

CURRICULUM VITAE

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91 Hsueh-Shih Road, Taichung 40402, Taiwan, ROC

Education:

Ph.D.	1994-1999	Cornell University (Department of Animal Science), USA
M.S.	1982-1984	National Chung Hsing University (Animal Science), Taiwan
B.S.	1978-1982	National Chung Hsing University (Animal Husbandry), Taiwan

University Appointment:

2013-present	Professor, Graduate Institute of Basic Medical Science, China Medical University, Taiwan
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2013-present	Principal Investigator, Core laboratory for Stem Cell Research, Medical Research Department, China Medical University Hospital, Taichung, Taiwan
2013 (-present)	Adjunct Professor, Department of Biomedical Informatics, College of Computer Science, Asia University, Taichung, Taiwan
2013 (-present)	Adjunct Professor, Department of Animal Science, National Chung Hsing University, Taichung, Taiwan
2014 (-present)	Adjunct Professor, Biotechnology Center, National Chung Hsing University, Taichung, Taiwan
2003-2013	Professor, Department of Animal Science, National Chung Hsing University, Taiwan
2009-2011 Taiwan	Distinguished Professor, National Chung Hsing University,
1999-2002	Associate Professor, Animal Science, National Chung Hsing University
1992-1999	Lecturer, Animal Science, National Chung Hsing University
1986-1992	Teaching Assistant, Animal Science, National Chung Hsing University

Honors

Recipient of the Distinguished Home Room teacher of College of Agriculture and Natural Resources, National Chung Hsing University (2008).

Recipient of the Distinguished Research Award (2009) from Chinese Society of Animal Science (CSAS).

Recipient of the Distinguished Professor of National Chung Hsing University (2009).

Fields of Study:

Gamete Biology

Embryology

Animal cloning and embryonic stem cells

Reproductive Biology

Signal Transduction

Thermobiology

Services:

1. Journal editorial board and *ad hoc* reviewers

Editorial board committee of the Journal of Chinese Association of Animal Science, Taiwan

Editorial board committee of the Journal of Livestock Research Institute Taiwan

Editorial board committee of the World Journal of Stem Cells (2010-)

Editorial board committee of the World Journal of Biological Chemistry (2013-)

Editorial board committee of Adaptive Medicine (2014-2015)

Reviewer of Animal Reproduction Science

Reviewer of Asian-Australasian Journal of Animal Science

Reviewer of Cloning and Stem cells/Cellular Reprogramming

Reviewer of Journal of Chinese Agriculture Association

Reviewer of Journal of Chinese Association of Animal Science

Reviewer of Journal of Clinical Rehabilitative Tissue Engineering Research

Reviewer of Journal of International Corporation

Reviewer of Journal of Livestock Research Institute Taiwan

Reviewer of Reproduction

Reviewer of Reproduction in Domestic Animals

Reviewer of Theriogenology

Reviewer of Zygote

Reviewer of Stem Cell and Development

Reviewer of Stem Cell Review and Reports

Reviewer of PlosOne

2. Grant proposal reviewers

Regular reviewer of the National Science Council, Executive Yuan, Taiwan, ROC

Re-reviewer of National Science Council, Executive Yuan, Taiwan, ROC

Reviewer of Livestock Research Institute, Executive Yuan, Taiwan, ROC.

Reviewer of the Minister of Education, Taiwan, ROC

Reviewer of the Chang Gung-Tsing Hua University collaboration programs

3. University Reviewer

National Ping-Tung Technology University

National I-Lan University

4. Standing committee of International Congress on Animal Reproduction (ICAR): 2012-2028

Selected publications (English) (*Corresponding author)

Cheng SP, **JC Ju**, CL Young. 1988. In vitro development of early swine embryos in mKRB medium supplemented with maternal serum. J Chin Soc Vet Sci 14: 307-314.

Cheng SP, YC Chang, **JC Ju**, CL Young. 1988. In vitro development of intact and micro-manipulated rabbit embryos. Proceedings of the three-way faculty exchange seminar on the application of biotechnology to agriculture. Seoul, Korea, pp 235-244.

Ju JC, SP Cheng, PC Tarng, KB Choo. 1991. In vivo development and microinjection of rabbit zygotes. Asian J Anim Sci 4 (1): 73-78.

Ju, JC, SP Cheng, YK Fan, JC Hsu, SK Chiang, EV Chang, SC Chiou. 1993. Investigation of equine hematological constituents in central Taiwan. I. Distribution of the blood cell parameters and the biochemical compositions of serum. Asian J Anim Sci 6(1):147-153.

