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Current Post Head of Biological Sciences
Professor of Cell Biology

Education

1999	Certificate in Teaching and Learning in Higher Education, University of Newcastle, UK.
1991-1994	PhD University of Liverpool, UK.
1986-1989	BSc Biochemistry (First Class Honours), University of Leeds, UK

Employment History

2013-	**Head of Biological Sciences & Professor of Cell Biology,** Centre for Biological Sciences, Southampton University, UK.
2008-2012	**Professor in Human Physiology,** School of Biomedical Sciences and Pharmacy**, & Co-Director of the Priority Research Centre in Reproductive Biology,** University of Newcastle, Australia.
2005-2008	**Professor in Reproductive Physiology,** Institute for Cell and Molecular Biosciences, University of Newcastle, UK.
2005	**Reader in Reproductive Physiology,** Institute for Cell and Molecular Biosciences, University of Newcastle, UK.
2002-2005	**Senior Lecturer**, Institute for Cell and Molecular Biosciences, University of Newcastle, UK.
1998-2002	**Lecturer,** Department of Physiological Sciences, University of Newcastle, UK.
1997-1998	**Senior Research Fellow**, Department of Anatomy & Developmental Biology, University College, London, UK.
1994-1997	**Non-Clinical Scientist Grade 1,** MRC Experimental Embryology & Teratology Unit, St. George's Hospital Medical School, London, UK.
1991-1994	**PhD**, Department of Medicine, University of Liverpool and Department of Dermatology, University of Newcastle, UK.

Research Funding

Amount	Investigators (**lead**)	Funding Source	Years	Funding scheme	Title
£601,373 (FEC)	**Jones KT**	Biotechnology and Biological Sciences Research Council	2014-2017	Project Grant	Mechanisms of DNA damage and repair in mature oocytes
$330 000	**Jones KT**	Australian Research Council	2012-2014	Discovery Project	The control of chromosome division during female meiosis
$600 000	**Jones KT**, Moreno S, McLaughlin E.	Australian Research Council	2011-2014	Discovery Project	Gamete-specific knockout of Fizzy-Related to examine its meiotic role in oocytes and sperm
$325 000	**Jones KT** & Stemmann O	Australian Research Council	2009-2011	Discovery Project	Elucidation of the signalling pathways during fertilization in mammals
$506 250	**Jones KT** & McLaughlin E.	National Health & Medical Research Council	2009-2011	Project Grant	The role of the Anaphase-Promoting Complex activator Cdh1 in mammalian oocytes and aneuploidy
$ 80 000	**Jones KT** & McLaughlin E.	Hunter Medical Research Institute	2009-2010	Project Grant	Aging eggs: understanding the molecular mechanisms of declining female fertility
$350 000	**McLaughlin E,** Jones KT 14 others	Australian Research Council	2010	LIEF Award	Laser microdissection microscopy system for cell and development biology
$ 29 000	**Jones KT,** 3 others.	National Health & Medical Research Council	2010	Infrastructure Grant	EM-CCD Camera for high resolution imaging
$275 000	**Jones KT,** 17 others.	Australian Research Council	2009	LIEF Award	Confocal Laser Scanning Microscopy for Live Cell Imaging
$495 000	**Aitken RJ** and 30 others (Jones KT 16th)	Australian Research Council	2009	LIEF Award	An Advanced Mass Spectrometry Facility for Applications in Proteomics and

