

## CURRICULUM VITAE

NAME Takami Oka

ADDRESS Wakunaga Pharmaceutical Co.,Ltd.  
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Japan

EDUCATION B.S., Tokyo University 1963  
Ph.D., Stanford University Medical School 1969

### PROFESSIONAL EXPERIENCE

Visiting Researcher, National Institute of Radiological  
Sciences, Chiba-shi, Japan 1963-1964

*Research Fellow, Department of Pediatrics (Biochemistry)*  
Stanford Medical School 1964-65

PhD candidate, Department of Pharmacology, Stanford  
Medical School 1965-1969

Visiting Fellow, Laboratory of Biochemistry and  
Metabolism, NIAMD, NIH 1969-1971

Senior Staff Fellow, Laboratory of Biochemistry and  
Metabolism, NIDDK, NIH 1971-1974

Senior Investigator, Laboratory of Biochemistry and  
Metabolism, NIDDK, NIH 1974-1985

Chief, Section on Cell Growth and Differentiation,  
Laboratory of Molecular and Cellular Biology, NIDDK  
NIH 1985-1998

Chief, Section on Cell Growth and Differentiation  
*Laboratory of Genetics and Physiology, NIDDK*  
NIH 1998-2004

Professor, Musashino University School of Pharmaceutical  
Sciences Tokyo Japan 2004-2010

Chief Senior Scientist and Adviser, Wakunaga Research  
Institute, Wakunaga Pharmaceutical Co.,Ltd Hiroshima  
Japan 2010-present

#### SCIENTIFIC SOCIETY MEMBERSHIP

American Society of Biochemistry and Molecular Biology  
American Society of Cell Biology  
Japanese Society of Pharmaceutical Sciences  
Japanese Society of Polyamine Research

#### AWARDS, INVITED LECTURES and SCIENTIFIC ACTIVITY

Numerous invited lectures at national and international  
scientific meetings; various awards including NIH merit  
awards and Musashino University award.

Served as the member of NIH grant study section , Breast  
cancer task force and reviewer of various scientific journals

#### MAJOR AREA OF RESEARCH

Study of hormonal regulation of cell growth and  
differentiation at cellular and molecular level.

1. Shinoda, M., Oka, T., and Akaboshi, S.: Pharmacological studies on chemical protectors against radiation. I. Radiosensitivities of mice against X-irradiation. Yakuqaku Zasshi 87:654-657, 1967.
2. Shinoda, M., Goto, M., Oka, T., Iwata, K., Tamaoki, B., and Akaboshi, S.: Pharmacological studies on chemical protectors against radiation. II. Influence of X-irradiation on body weight of mouse. Yakuqaku Zasshi 87:658-66, 1967.
3. Oka, T., and Schimke, R.T.: Progesterone antagonism of the estrogen induced cytodifferentiation of the chick oviduct. Science 163: 83-86, 1969.
4. Oka, T., and Schimke, R.T.: Interaction of estrogen and progesterone in chick oviduct development. I. Antagonistic effect of progesterone on estrogen-induced proliferation and differentiation of tubular gland cells. J. Cell Biol. 41:816-831, 1969.
5. Oka, T., and Schimke, R.T.: Interaction of estrogen and progesterone in chick oviduct development. II. Effect of estrogen and progesterone on the function of tubular gland cells. J. Cell Biol. 43: 123-137, 1969.
6. Oka, T.: Interaction of estrogen progesterone in chick oviduct development. Ph.D. Thesis, Stanford University, 1969.
7. Palmiter, R.D., Oka, T., and Schimke, R.T.: Modulation of ovalbumin synthesis by estradiol-17 and actinomycin D as studied in explants of chick oviduct in culture. J. Biol. Chem. 246: 724-737, 1971.
8. Friedburg, S.H., Oka, T., and Topper, Y.J.: Development of insulin sensitivity by mouse mammary gland *in vitro*. Proc. Natl. Acad. Sci. USA 67: 1493-1500, 1970.
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10. Oka, T., and Topper, Y.J.: Hormone-dependent accumulation of rough endoplasmic reticulum in mouse mammary epithelial cells *in vitro*. J. Biol. Chem. 246: 7701-7707, 1971.
11. Oka, T., and Topper, Y.J.: Insulin-sepharose and the dynamics of insulin action. Proc. Natl. Acad. Sci. USA 68:2066-2068, 1971.
12. Oka, T., and Topper, Y.J.: Is prolactin mitogenic for mammary epithelium? Proc. Nat'l Acad. Sci. USA 69: 1693-1696, 1972.
13. Oka, T., and Topper, Y.J.: Hormone-dependent accumulation of RER in mouse mammary epithelial cells *in vitro*. J. Natl. Cancer Inst. 48: 1225-1230, 1972.
14. Oka, T., and Topper, Y.J.: Dynamics of insulin action on mammary epithelium. Nature New Biol. 239: 216-217, 1972.
15. Topper, Y.J., and Oka, T.: Insulin and the mammary epithelial cell membrane. In: Mehlman, M.A., and Hanson, R.W. (Eds.): The Role of Membrane in Metabolic Regulation. New York, Academic Press, 1971, pp. 341-347.
16. Topper, Y.J., Oka, T., Owens, I.S., and Vonderhaar, B.K.: Some aspects of mouse mammary gland development from maturity to early pregnancy. In Vitro 8: 228-236, 1972.