Yen, SC, SP Cheng, **JC Ju**. 1994. In vivo development of microencapsulated rabbit aggregated blastomeres and bisected morulae with calcium alginate gel. In "Proceedings of the 7th. AAAP Anim Sci Congress Vol. II, 329-330.

- Liu L, **JC Ju**, X Yang. 1998. Parthenogenetic development and protein patterns of newly matured bovine oocytes after chemical activation. *Mol Reprod Dev* 49: 298-307. (*SCI*)
- Suzuki H, **JC Ju**, JE Parks, X Yang. 1998. Surface ultrastructural characteristics of bovine oocytes following heat shock. *J Reprod Dev* 44: 345-351.
- Liu L, **JC Ju**, X Yang. 1998. Differential inactivation of maturation-promoting factor and mitogen-activated protein kinase following parthenogenetic activation of bovine oocytes. *Biol Reprod* 59: 537-545. (*SCI*)
- Suzuki H, **JC Ju**, X Yang. 1999. Surface ultrastructural alterations of bovine oocytes after parthenogenetic activation. *Reprod Fert Dev*: 44: 345-351.
- Ju JC**, JE Parks, X Yang. 1999. Thermotolerance of IVM-derived bovine oocytes and embryos after short-term heat shock. *Mol Reprod Dev* 53: 336-340. (*SCI*)
- Ju JC**, JE Parks, X Yang. 2000. Heat shock and oocyte activation. The 7th Sino-Japanese-Korean Conference in dairy production, pp. 57-71.
- Suzuki H, **JC Ju**, X Yang. 2000. Surface ultrastructural alterations of bovine oocytes after parthenogenetic activation. *Cloning* 2: 69-78.
- Tripp MW, **JC Ju**, TA Hoagland, JW Riesen, X Yang, and SA Zinn. 2000. Influence of somatotropin and nutrition on bovine oocyte retrieval and in vitro development. *Theriogenology* 53: 1581-1590. (*SCI*)
- Maneesh T, PEJ Bols, AVD Velde, **JC Ju**, D Schreiber, MW Tripp, H Levine Y, Echelard, J Riesen and X Yang. 2000. Developmental competence of juvenile calf oocytes in vitro: influence of donor animal variation and repeated gonadotropin stimulation. *Biol Reprod* 62: 206-213. (*SCI*)
- Ju JC**, YC Chang, WT Huang, PC Tang, SP Cheng. 2001. Superovulation and Transplantation of demi- and aggregated embryos in rabbits. *Asian-Aust J. Anim. Sci.* 14: 455-461 (*SCI*)

Huang WT, PC Tang, SC Wu, SP Cheng, **JC Ju***. 2001. Effects of levels and sources of follicular fluid on the in vitro maturation and development of porcine oocytes. *Asian-Aust J. Anim. Sci.* 14: 1360-1366 (*SCI*)

Ju JC, HC Peh, JC Hsu, SP Cheng, HH Chiou, YK Fan. 2001. The reproductive characteristics of the mare in subtropical Taiwan. *Asian-Aust J. Anim. Sci.* 15: 494-499 (*SCI*)

Liu CT, CH Chen, SP Cheng, **JC Ju***. 2002. Parthenogenesis of rabbit oocytes activated by different stimuli. *Anim Reprod Sci* 70: 267-276. (*SCI*)

Wu MF, WT Huang, C Tsay, HF Hsu, BT Liu, CM Chiou, SC Yen, SP Cheng, **JC Ju***. 2002. The stage-dependent inhibitory effect of porcine follicular cells on the development of preantral follicles. *Anim Reprod Sci* 73: 73-88. (*SCI*)

Huang, WT, SG Lu, PC Tang, SC Wu, SP Cheng, **JC Ju***. 2002. Biochemical compositions of follicular fluid and the effects of culture conditions on the in vitro development of pig oocytes. *Asian-Aust. J Anim Sci* 15: 1403-1411. (*SCI*)

Ju, JC, TH Chen, JK Tseng, C Tsay, SP Yeh, PC Chou, CH Chen and CT Liu. 2002. Cytoskeletal patterns, in vitro maturation and parthenogenetic development of rabbit GV oocytes. *Asian-Aust. J. Anim Sci* 15:1695-1701.