					Organic Chemistry
$516 000	**O'Bryan M** & Jones KT	National Health & Medical Research Council	2008-2011	Project Grant	The function of gametogenetin in male fertility and embryogenesis
$ 14 700	**McLaughlin E** & Jones KT	University of Newcastle	2008	Strategic Pilot Grant	Programmed mammalian oocyte activation: the production line model of primordial follicle development
$141 970	**Jones KT**	National Health & Medical Research Council	2008	Infrastructure Grant	Olympus Fluoview FV1000-IX81 Microscope
$ 23 225	**Thorne R** and 6 others (Jones KT 7th)	National Health & Medical Research Council	2008	Infrastructure Grant	Colibri high-performance LED illumination system for fluorescence live cell microscopy
£235 887	**Jones KT**	The Wellcome Trust	2004-2007	Project Grant	The roles of the Anaphase-Promoting Complex activators Cdc20 and Cdh1 during mouse oocyte maturation, activation and early embryonic cycles
£165 571	**Jones KT**	The Wellcome Trust	2003-2005	Project Grant	Calcium-mediated cell cycle progression in mammalian eggs
£267 000	**Whitaker MJ,** Cheek TR, Jones KT and McDougall A	The Wellcome Trust	2002-2005	Equipment Grant	A multiphoton microscope for the cell signalling group
£332 248	**Whitaker MJ,** Cheek TR, Jones KT and McDougall A	The Wellcome Trust	2002	Refurbishment Grant	Refurbishment of labs for the Cell Signalling Group.
£266 036	**Jones KT**, McDougall A, & O'Sullivan A.	Biotechnology and Biological Sciences Research Council	2001-2004	Project Grant	Purification of the sperm Ca^{2+} - releasing protein in ascidiella aspersa
£203 099	**Jones KT**	The Wellcome Trust	1999-2003	Project Grant	Elucidation of the signalling pathways at mammalian fertilization

					responsible for calcium oscillations
£ 8 705	**Jones KT**	The Royal Society	1999-2000	Equipment Grant	
£229 000	**Swann K** & Jones KT	Medical Research Council	1997-2000	Project Grant	Mechanism of oocyte activation in mammals

Editorial Board Membership
Scientific Reports. Editorial Board Member (since 2013)
Molecular Human Reproduction. Associate Editor (since 2013).
Reproduction. Editorial Board Member (since 2002).
Developmental Biology. Editorial Board Member (since 2007).
Journal of Assisted Reproduction and Genetics. Editorial Board Member (2009-2012).
Human Reproduction Update. Editorial Board Member (2008-2012).
Biology of Reproduction. Board of Reviewing Editors (2005-2009).

Publications

Invited Commentaries, News & Views

1. Jones KT **(2012)** Topsy-turvy anaphase in mammalian eggs. **Current Biology** 22:R153-R155.
2. Lane SI & Jones KT **(2011)** Phosphorylation of Histone H3 in 1- and 2-cell embryos. **Cell Cycle** 10**:** 17-8.
3. Jones KT & Holt JE **(2010)** BubR1 highlights essential function of Cdh1 in mammalian oocytes. **Cell Cycle** 9: 1025-30.
4. Jones KT **(2010)** Cohesin and Cdk1: an anaphase barricade. **Nature Cell Biology** 12: 106-8.

Book Chapters

5. Holt, JE, Lane SI & Jones KT (**2013**) The control of meiotic maturation in mammalian oocytes. In, **Current Topics in Developmental Biology**: Gametogenesis (Ed, P Wassarman). Volume 102, Chapter 7 pp207-26. Elsevier, Oxford UK.
6. Holt, JE, Lane SI & **Jones KT** (**2013**) Time-Lapse Epi-Fluorescence Imaging of Expressed cRNA to Cyclin B1 for Studying Meiosis I in Mouse Oocytes. In, **Methods in Molecular Biology (**Ed, H. Homer**)** Volume 957, Chapter 6, pp957-106. Springer, London, UK.
7. Jones KT, Lane S**I** & Holt, JE (**2013**) Start and stop signals of oocyte meiotic maturation. In, **Oogenesis** (Eds, G. Coticchio, D. Albertini, L. De Santis). Chapter 13 pp 183-194. Springer, London UK.
8. Jones KT **(2011)** Anaphase-Promoting Complex control in female mouse meiosis. In: **Cell Cycle in Development** (Ed JZ Kubiak). Series: Results and Problems in Cell Differentiation, Volume 53, pp343-363. Springer.
9. Swann K & Jones KT **(2002)** Membrane events in egg activation. In: **Fertilization** (D Hardy ed) Chapter 10 pp319-346. Academic Press, Orlando.

