

**NEUROENDOCRINOLOGY OF THE  
REPRODUCTIVE CYCLE IN THE FEMALE NATIVE  
THAI CHICKEN: ROLES OF DOPAMINE AND  
GONADOTROPIN RELEASING HORMONE**

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การศึกษาระบบประสาทและต่อมไร้ท่อของวงจรสืบพันธุ์ใน  
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AND GONADOTROPIN RELEASING HORMONE**

Suranaree University of Technology has approved this thesis submitted in partial fulfillment of the requirements of the Degree of Doctor of Philosophy.

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ประสาทที่ผลิตโดปามีนที่บริเวณนิวเคลียสอินทราเมดิเอลิสและเซลล์ประสาทที่ผลิตโกนาโดโทร  
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NATAGARN SARTSOONGNOEN : NEUROENDOCRINOLOGY OF THE  
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DOPAMINE/GONADOTROPIN RELEASING HORMONE/LUTEINIZING  
HORMONE/NATIVE THAI CHICKEN/PROLACTIN/REPRODUCTIVE CYCLE

Roles of dopamine (DA), gonadotropin releasing hormone (GnRH), prolactin (PRL), and luteinizing hormone (LH) in the neuroendocrine regulation of reproductive system in the female native Thai chicken were investigated. Immunohistochemistry studies revealed that DA neurons were found throughout the brain. GnRH neurons were distributed in a discrete region from the preoptic area through the anterior hypothalamus. Changes in number of DA neurons in the nucleus intramedialis (nI) and GnRH neurons in the nucleus commissurae pallii were observed across the reproductive stages. Changes in PRL levels were directly correlated with variations in DA neurons within the nI. However, changes in LH levels were not observed. The results indicate, for the first time, an association exists between DA neurons and the regulation of the reproductive system in the female native Thai chicken.

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# CONTENTS

	<b>Page</b>
ABSTRACT IN THAI.....	I
ABSTRACT IN ENGLISH.....	II
ACKNOWLEDGEMENTS.....	III
CONTENTS.....	IV
LIST OF TABLES.....	IX
LIST OF FIGURES.....	XI
<b>CHAPTER</b>	
<b>I INTRODUCTION.....</b>	<b>1</b>
1.1 Rational of the Study.....	1
1.2 Research Objectives.....	8
<b>II LITERATURE REVIEW.....</b>	<b>9</b>
2.1 Neuroendocrine Regulation of the Avian Reproductive Cycle.....	9
2.1.1 Gonadotropin Releasing Hormone-I/Follicle Stimulating Hormone-Luteinizing Hormone System.....	10
2.1.2 Vasoactive Intestinal Peptide/Prolactin System.....	13
2.2 Gonadotropins: Structure, Function, and Regulation of Secretion.....	17
2.2.1 The Structure of Follicle Stimulating Hormone .....	18
2.2.2 The Structure of Luteinizing Hormone .....	21
2.2.3 The Function of Gonadotropins in Mammals.....	25
2.2.4 The Function of Gonadotropins in Birds.....	27

## CONTENTS (Continued)

	<b>Page</b>
2.2.5 Neuroendocrine Regulation of Mammals Gonadotropins	
Secretion.....	30
2.2.6 Neuroendocrine Regulation of Avian Gonadotropins	
Secretion.....	32
2.3 Prolactin: Structure, Function, and Regulation of Secretion.....	36
2.3.1 The Structure of Prolactin.....	36
2.3.2 The Function of Prolactin in Mammals.....	42
2.3.3 The Function of Prolactin in Birds.....	44
2.3.4 Neuroendocrine Regulation of Prolactin in Mammals.....	46
2.3.5 Neuroendocrine Regulation of Prolactin in Birds.....	50
2.4 Gonadotropin Releasing Hormone: Structure, Function, and	
Regulation of Secretion.....	51
2.4.1 The Structure of Gonadotropin Releasing Hormone.....	51
2.4.2 The Localization of Gonadotropin Releasing Hormone in the	
Brain.....	54
2.4.3 The Function of Gonadotropin Releasing Hormone in	
Mammals.....	56
2.4.4 The Function of Gonadotropin Releasing Hormone in Birds....	58
2.4.5 The Regulation of Gonadotropin Releasing Hormone	
Secretion.....	61
2.5 Gonadotropin Inhibiting Hormone: Structure and Function.....	64