Fan YK, JC Hsu, HC Peh, CL Tsang, SP Cheng, SH Chiu, **JC Ju***. 2002. The effects of endurance training on the hemogram of the horse. *Asian-Aust J Anim Sci* 15(9): 1348-1353 (*SCI*)

Ju JC, JS Yang, CT Liu, CH Chen, JK Tseng, PC Chou, SP Cheng 2003. Differential influences in size and cell cycle stages of donor blastomeres on the development of cloned rabbit embryos. *Asian-Aust. J. Animal Sci.* 16: 15-22 (*SCI*)

Ju JC, Tsay C, Ruan CW. 2003. Alterations and reversibility in the chromatin, cytoskeleton and development of pig oocytes treated with roscovitine. *Mol Reprod Dev* 64:

482-491. (*SCI*)

Yep, SP, **JC Ju**, JK Tseng, PC Chou, CH Chen, T Chih, YK Fan. 2004. Surgical oocyte retrieval and the developmental potential of the oocytes derived from prepubertal calves. *Asian-Aust J Anim Sci* 17: 174-178. (*SCI*)

Ju JC, JK Tseng. 2004. Nuclear and cytoskeletal alterations of in vitro matured porcine oocytes under hyperthermia. *Mol Reprod Dev* 68: 125-133. (*SCI*)

Tseng, JK, CH Chen, SP Yeh, PC Chou, **JC Ju***. 2004. Influences of follicular size on parthenogenetic activation and in vitro heat shock on the cytoskeleton in cattle oocyte. *Reprod Dom Anim* 39: 146-153. (*SCI*)

Fan, YK, **JC Ju**, SL Lee, CF Chen, HC Peh, JC Hsu, YP Lee. 2004. High ejaculation frequency enhances production of semen in Taiwan Country Chicken. *Asian-Aust. J. Anim. Sci.* 17: 924-929. (*SCI*)

Hsieh CH, S Lee, Jaw SN, Tseng JK, Tang PC, Chang LH, **Ju JC***. 2004. The relative centrifugation force permits visualization of the germinal vesicle in pig oocytes. *Asian-Aust J Anim Sci* 17: 1227-1231. (*SCI*)

Liu CT, KC Yu, **JC Ju***. 2004. Cell cycle stage analysis of rabbit fetal fibroblasts and cumulus cells. *Reprod Dom. Anim.* 39: 385-390. (*SCI*)

Ju, JC, Shie Jiang, Jung-Kai Tseng, John E. Parks, and Xiangzhong Yang. 2005. Heat shock reduces developmental competence and alters spindle configuration of bovine oocytes. *Theriogenology* 64:1677-1689. (*SCI*)

Ju JC*. 2005. Cellular responses of oocytes and embryos under thermal stress: hints to molecular signaling. (a review). *Anim Reprod* 2: 79-90.

Hsieh CH, PC Tang, WH Chang, YC Weng, SW Sha, JK Tseng, LH Chang, and **JC Ju***. 2006. The kinase inhibitor indirubin-3'-oxime prevents GV breakdown but reduces parthenogenetic development of pig oocytes. *Theriogenology* 65:744-756. (SCI)

Tseng JK, PC Tang and **JC Ju***. 2006. In vitro thermal stress induces apoptosis and reduces development of porcine parthenotes. *Theriogenology* 66:1073-1082. (SCI)

Weng YC, Sha SW, CM Chiou, PC Tang, JH Yang, **JC Ju***. 2007. Butyrolactone I reversibly alters nuclear configuration, periooplasmic microtubules, and development of porcine oocytes. *Theriogenology*. 67:509-519. (SCI)

Lin, TA, TC Tsay, CH Chen, PC Tang, **JC Ju***. 2008. Nuclear and cytoskeletal dynamics during oocyte maturation and development of somatic cell cloned pig embryos injected with membrane-disintegrated donor cells. *Anim Reprod Sci* 103:107-119. (SCI)

Chiang SK, HH Chang, YW Ou, P Intawicha, SP Cheng, LR Chen, KH Lee, J Giles, and **JC Ju***. 2008. Successful induction of antisera against rabbit embryos for isolation of the ICM and putative embryonic stem cells. *Reprod Dom Anim*. 43:181-188 (SCI)

Chen CH, S Lee, **JC Ju**, WT Lien, MS Liu, CF Tu, KH Lee. 2008. Transgenic cloned mice expressing enhanced green fluorescent protein generated by activation stimuli combined with 6-dimethylaminopurine. *Reprod Dom Anim*. 43:547-555. (SCI)

Siddiqui MAR, Gastal EL, **Ju JC**, Gastal MO, Beg MA, and Ginther OJ. 2009. Nuclear configuration, spindle morphology and cytoskeletal organization of *in vivo* maturing horse oocytes. *Reprod Dom Anim* 44(3):435-440 (SCI) (DOI: 10.1111/j.1439-0531.2008.01105.x)