Review Articles

10. Jones KT & Lane SI (**2013**) Molecular causes of aneuploidy in mammalian eggs. **Development** 140: 3719-3730.
11. Jones KT & Lane SI **(2012)** Chromosomal, metabolic, environmental, and hormonal origins of aneuploidy in mammalian oocytes. **Experimental Cell Research** 318: 1394-1399.
12. Aitken RJ, Jones KT & Robertson SA **(2012)** Reactive Oxygen Species and Sperm Function--in Sickness and in Health. **Journal of Andrology** 33: 1096-1106.
13. Holt JE & Jones KT **(2009)** Control of chromosome division in the mammalian oocyte. **Molecular Human Reproduction** 15: 139-147.
14. Jones KT **(2008)** Meiosis in oocytes: predisposition to aneuploidy and its increased incidence with age. **Human Reproduction Update** 14:143-58.
15. Jones KT **(2007)** Intracellular calcium in the fertilization and development of mammalian eggs. **Clinical and Experimental Pharmacology and Physiology** 34:1084-9.
16. Madgwick S & Jones KT **(2007)** How eggs arrest at metaphase II: MPF stabilisation plus APC/C inhibition equals Cytostatic Factor. **Cell Division** 2:4 (1-7).
17. Jones KT **(2005)** Mammalian egg activation: from Ca^{2+} spiking to cell cycle progression. **Reproduction** 130:813-23. Meiosis Focus Issue. Invited Review.
18. Jones KT **(2004)** Turning it on and off: M-Phase Promoting Factor during meiotic maturation and fertilization. **Molecular Human Reproduction** 10:1-5.
19. Swann K, Parrington J & Jones KT **(2001)** Potential role of a sperm-derived phospholipase C in triggering the egg-activating Ca^{2+} signal at fertilization. **Reproduction** 122:839-46.
20. Nixon VL, McDougall A & Jones KT **(2000)** Ca^{2+} oscillations and the cell cycle at fertilisation of mammalian and ascidian eggs. **Biology of the Cell** 92:187-96. Fertilization Focus Issue.
21. Swann K, Parrington J & Jones KT **(1998)** On the search for the sperm oscillogen. **Molecular Human Reproduction** 4:1010-2. Invited Review.
22. Jones KT **(1998)** Ca^{2+} oscillations in the activation of the egg and development of the embryo in mammals. **International Journal of Developmental Biology** 42:1-10.
23. Jones KT **(1998)** Protein kinase C action at fertilization: overstated or undervalued? **Reviews of Reproduction** 3:7-12.
24. Carroll J, Jones KT & Whittingham DG **(1996)** The development of Ca^{2+} release mechanisms during oocyte maturation. **Reviews of Reproduction** 1:137-43.

Research Articles

1. Lane SIR & Jones KT (**2014**) Non-canonical function of spindle assembly checkpoint proteins after APC activation reduces aneuploidy in mouse oocytes. **Nature Communications**, 5:3444.
2. Holt JE, Pye V, Boon E, Stewart JL, García-Higuera I, Moreno S, Rodríguez R, Jones KT & McLaughlin EA (**2014**) The APC/C activator FZR1 is essential for meiotic prophase I in mice. **Development**, 141:1354-65.