17. Topper, Y.J., and Oka, T.: Some aspects of mammary gland development in the mature mouse. In: Larson, B.L., and Smith, V.R. (Eds.): Lactation: A Comprehensive Reatise. New York, Academic Oress, 1974, pp. 327-348.
18. Oka, T.: The role of spermidine in hormone-dependent differentiation of mammary gland in vitro. Science 184: 74-80, 1974.
19. Oka, T., and Perry, J.W.: Studies on the function of glucocorticoid in mouse mammary epithelial cell differentiation in vitro: Stimulation of glucose-6- phosphate dehydrogenase. J. Biol. Chem. 249: 3586-3590, 1974.
20. Oka, T., and Topper, Y.J.: A soluble super-active form of insulin. Proc. Natl. Acad. Sci. USA 71: 1630-1633, 1974.
21. Topper, Y.J., Oka, T., and Vonderhaar, B.K.: Techniques for studying development of normal mammary epithelial cells in organ culture. In: Hardman, J.G., and O'Malley, B.W. (Eds.): Methods in Enzymology. New York, Academic Press, 1974.
22. Oka, T., Perry, J.W., and Topper, Y.J.: Changes in insulin-responsiveness during development of mammary epithelium. J. Cell Biol. 62: 550-554, 1974.
23. Oka, T., and Perry, J.W.: Spermidine as a possible mediator of glucocorticoid effect on milk protein synthesis in mouse mammary epithelium in vitro. J. Biol. Chem. 249: 7647-7652, 1974.
24. Oka, T., and Perry, J.W.: Arginase affects lactogenesis through its influence on the biosynthesis of spermidine. Nature 250: 660-661, 1974.
25. Oka, T., and Topper, Y.J.: Insulin-unresponsive tissues respond to superactive insulin-like material. Science 188: 1317-1319, 1975.
26. Wilchek, M., Oka, T., and Topper, Y.J.: Insulin is revealed by the nature of the complex between cyanogens bromide activated sepharose and amines. Proc. Natl. Acad. Sci. USA 72: 1055-1058, 1975.
27. Topper, Y.J., Oka, T., Vonerhaar, B.K., and Wilchek, M.: Characterization of super-active insulin, prolactin and placental lactogen. Biochem. Biophys. Res. Commun. 66: 793-798, 1975.
28. Oka, T., and Perry, J.W.: Studies on regulatory factors of ornithine decarboxylaseactivity during development of mouse mammary epithelium in vitro. J. Biol. Chem. 251: 1738-1744, 1976.
29. Kano, K., and Oka, T.: Polyamine transport in mouse mammary gland. General properties and hormonal regulation. J. Biol. Chem. 251: 2795-2800, 1976
30. Topper, Y.J., Oka, T., Vonderhaar, B.K., and Wilchek, M.: An insulin derivative with biological activity greater than that of native insulin. J. Cell Physiol. 89: 647-649, 1976.
31. Oka, T.: Studies on cytodifferentiation (review in Japanese) Taisha 11: 25-31, 1974.
32. Oka, T.: Some aspects of polyamine functions in animal cells (review in Japanese). Protein, Nucleic Acid, Enzyme 20: 101, 1975.
33. Oka, T.: Hormonal regulation of the growth and development of mammary gland (review in Japanese) Kagaku 45: 400-407, 1975.