## **CONTENTS (Continued)**

	<b>Page</b>
2.5.1 The Discovery and Structure of Gonadotropin Inhibiting Hormone.....	64
2.5.2 The Localization of Gonadotropin Inhibiting Hormone in the Brain.....	66
2.5.3 The Function of Gonadotropin Inhibiting Hormone.....	68
2.6 Vasoactive Intestinal Peptide: Structure, Function, and Regulation of PRL Secretion.....	70
2.6.1 The Structure of Vasoactive Intestinal Peptide.....	70
2.6.2 The Function of Vasoactive Intestinal Peptide.....	72
2.6.3 Vasoactive Intestinal Peptide as the Avian PRF.....	75
2.7 Dopamine: Structure, Localization, Function, and Regulation of PRL Secretion.....	78
2.7.1 The Structure of Dopamine.....	78
2.7.2 The Localization of Dopaminergic System in Mammals.....	83
2.7.3 The Localization of Dopaminergic System in Birds.....	86
2.7.4 The Function of Dopamine in Mammals.....	88
2.7.5 The Function of Dopamine in Birds.....	90
2.7.6 Dopamine as the PIF in Mammals.....	91
2.7.7 Dopamine Regulation of Avian PRL Secretion.....	95
2.8 Photoperiodic Control of Reproductive Cycle in Birds.....	98
2.8.1 The Role of Photoperiod in Seasonal Reproduction.....	98
2.8.2 Light Detection and Circadian Rhythms.....	101

## **CONTENTS (Continued)**

	<b>Page</b>
2.8.3 Photoperiodic Regulation of Avian Reproduction.....	105
2.9 The Studies of the Native Thai Chicken Reproduction.....	110
2.10 References.....	113
<b>III REGULATION OF REPRODUCTIVE CYCLE IN THE NATIVE THAI CHICKEN: ROLE OF PROLACTIN AND LUTEINIZING HORMONE .....</b>	<b>228</b>
3.1 Abstract.....	229
3.2 Introduction.....	229
3.3 Materials and Methods.....	235
3.4 Results.....	238
3.5 Discussion.....	244
3.6 References.....	251
<b>IV GONADOTROPIN RELEASING HORMONE: LOCALIZATION AND DIFFERENTIAL EXPRESSION ACROSS THE REPRODUCTIVE CYCLE OF THE NATIVE THAI CHICKEN.....</b>	<b>267</b>
4.1 Abstract.....	267
4.2 Introduction.....	268
4.3 Materials and Methods.....	273
4.4 Results.....	277
4.5 Discussion.....	293
4.6 References.....	300

## **CONTENTS (Continued)**

		<b>Page</b>
<b>V</b>	<b>THE DOPAMINERGIC SYSTEM IN THE BRAIN OF THE NATIVE THAI CHICKEN: LOCALIZATION AND DIFFERENTIAL EXPRESSION ACROSS THE REPRODUCTIVE CYCLE.....</b>	<b>313</b>
	5.1 Abstract.....	313
	5.2 Introduction.....	314
	5.3 Materials and Methods.....	319
	5.4 Results.....	324
	5.5 Discussion.....	339
	5.6 References.....	347
<b>VI</b>	<b>THE INFLUENCES OF PHOTOPERIOD ON THE REPRODUCTIVE SYSTEM OF THE NATIVE THAI CHICKEN.....</b>	<b>362</b>
	6.1 Abstract.....	362
	6.2 Introduction.....	363
	6.3 Materials and Methods.....	368
	6.4 Results.....	372
	6.5 Discussion.....	378
	6.6 References.....	382
	CURRICULUM VITAE.....	397

## LIST OF TABLES

Table	Page
<b>II LITERATURE REVIEW</b>	
2.1 Primary structures of GnRH forms.....	53
<b>III REGULATION OF REPRODUCTIVE CYCLE IN THE NATIVE THAI CHICKEN: ROLE OF PROLACTIN AND LUTEINIZING HORMONE</b>	
3.1 Reproductive characteristics of the native Thai chickens during the reproductive cycles.....	241
3.2 Plasma PRL and LH concentrations in each reproductive stage (n=10) during the reproductive cycles of the native Thai chickens.....	242
<b>IV GONADOTROPIN RELEASING HORMONE: LOCALIZATION AND DIFFERENTIAL EXPRESSION ACROSS THE REPRODUCTIVE CYCLE OF THE NATIVE THAI CHICKEN</b>	
4.1 Abbreviations of brain areas. Nomenclature and abbreviations are from a stereotaxic atlas of the brain of the chick (Kuenzel and Masson, 1988).....	281
<b>V THE DOPAMINERGIC SYSTEM IN THE BRAIN OF THE NATIVE THAI CHICKEN: LOCALIZATION AND DIFFERENTIAL EXPRESSION ACROSS THE REPRODUCTIVE CYCLE</b>	
5.1 Abbreviations of brain areas. Nomenclature and abbreviations are from a stereotaxic atlas of the brain of the chick (Kuenzel and Masson, 1988).....	329

