

**BIOGRAPHICAL SKETCH**

Provide the following information for the key personnel in the order listed on Form Page 2.

Photocopy this page or follow this format for each person.

NAME	POSITION TITLE		
<b>Ok-Kyong Park-Sarge, Ph.D.</b>	Associate Professor		
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Seoul National University, Korea	B.S.	1978-1981	Biology
University of Illinois, Urbana, IL	M.S.	1984-1986	Physiology
University of Illinois, Urbana, IL	Ph.D.	1986-1989	Physiology
Northwestern University, Evanston, IL	Postdoc	1989-1993	Molecular Biology

RESEARCH AND PROFESSIONAL EXPERIENCE: Concluding with present position, list, in chronological order, previous employment, experience, and honors. Include present membership on any Federal Government public advisory committee. List, in chronological order, the titles, all authors, and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. If the list of publications in the last three years exceeds two pages, select the most pertinent publications. **DO NOT EXCEED TWO PAGES.**

**A. Positions and Honors****Professional Positions:**

- 1999- Associate Professor with tenure, University of Kentucky
- 1993-1999 Assistant Professor, University of Kentucky
- 1989-1993 Postdoctoral Fellow in Dr. Kelly Mayo's laboratory, Northwestern University
- 1984-1988 Graduate Teaching and Research Assistant, University of Illinois

**Honors & Awards:**

- 2002 Invited Speaker, University of Kentucky Symposium in Reproductive Sciences, Kentucky
- 2000 Invited Speaker, Ovarian Workshop, Madison, WI, USA
- 2000 Invited Speaker, Gordon Conference, Female Reproductive Tract, London, CT, USA
- 2000 Wethington University of Kentucky College of Medicine Research Award
- 1998 University of Kentucky Medical Center Faculty Research Award
- 1998 Invited Speaker, 11th Asia-Oceania Congress of Endocrinology, Seoul, Korea
- 1996-2001 NIH Research Career Development Award
- 1996 Director, 15th University of Kentucky Symposium in Reproductive Sciences
- 1993 NIH Reproductive Biology Postdoctoral Trainee
- 1990-1992 Mellon Foundation Postdoctoral Award
- 1991 Constant Campbell Research Award
- 1982 Graduated *magna cum laude* from Seoul National University
- 1982 Seoul National University President Award for the top graduate

**Review & Service:**

- 2001-2004 NIH BCE Study Section Member
- 2000-2001 The Endocrine Society Annual Meeting Steering Committee
- 1999-2001 Editorial Board, *Endocrinology*
- 1997-2001 Editorial Board, *Biology of Reproduction*
- 1999,2000 NIH BCE Study Section Ad hoc Member
- 1996-1998 Public Affairs Committee, Society for the Study of Reproduction
- 1998-2001 ACS Institutional Research Grant Review Committee, Markey Center, Univ of Kentucky
- 1995-present NSF Grant Reviewer