Tseng JK and **Ju JC***. 2009. Calcium release of heat-shocked porcine oocytes induced by thimerosal or inositol 1,4,5-trisphosphate (IP3). *Anim. Reprod. Sci.* 111:41-53. (SCI)

Intawicha P, YW Ou, NW Lo, SC Zhang, YZ Chen, TA Lin, HL Su, HF Guu, MJ Chen, KH Lee, WT Chiu, and **JC Ju***. 2009. Characterization of embryonic stem cell lines derived from New Zealand White rabbit embryos. *Cloning Stem Cells* 11:27-38. (SCI)

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Nguyen TN, DPC Lin, SY Yen, JK Tseng, JF Chuang, HT Hung, TA Lin, HH Chang, and **JC Ju***. 2009. Sonic hedgehog promotes porcine oocyte maturation and early embryo development. *Reprod Fertil Dev* 21:805-815. (SCI)

Tseng, JK, HK Liu, TA Lin, CR Yang, X Yang, and **JC Ju***. 2009. Calcium release and development of heat-shocked porcine oocytes after nucleus-ooplasm reconstruction. *Cloning Stem Cells* 11(4):557-563. (SCI)

Nguyen NT, DPC Lin, C Siriboon, and **JC Ju***. 2010. Sonic Hedgehog improves in vitro development of porcine parthenotes and handmade cloned embryos. *Theriogenology* 74:1149-1160 (SCI).

Shen PC, JW Lee, WTK Cheng, HY Su, SN Lee, BT Liu, CH Wang, LR Chen, **JC Ju***. 2010. Differential thermal sensitivity between the recipient ooplasm and the donor nucleus in Holstein and Taiwan Native Yellow cattle. *Theriogenology* 74:1587-1595 (SCI)

Lin TA, C H Chen, LY Sung, M Carter, Y Chen, F Du, **JC Ju***, and J Xu*. 2011. Differential cryotolerance of in vitro cultured rabbit embryos at different developmental stages. *Theriogenology* 75:760-768 (doi:10.1016/j.theriogenology.2010.10.018) (SCI)

Hsieh YC, P Intawicha, KH Lee, YT Chiu, NW Lo*and **JC Ju***. 2011. LIF and FGF cooperatively support stemness of rabbit embryonic stem cells derived from parthenogenetically activated embryos. *Cell Reprogram* 13:241-255 (doi:10.1089/cell.2010.0097). (SCI)

Nguyen NT, NW Lo, SP Chuang, YL Jian, and **JC Ju***. 2011. Sonic Hedgehog supplemented in oocyte and embryo culture media enhances development of in vitro fertilized porcine embryos. *Reproduction* 142:87-97 (doi:10.1530/REP-11-0049) (SCI)

Sung LY, CH Chen, J Xu, TA Lin, HY Su, WF Chang, CC Liu, YS Sung, WTK Cheng, JF Zhang, X. C Tian, **JC Ju**, Y. E Chen, SC Wu, F Du. 2011. Follicular oocytes better support development in rabbit cloning than oviductal oocytes. *Cell Reprogram.* 13(6): 503-512. (SCI)

Siriboon C, NT Nguyen, JK Tseng, NW Lo, CF Tu, and **JC Ju***. 2012. Trichostatin A and ascorbic acid assist in the development of porcine handmade cloned embryos via different physiologic pathways. *Reprod Sci* 19 (9):976-986 (doi: 10.1177/ 1933719112440049). (SCI)

Kere M, C Siriboon, NW Lo, NT Nguyen, **JC Ju***. 2013. Ascorbic acid improves the developmental competence of porcine oocytes after parthenogenetic activation and somatic cell nuclear transplantation. *J Reprod Dev* 59:78-84. (SCI)

Siriboon C, CF Tu, M Kere, MS Liu, HJ Chang, LL Ho, ME Tai, WD Fang, NW Lo, JK Tseng, and **JC Ju***. 2013. Production of viable cloned miniature pigs by aggregation of handmade cloned embryos at the 4-cell stage. *Reprod Fertil Dev* .(doi.org/10.1071/RD12243) (SCI)

Lee KH*, JC Sun, CK Chuang, CF Tu, and **JC Ju***. 2013. An efficient and mass reproducible method for vitrifying mouse embryos on a paper in cryotubes. *Cryobiology* 66:311-317. (SCI)

Chen CH, F Du, J Xu, WF Chang, CC Liu, HY Su, TA Lin, **JC Ju**, WTK Cheng, SC Wu, YE Chen, LY Sung. 2013. Synergic effects of Trichostatin A and scriptaid on rabbit somatic cell nuclear transfer. *Theriogenology* 79 :1284–1293. (SCI)