## LIST OF TABLES (Continued)

<b>Table</b>	<b>Page</b>
5.2	The number of TH-ir neurons within individual hypothalamic areas (AM, PVN, nI, and ML) in the native Thai chicken at different reproductive stages.....336
<b>VI THE INFLUENCES OF PHOTOPERIOD ON THE REPRODUCTIVE SYSTEM OF THE NATIVE THAI CHICKEN</b>	
6.1	Mean $\pm$ SEM of the age at first laying, total number of laying hen, and egg production of the native Thai chicken in each treatment group of Experiment I (n=19).....374
6.2	The presence of F1-F5 follicles of the native Thai chicken in each treatment group of Experiment I (n=19).....375
6.3	Total number of birds in each reproductive stage in each treatment group of Experiment I (n=19).....375
6.4	Mean $\pm$ SEM of the age at first laying, total number of laying hen, and egg production of the native Thai chicken in each treatment group of Experiment II (n=10).....376
6.5	The presence of F1-F5 follicles of the native Thai chicken in each treatment group of Experiment II (n=10).....377
6.6	Total number of birds in each reproductive stage in each treatment group of Experiment II (n=10).....377

## LIST OF FIGURES

Figure	Page
<b>II LITERATURE REVIEW</b>	
2.1 Multiple sequence alignments of FSH- $\beta$ -subunit of various species. Residues identical to chicken FSH- $\beta$ are presented in white letters. Twelve conserved cysteines are denoted by ● and two putative N-linked glycosylation sites by ▼. Conserved residues are indicated by “*” under sequences. Arrows represent $\beta$ -strands; single lines are loops. Line with dots corresponds to the “seat-belt” region in crystal structure of human FSH (Shen and Yu, 2002).....	19
2.2 Alignments of the amino acid sequences of signal peptide (a) and apoprotein (b) of the putative LH- $\beta$ -subunit in different species. Dashes indicate amino acid residues which are indicated to those in the Japanese quail sequences (Ando and Ishii, 1994).....	23
2.3 Sequence homology (%) among LH- $\beta$ -subunit of various species (Ando and Ishii, 1994).....	24
2.4 Sequence homology (%) of PRLs among different species (Sinha, 1995).....	39
2.5 Primary structures of PRLs of different species. (-) indicates positions left blank to optimize alignment of amino acid sequences. (*) indicates absence of residues from a genetic variant of tilapia PRL. PD is PRL domain. PDI-PD4 indicates the four highly conserved domains of the PRLs (Sinha, 1995).....	40

## LIST OF FIGURES (Continued)

Figure	Page
2.6 The amino acid sequences of VIP, PHI, secretin, glucagon, and GIP. a: the C-terminal amino acid is in the amide form. p: porcine, b: bovine, c: chicken, m: mammalian (Rosselin et al., 1982).....	71
2.7 Biosynthetic pathway of catecholamines and available antisera as indicated by asterisks (Smeets and Gonzalez, 2000).....	80
<b>III REGULATION OF REPRODUCTIVE CYCLE IN THE            NATIVE THAI CHICKEN: ROLE OF PROLACTIN AND            LUTEINIZING HORMONE</b>	
3.1 Plasma PRL levels in the native Thai chickens in each reproductive stage during the two reproductive cycles (n=10). Values are expressed as the mean $\pm$ SEM. Values with different letters are significantly different (P<0.05).....	243
3.2 Plasma LH levels in the native Thai chickens in each reproductive stage during the two reproductive cycles (n=10). Values are expressed as the mean $\pm$ SEM. Values with different letters are significantly different (P<0.05).....	243
<b>IV GONADOTROPIN RELEASING HORMONE: LOCALIZATION            AND DIFFERENTIAL EXPRESSION ACROSS THE            REPRODUCTIVE CYCLE OF THE NATIVE THAI CHICKEN</b>	

