques. By immunocytochemistry, most of the immunoreactive GH cells are concentrated at the dorso-posterior region of pars distalis and some of are distributed at the centro-ventral area. Prolactin cells are most numerous and are distributed throughout the gland except at the anterior-most area. There are two types of immunoreactive LH cells. Most of them are moderately immunoreactive-stained and concentrated at the centro-dorsal region, whereas a small number are intensely stained, and patches of them are distributed at the ventral rim of the gland. Immunoreactive FSH cells are distributed throughout the gland except at the anterior and posterior-most areas. Most of the immunoreactive TSH cells are concentrated at the ventral rim and centro-ventral region except at the anterior-most areas, while most of the immunoreactive ACTH cells are concentrated at the ventral-anterior region and some of them are distributed at the ventral half area. By immunogold technique, GH cells are characterized by the presence of round-shaped granules of about 345.69±3.47 nm in diameter (n=167), dilated RER and a large number of lipid droplets, while PRL cells contain round-shaped granules about 500±5.9 nm in size (n=203). GtH_1 cells are positively reacted with only LHβ antiserum. GtH_1 are large and characterized by the appearance of various shaped granules and dilated RER. GtH_1 granules are large and round (634.6±13.6 nm; n=40), rod (L.=592.8±14 nm, W.=381±12.7nm ; n=42), and dumbell-shaped (L.=752.3±25.7 nm, W.=278±8.5 nm, isthmus=191.2±12.1 nm; n=35). GtH_2 cells are positively reacted with both LHβand FSHβ and similar in appearance to GtH_1 but contain some large round-shaped granules (764±13.2 nm in size; n=15), while GtH_3 contain only large round-shaped granules that positively react with both LHβ and FSHβ. ACTH cells are identified by the presence of two types of round-shaped granules which are widely scattered and strikingly dilated RER. Type I granules are moderately electron-dense about 336.6±8.1 nm in size (n=89), whereas type II granules are electron-dense about 333.8±6.7 in size (n=98). TSH cells are characterized by round-shaped granules about 436.3±8.4 nm in size (n=50).