**B. Selected Peer-Reviewed Publications since 1991**

1. Xing H, Mayhew CN, Cullen KE, Park-Sarge OK, Sarge KD (*Submitted*) HSF1 modulation of hsp70 mRNA polyadenylation via interaction with Symplekin"
2. Hilgarth RS, Murphy LA, O'Connor CM, Clark JA, Park-Sarge OK, Sarge KD (*Submitted*) Identification of Xenopus HSF2: Conserved role of sumoylation in regulating DNA-binding activity of HSF2 proteins.
3. Cao J, Wood M, Liu Y, Park-Sarge OK, Vore M (*Submitted*) E<sub>2</sub> represses PRL-induced expression of Ntcp through Interaction of ER $\alpha$  and Stat5a in liver cells
4. Gothard LQ, Park-Sarge OK, and Sarge KD (2003) Lowered Temperature Set-Point for Activation of the Cellular Stress Response in T-Lymphocytes. *J Biol Chem* 278:9322-9326.
5. Hilgarth RS, Hong Y, Park-Sarge OK, Sarge KD (2003) Insights into the regulation of heat shock transcription factor 1 SUMO-1 modification. *Biochem Biophys Res Commun* 303:196-200.
6. Frasar J, KyungSoo Park, Byers MJ, Kitamura T, Telleria C, Yu-Lee L-Y, Park-Sarge OK, Gibori G (2001) Differential roles for Stat5a and Stat5b in prolactin stimulation of estrogen receptor alpha and beta transcription. *Mol Endocrinol* 2172-2181
7. Hong Y, Rogers R, Matunis M, Goodson M, Park-Sarge OK, and Sarge KD (2001) Stress-induced SUMO-1 modification activates the DNA-binding activity of Heat Shock Transcription Factor 1 (HSF1). *J Biol Chem* 276:40263-40267
8. Choi I, Ko C, Park-Sarge OK, Zhou Q, Hess R, Graves C, and Katzenellenbogen BS (2001) Human estrogen receptor beta-specific monoclonal antibodies: characterization and use in studies of estrogen receptor beta protein expression in reproductive tissue. *Cell Mol Endocrinol* 181:139-150
9. Guo C-X, Savage LM, Sarge KD, Park-Sarge OK (2001) Gonadotropins decrease ER $\beta$  mRNA stability in cultured rat granulosa cells. *Endocrinology* 142:2230-2237
10. Goodson ML, Hong Y, Rogers R, Matunis MJ, Park-Sarge OK, Sarge KD (2001) SUMO-1 modification regulates both the subcellular localization and DNA-binding activity of heat shock transcription factor 2. *J Biol Chem* 276:18513-18518
11. Graham KM, Ko C, , KS Park, Park-Sarge OK (2000). Expression of an Intracisternal A-Particle-Like Element in Rat Ovary. *Biochem Biophys Res Comm* 278:48-57
12. Ko C, Park-Sarge OK (2000) Progesterone receptor activation mediates LH-induced type-I pituitary adenylate cyclase activating polypeptide receptor (PAC<sub>1</sub>) gene expression in rat granulosa cells. *Biochem Biophys Res Comm.* 277:270-279
13. Ko C, In YH, Park-Sarge OK (1999) Role of progesterone receptor activation in pituitary adenylate cyclase activating polypeptide (PACAP) gene expression in rat ovary. *Endocrinology* 140:5185-5194
14. O'Brien M, Park KS, In YH, Park-Sarge OK (1999) Characterization of the estrogen receptor beta mRNA and protein in rat ovary. *Endocrinology* 140:4530-4541
15. Shanmugam M, Krett NL, Maizels ET, Cutler RE, Peters C, Smith L, O'Brien ML, Park-Sarge OK, Rosen ST, Hunzicker-Dunn M (1999). Regulation of protein kinase C delta by estrogen in the MCF-7 human breast cancer cell line. *Mol Cell Endocrinol* 148:109-118
16. Telleria CM, Ou J, Sugino N, Park KS, Park-Sarge OK, Gibori G (1998) Estrogen receptor- $\beta$  mRNA expression in the pregnant rat corpora lutea and in the temperature sensitive SV-40 transformed luteal cell line: regulation by prolactin. *Endocrinology* 139:2432-2442
17. Byers M, Kuiper GJM, Gustafsson Jan-Ake, Park-Sarge OK (1997) Estrogen receptor- $\beta$  mRNA expression in the rat ovary: down regulation by gonadotropins. *Molecular Endocrinology* 11:172-182
18. Muhukejee A, Park-Sarge OK, Mayo KE (1996) Gonadotropins rapidly induce phosphorylation of cAMP response element binding protein in rat granulosa cells. *Endocrinology* 137:3234-3245
19. Pinter J, Deep C, Park-Sarge OK (1996) Progesterone receptors: expression and regulation in the mammalian ovary. *Clin Obst Gynecol* 39:424-435
20. Park-Sarge OK, Sarge KD (1995) Cis-regulatory elements conferring 3',5'-adenosine monophosphate responsiveness of the progesterone receptor gene in transfected rat granulosa cells. *Endocrinology* 136:5430-5437
21. Goodson ML, Park-Sarge OK, Sarge KD (1995) Differential expression of heat shock factor 2 mRNA splicing isoforms in spermatogenic cells of the mouse testis. *Mol Cell Biol* 15:5288-5293