## LIST OF FIGURES (Continued)

Figure	Page
<p>4.1 Schematic diagrams of coronal sections illustrating the distributions of GnRH-I-ir neurons (black dot) and fibers (small black dot) throughout the brain of the laying native Thai chicken. Sections are presented in a rostral to caudal order from <b>A-D</b>. Coronal illustrations are redrawn, with the given coordinates, from the stereotaxic atlas of the brain of the chick (Kuenzel and Masson, 1988). For abbreviations, see Table 4.1.....</p>	283
<p>4.2 Photomicrographs illustrating the distribution of GnRH-I-ir neurons in the preoptic area. <b>(A)</b> GnRH-I-ir neurons in the POM. Rectangles indicate areas from which following photomicrographs were taken. <b>(B)</b> Higher magnification from <b>(A)</b> showed an oval shape with monopolar process neurons in the POM. <b>(C)</b> A sparse population of GnRH-I-ir neurons, spindle shape-liked, formed a narrow and elongated group forming a line adjacent and parallel to the floor of the brain. <b>(D)</b> Higher magnification of the GnRH-I-ir neurons in the POP. Bar=50 <math>\mu</math>m</p> <p>For abbreviations, see Table 4.1.....</p>	284
<p>4.3 Photomicrographs illustrating the distribution of GnRH-I-ir fibers in the OVLT <b>(A)</b> and POP <b>(B)</b>. Bar=50 <math>\mu</math>m. For abbreviations, see Table 4.1.....</p>	285
<p>4.4 Photomicrographs illustrating the distribution of GnRH-I-ir neurons in the AM <b>(A)</b> and PVN <b>(B)</b>. Bar=50 <math>\mu</math>m. For abbreviations, see Table 4.1.....</p>	285

## LIST OF FIGURES (Continued)

<b>Figure</b>	<b>Page</b>
4.5 Photomicrographs illustrating the distribution of GnRH-I-ir neurons in the hypothalamic region and at more laterally region. Scattered GnRH-I-ir neurons were distributed in the LH <sub>y</sub> ( <b>A</b> ). The characterization of GnRH-I-ir neurons observed in the LH <sub>y</sub> were usually spindle and bipolar in shape ( <b>B</b> ). At more laterally, small groups of oval shape GnRH-I-ir neurons were found in the VLT ( <b>C</b> ) and DLAmc ( <b>D</b> ). Bar=50 $\mu$ m.  For abbreviations, see Table 4.1.....	286
4.6 Photomicrographs illustrating the distribution of GnRH-I-ir fibers in the lateral hypothalamic region. GnRH-I-ir fibers were lined symmetrically along the V III in the PHN ( <b>A</b> ). The more extensive GnRH-I-ir fibers were observed at the base of the V III in the SCN <sub>m</sub> ( <b>B</b> ). Bar=50 $\mu$ m.  For abbreviations, see Table 4.1. ....	287
4.7 Photomicrographs illustrating the distribution of GnRH-I-ir fibers in the IN-IH area. Very intense GnRH-I-ir fibers were innervated at the external layer of the ME, note that there was no GnRH-I immunoreactivity observed in the pituitary ( <b>A</b> ). Bar=100 $\mu$ m. ( <b>B</b> ) Higher magnification of GnRH-I-ir fibers in the ME. Small numbers of GnRH-I-ir fibers were found in the IH ( <b>C</b> ). Bar=50 $\mu$ m. For abbreviations, see Table 4.1.....	288

## LIST OF FIGURES (Continued)

Figure	Page
<p>4.8 Photomicrographs illustrating the distributions of GnRH-I-ir neurons and fibers in the nCPa. In the rostral part, GnRH-I-ir fibers in the nCPa appeared in a triangular group of fibers just dorsal to the CA (<b>A</b>). GnRH-I-ir neurons were large and found close to the midline on the both side of the V III when moving more caudally (<b>B</b> and <b>C</b>). At this plane of section, GnRH-I-ir fibers were found within the SSO (<b>C</b>). (<b>D</b>) Higher magnification of GnRH-I-ir neurons found in the nCPa. Bar=50 <math>\mu</math>m.</p> <p>For abbreviations, see Table 4.1. ....</p>	289
<p>4.9 Photomicrographs illustrating the distributions of GnRH-I-ir neurons and fibers in the SL. A dense plexus of GnRH-I-ir fibers was located near the nCPa and extended dorsally and laterally toward the lateral ventricle in the SL (<b>A</b>). Higher magnification of GnRH-I-ir neurons in the SL showed a very small and immunostained less intensely compared with larger GnRH-I-ir neurons found in all other groups (<b>B</b>). Bar=50 <math>\mu</math>m.</p> <p>For abbreviations, see Table 4.1. ....</p>	290
<p>4.10 Photomicrographs illustrating the expression of GnRH-I-ir neurons in the nCPa during different reproductive stages. Bar=100 <math>\mu</math>m.</p> <p>For abbreviations, see Table 4.1. ....</p>	291
<p>4.11 Changes in number of GnRH-I-ir neurons in the nCPa of the native Thai chicken at different reproductive stages. Values (number of GnRH-I-ir neurons/section) are presented as the mean <math>\pm</math> SEM (n=6). Values with different letters are significantly different (P&lt;0.05).....</p>	292