Intawicha P, SH Wang, YC Hsieh, NW Lo, KH Lee, SY Huang*, and **JC Ju***. 2013. Proteomic profiling of rabbit embryonic stem cells derived from parthenotes and fertilized Embryos. *Plos One* (July 2013 | Volume 8 | Issue 7 | e67772) (SCI)

Tseng, JK., NW Lo, and **JC Ju***. 2014. Physiologic responses of mammalian oocytes and embryos under thermal stress: an overview. *Adaptive Medicine* 6(2): (in press)

Yen Shih-Ying, JK Tseng, SM Chuang, SE Chen, and **JC Ju***. 2014. Subcellular localization, expression and activation of mitogen-activated protein kinase p38 in porcine oocytes under thermal stress. *J Reprod Dev* (in press). (SCI)

Kere M, C Siriboon, JW Liao, NW Lo, HI Chiang, YK Fan, JP Kastelic, **JC Ju*** 2014. Vascular endothelial growth factor A improves quality of matured porcine oocytes and developing parthenotes. *Endocrinology of Domestic Animals* (in press). (SCI)

Selected publications (in Chinese with English abstract) *Corresponding author

Yeh SP, Tseng JK, Chou PC, Chen CH, Chih T, Fan YK, Taneja M, Yang X, **Ju JC***. 2002 The developmental competence and factors influencing the in vitro production of cattle embryos using oocytes derived from juvenile calves. *J Agri Assoc China*. 3: 93-105.

Tseng JK, Tang PC, Liu CT, Chiou CM, **Ju JC***. 2002. The effects of hyperthermia on the cytoskeleton and development of oocytes. *J Agri Assoc China*. 3: 337-354.

Chen CH, Liu CT, Cheng SP, **Ju JC***. The challenges and principles of rabbit cloning. *Sci Mag*. 389: 337-354.

Wang KW, **Ju JC**, Parks JE, Hsu KH, Peh HC. 2003. Cryopreservation of oocytes and embryos. 2003. *J Agri Assoc China* 4: 288-303.

Chou PC, Tang PC, **Ju JC***. 2003. Mechanisms and factors affecting the production of transgenic mice by pronuclear microinjection. *J Agri Assoc China* 4: 364-383.

Weng YC, Chiou CM, Tang PC, Yang JH, **Ju JC***. 2005. Oocyte biology and the cell cycle regulators. *J Agri Assoc China*. 6: 500-514.

Wang SK, Tang PC, **Ju JC**. 2005. The mechanism and application of RNA interference.

J Agri Assoc China. 6: 515-530.

Chang WC, Ho HC, Tang PC, **Ju JC***. 2007. Application of animal transgenic technology to human lung cancer research. J Agri Assoc China. 8:68-82.

Lin TA, Tang PC, **Ju JC***. 2007. In vitro culture of cloned and non-cloned pig embryos. J Agri Assoc China. 8 (2) 113-128.

Chang WF, Tang PC, **Ju JC***. 2007. Intrinsic factors related to regulation of pluripotency and differentiation of embryonic stem cells and early mammalian embryos. J Agri Assoc China. 8 (3):245-254.

Ou YW, Tang PC, **Ju JC***. 2008. Signaling pathways of self-renewal in embryonic stem cells. J Agri Assoc China. 9 (3):226-242.

Yen SY and **JC Ju***. 2009. Oocyte maturation and the effect of thermal stress on its signaling pathways. Chin Soc Anim Sci (in press).

Hsieh YC, P Intawicha, NW Lo, KH Lee, **JC Ju***. 2010. Characterization and applications of embryonic stem cells derived from parthenogenetically activated embryos (a review). J Agri Assoc Taiwan 11 (6) 580-601.

Sun JC, KH Lee*, and **JC Ju***. 2011. Vitrification of mammalian embryos. Chin Soc Anim Sci 40 (1) 1-17.

Jian YL, NW Lo, and **JC Ju***. 2011. Effects of growth factors on the maturation of porcine follicular oocytes and their subsequent development. J Chin Soc Anim Sci 39 (3):147-164.

Chen YZ, YH Chang, NW Lo, **JC Ju**. 2012. Roles of regulatory proteins in the development of mouse primordial germ cells. J Agri Assoc Taiwan 13 (2): 132-149 .

Yang CR, JK Tseng, NW Lo, **JC Ju***. 2013. Developmental stages of mouse embryos and embryoid bodies. Journal of Agricultural Association of Taiwan. 14(4):402-419.

(楊淳茹、曾榮凱、羅能文、朱志成。2013。小鼠胚發育階段與類胚體之比較。台灣農學會報 14(4):402-419。)