22. Park-Sarge OK, Parmer TG, Gu Y, Gibori G (1995) Does the rat corpus luteum express the progesterone receptor gene? *Endocrinology* 136:1537-1543
23. Gu Y, Jow G-M, Moulton BC, Sensibar JA, Park-Sarge OK, Chen TC, Gibori G (1994) Involvement of apoptosis in decidual tissue regression and reorganization. *Endocrinology* 135:1272-1279
24. Park-Sarge OK, Mayo KE (1994) Regulation of the progesterone receptor gene by gonadotropins and cyclic adenosine 3',5'-monophosphate in rat granulosa cells. *Endocrinology* 124:709-718
25. Sarge KD, Park-Sarge OK, Kirby JD, Mayo KE, Morimoto RI (1994) Expression of heat shock factor 2 during mouse spermatogenesis. *Biol Reprod* 50:1334-1343
26. Park OK, Mayo KE (1991) Transient expression of progesterone receptor mRNA in ovarian granulosa cells following the preovulatory LH surge. *Mol Endocrinol* 5:967-978

### C. Research Projects Ongoing or Completed During the Last 3 Years:

#### Ongoing:

##### **“Regulation and Function of Estrogen Receptor- $\beta$ in Ovary“**

Principal Investigator: Ok-Kyong Park-Sarge, Ph.D.

Agency: National Institute of Child Health and Human Development

Type: R01 (HD36879, Years 1-5), Period: 6/01/99-5/31/04

The long term goal of this project is to determine the transcriptional regulatory mechanisms of ER $\beta$  gene expression and functional significance of ER $\beta$  in granulosa cells.

##### **“Cellular and Molecular Mechanisms of Mammalian Ovulation“**

Principal Investigator: Ok-Kyong Park-Sarge, Ph.D.

Agency: National Institute of Child Health and Human Development

Type: R01 (HD416909), Period: 9/01/02-8/31/04

The long term goal of this project is to determine the molecular mechanisms by which a local synthesis of progesterone and its receptors modulate oocyte meiosis.

#### Completed:

##### **“Regulatory Mechanisms of Ovarian Progesterone Receptors”**

Principal Investigator: Ok-Kyong Park-Sarge, Ph.D.

Agency: National Institute of Child Health and Human Development

Type: K04 (HD01135, Years 1-5), Period: 07/01/96-06/30/01

Salary only

##### **“Progesterone Receptor Gene Regulation in the Rat Ovary“**

Principal Investigator: Ok-Kyong Park-Sarge, Ph.D.

Agency: National Institute of Child Health and Human Development

Type: R29 (HD30719, Years 1-5), Period: 5/091/94-4/30/99

The long term goal of this project was to determine the hormonal regulatory mechanisms of the progesterone receptor gene expression in rat ovary.

##### **“Role of Metalloproteinases in ovarian function “**

Principal Investigator: Thomas Curry Jr., Ph.D.

Agency: National Institute of Environmental Health Sciences

Type: R01 (HD23195, Years 1-4), Period: 07/01/96-06/30/00

The long term goal of this project is to determine the expression and hormonal regulation of metalloproteinases in the rat ovary.

##### **“Metalloproteinases in Human Ovarian Physiology “**

Principal Investigator: Thomas Curry Jr., Ph.D.

Agency: National Institute of Environmental Health Sciences

Type: R01 (HD HD34400, Years 1-4), Period 10/1/98-9/30/2002

The long term goal of this project is to determine the cellular localization and changes in the matrix metalloproteinase system in the human ovary throughout the menstrual cycle.