34. Oka, T., Kano, K., and Perry, J.W.: Spermidine and the action of glucocorticoid during the development of mammary gland. Excerpta Medical International Congress Series No. 402 Endocrinology. Proceedings of the V International Congress of Endocrinology, Hamburg, July, 18-24, 1976, Vol. I James, V.H.T., (Ed.) Excerpta Medica, Amsterdam, pp. 542-547.
35. Klein, D.C., Kirk, K.L., Weller, J.L., Oka, T., Parfit, A., and Owens, I.S.: 2-fluoro-L-histidine, an inhibitor of enzyme induction. Molecular Pharmacol. 12: 720-730, 1976.
36. Oka, T., Kano, K., and Perry J.W.: Studies on S-adenosyl-methionine decarboxylase of mouse mammary gland. In: Campbell, R., et al., (Eds.) Advances in Polyamine Research, Vol. 1, Raven Press, New York, 1977, pp. 59-67.
37. Sakai, T., Lundgren, D.W., Oka, T.: The role of spermidine in the regulation of DNA synthesis in cultured mammary explants from virgin mice. J. Cell. Physiol. 95: 259-268, 1978.
38. Oka, T., Perry J.W., and Kano, K.: Hormonal regulation of spermidine synthase during the development of mouse mammary epithelium in vitro. Biochem. Biophys. Res. Commun. 79: 979-986, 1977.
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41. Oka, T., and Perry, J.W.: Glucocorticoid stimulation of choline kinase activity during the development of mouse mammary gland. Develop. Biol. 68: 311-318, 1979.
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44. Nagamatsu, Y., and Oka, T.: Mouse  $\alpha$ -lactalbumin: purification, characterization and the antibody preparation. Biochem.J. 185: 227-237, 1980.
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48. Ono, M., and Oka, T.: The differential actions of cortisol on the accumulation of lactalbumin and casein in midpregnant mouse mammary gland in culture. Cell 19: 473-480, 1980.
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51. Oka, T.: Polyamine as an intracellular regulatory factor. Shizen 67: 369-377, 1980.
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71. Taketani, Y., and Oka, T.: Tumor promoter 12-0 teradecanoyl phorbol 13-acetate, like epidermal growth factor, stimulates cell proliferation and inhibits differentiation of Mouse mammary epithelial cells in culture. Proc. Natl. Acad. Sci. USA 80: 1646-1649, 1983.
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74. Terada, N., and Oka, T.: Interaction of cortisol and prostaglandin E2 on the expression of lactalbumin gene. Biochem. Biophys. Res. Commun. 80: 2647-2650, 1983.
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76. Oka, T., and Perry, J.W.: Use of mammary gland tissue for the study of polyamine metabolism and function. In: Tabor, H., and Tabor, C., (eds.) Methods in Enzymology, Vol. 94, pp. 389-396, 1983.
77. Oka, T.: Intracellular mediators of hormone action in lactogenesis. In: Mephan, T.B. (Ed.) Biochemistry of Lactation, Elsevier/NorthHolland Biomedical Press, pp. 381-399, Amsterdam, 1983.
78. Terada, N., and Oka, T.: Cortisol mesylate exerts glucocorticoid actions on differentiation of the mammary gland in organ culture. Hormone and Metabolic Research 15: 508-512, 1983.
79. Taketani, Y., and Oka, T.: Epidermal growth factor stimulates cell proliferation and inhibits functional differentiation of mouse mammary epithelial cells in culture. Endocrinology 113: 871-877, 1983.

80. Motojima, K., and Oka, T.: 5'- terminal sequence of the mRNA of mouse whey acidic protein contains three possible sites of interaction with 18S rRNA. *Biochim. Biochys. Res*
81. Russell, D.H., Criss, W.E., Oka, T., Morishita, Y., and Deu, B.: Identification of polypeptide which inhibits the in vitro activities both ornithine decarboxylase and a polyamine-stimulated protein kinase. *J. Nutr. Growth and Cancer* 1: 91-95, 1983.
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83. Okamoto, S., and Oka, T.: Evidence for physiological function of epidermal growth factor: pregestational sialadenectomy of mice reduces milk production and increases offspring mortality during lactation period. *Proc. Natl. Acad. Sci. USA* 81: 6059-6063, 1984.
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109. Kurachi, H., Tamizawa, O., tsutsumi, O., and Oka, T.: EGF and reproductive function. Progress in Endocrinology 5: 97-110, 1987.
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