## LIST OF FIGURES (Continued)

Figure	Page
<p><b>V THE DOPAMINERGIC SYSTEM IN THE BRAIN OF THE NATIVE THAI CHICKEN: LOCALIZATION AND DIFFERENTIAL EXPRESSION ACROSS THE REPRODUCTIVE CYCLE</b></p>	
<p>5.1 Schematic diagrams of coronal sections illustrating the distribution of TH-ir neurons (black dot) throughout the brain of the laying native Thai chicken. Sections are presented in a rostral to caudal order from <b>A-F</b>. Coronal illustrations are redrawn, with the given coordinates, from the stereotaxic atlas of the brain of the chick (Kuenzel and Masson, 1988).....</p>	331
<p>5.2 Photomicrographs showing TH-ir structures in the telencephalon. <b>(A)</b> A TH immunonegative cell surrounded by TH-ir positive fibers in the SM. <b>(B)</b> TH-ir fibers at the ventral terminus of the VL. Bar=50 <math>\mu</math>m. For abbreviations, see Table 5.1. ....</p>	332
<p>5.3 Photomicrographs illustrating the distribution of TH-ir neurons in the diencephalon. TH-ir neurons are found in <b>(A)</b> AM, <b>(B)</b> SCNm, and <b>(C)</b> PVN (Bar=100 <math>\mu</math>m). Insert in <b>(A)</b> at higher magnification (Bar=50 <math>\mu</math>m) of a bipolar cell in the AM. <b>(D)</b> A dense number of TH-ir neurons situated bilaterally close to the third ventricle in the PVO (Bar=100 <math>\mu</math>m). <b>(E)</b> Higher magnification in the PVN, showing a neuron with an elongated fiber (Bar=50 <math>\mu</math>m). <b>(F)</b> Scattered TH-ir fibers between the PVO and LHy (Bar=100 <math>\mu</math>m). <b>(G)</b> Higher magnification of a compact group of TH-ir neurons in the LHy (Bar=50 <math>\mu</math>m). For abbreviations, see Table 5.1.....</p>	333

## LIST OF FIGURES (Continued)

Figure	Page
5.4 Photomicrographs showing TH-ir neurons and fibers in the caudal hypothalamus. (A) A compact group of TH-ir neurons in nI, located on both sides of the fused ventricle. (B) Large, ovoid, and intensely labeled TH-ir neurons are found in the nI. (C) In the tuberal hypothalamus, TH-ir cells are observed in the ML; only TH-ir fibers are found in the MM and ME. (D) Higher magnification of TH-ir neurons in the ML and (E) TH-ir fibers in the external layer of the ME. (F) Small numbers of TH-ir neurons are scattered within the GCt. Bar=100 $\mu$ m. For abbreviations, see Table 5.1 .....	334
5.5 Photomicrographs illustrating the TH-ir neurons and fibers in the mesencephalon. (A) A cluster of TH-ir fibers and TH-ir neurons in the AVT, adjacent to the NIII. (B) A large group of TH-ir neurons and intensely labeled fibers are co-localized within the TPc. (C) TH-ir neurons in the LoC are multipolar cells with many dendritic processes. (D) Some weakly labeled TH-ir neurons are found in the Cb. Bar=100 $\mu$ m. For abbreviations, see Table 5.1 .....	335
5.6 (A) Plasma PRL concentrations and (B) numbers of TH-ir neurons in the nI in the native Thai chicken at different reproductive stages. Values are presented as the mean $\pm$ SEM (n=5). Values with different letters are significantly different (P<0.05).....	337

## LIST OF FIGURES (Continued)

<b>Figure</b>	<b>Page</b>
5.7	Photomicrographs illustrating the expression of TH-ir neurons in the nI during different reproductive stages. Bar =100 $\mu$ m. For abbreviations, see Table 5.1..... 338
5.8	Photomicrographs illustrating the expression of TH-ir neurons in the ML during different reproductive stages. Bar =100 $\mu$ m. For abbreviations, see Table 5.1.....339
<b>VI</b>	<b>THE INFLUENCES OF PHOTOPERIOD ON THE REPRODUCTIVE SYSTEM OF THE NATIVE THAI CHICKEN</b>
6.1	Age at first laying (week) of the native Thai chicken in each treatment group of Experiment I (n=19). Values are expressed as the mean $\pm$ SEM. Values with different letters are significantly different (P<0.05).....374
6.2	Age at first laying (week) of the native Thai chicken in each treatment group of Experiment II (n=10). Values are expressed as the mean $\pm$ SEM. Values with different letters are significantly different (P<0.05).....376