3. Yun Y, Lane SIR & Jones KT (**2014**) Premature dyad separation in meiosis II is the major segregation error with maternal age in mouse oocytes. **Development**, 141:191-208.
4. Jamsai D, O'Connor A, DeBoer KD, Smith SJ, Clark B, Browne CM, Merriman JA, Yuen WS, Koopman P, Jones KT & O'Bryan MK **(2013)** Loss of GGN leads to pre-implantation embryonic lethality and compromised male meiotic DNA double strand break repair in the mouse. **PLoSOne** 8(2): e56955.
5. Merriman JA, Lane SIR, Holt JE, Jennings PC, García-Higuera I, Moreno S, McLaughlin EA & Jones KT **(2013)** Reduced chromosome cohesion measured by interkinetochore distance is associated with aneuploidy even in oocytes from young mice. **Biology of Reproduction** 88(2):31.
6. Lord T, Nixon B, Jones KT, Aitken RJ. (**2013**) Melatonin prevents post-ovulatory oocyte aging in the mouse and extends the window for optimal fertilization in vitro. **Biology of Reproduction** 88(3):67.
7. Seah MKY, Holt JE, García-Higuera I, Moreno S & Jones KT **(2012)** The APC activator FZR1 is needed for preimplantation mouse embryo development. **Journal of Cell Science** 125:6030-7.
8. Holt JE, Lane SIR, Jennings P, García-Higuera I, Moreno S & Jones KT (**2012**) APC^{FZR1} prevents non-disjunction in mouse oocytes by controlling meiotic spindle assembly timing. **Molecular Biology of the Cell** 23:3970-81.
9. Yuen WS, Merriman JA, O'Bryan MK & Jones KT (**2012**) DNA double strand breaks but not interstrand crosslinks prevent progress through meiosis in fully grown mammalian oocytes. **PLoSOne** 7(8): e43875.
10. Lane SI, Yun Y & Jones KT **(2012)** Timing of anaphase-promoting complex activation in mouse oocytes is predicted by microtubule-kinetochore attachment but not by bivalent alignment or tension. **Development** 139:1947-55.
11. Merriman JA, Jennings PC, McLaughlin EA & Jones KT **(2012)** Effect of aging on superovulation efficiency, aneuploidy rates, and sister chromatid cohesion in mice aged up to 15-months. **Biology of Reproduction** 86(49):1-6.
12. Liu W, Yin J, Zhao G, Yun Y, Wu S, Jones KT & Lei A **(2012)** Differential regulation of cyclin B1 degradation between the first and second meiotic divisions of bovine oocytes. **Theriogenology** 78:1171-81.
13. Chang HY, Jennings PC, Weaver J, Verrills NM & Jones KT **(2011)** Essential role of protein phosphatase 2A in metaphase II arrest and activation of mouse eggs shown by okadaic acid, dominant negative PP2A and FTY720. **Journal of Biological Chemistry** 286:14705-12.
14. Holt JE, Tran SMT, Stewart JL, Minahan K, García-Higuera I, Moreno S & Jones KT **(2011)** The APC/C activator FZR1 co-ordinates the timing of meiotic resumption during prophase I arrest in mammalian oocytes. **Development** 138:905-13.
15. Jennings PC, Merriman JA, Beckett EL, Hansbro PM & Jones KT **(2011)** Increased zona pellucida thickness and meiotic spindle disruption in oocytes from cigarette smoking mice. **Human Reproduction** 26:878-84.
16. Jamsai D, Sarraj MA, Merriner DJ, Drummond AE, Jones KT, McLachlan RI & O'Bryan MK **(2011)** GGN1 in the testis and ovary and its variance within the Australian fertile and infertile male population, **International Journal of Andrology** 34:624–32.

17. Lane SI, Chang HY, Jennings PC & Jones KT **(2010)** The Aurora kinase inhibitor ZM447439 accelerates first meiosis in mouse oocytes by overriding the spindle assembly checkpoint. **Reproduction** 140:521–30.
18. Holt JE, Weaver J & Jones KT **(2010)** Spatial regulation of APC^{Cdh1} induced cyclin B1 degradation maintains G2 arrest in mouse oocytes. **Development** 137:1297-304.
19. Chang HY, Minahan K, Merriman JA & Jones KT **(2009)** Calmodulin-dependent protein kinase gamma3(γ3) mediates the cell cycle resumption of metaphase II eggs in mouse. **Development** 136:4077-81.
20. Nabti I, Reis A, Levasseur M, Stemmann O & Jones KT **(2008)** Securin and not CDK1 regulates sister chromatid disjunction during meiosis II in mouse eggs. **Developmental Biology** 321:379-86.
21. Reis A, Madgwick S, Chang HY, Nabti I, Levasseur M & Jones KT **(2007)** Prometaphase APC^{cdh1} activity prevents non-disjunction in mammalian oocytes. **Nature Cell Biology** 9:1192-8.
22. Jones KT & Swann K **(2007)** Composition of sea urchin egg homogenate determines its potency to inositol trisphosphate and cyclic ADPRibose induced Ca^{2+} release. **Biochemical & Biophysical Research Communications** 360:815-20.
23. Gardner AJ, Knott JG, Jones KT & Evans JP **(2007)** CaMKII can participate in but is not sufficient for the establishment of the membrane block to polyspermy in mouse eggs. **Journal of Cell Physiology** 212:275-80.
24. Levasseur M, Carroll M, Jones KT & McDougall A **(2007)** A novel mechanism controls the Ca^{2+} oscillations triggered by activation of ascidian eggs and has an absolute requirement for CDK1 activity. **Journal of Cell Science** 120:1763-71.
25. Madgwick S, Hansen DV, Levasseur M, Jackson PK & Jones KT **(2006)** Mouse Emi2 is required to enter meiosis II by reestablishing cyclin B1 during interkinesis **Journal of Cell Biology** 174:791-801.
26. Gorr IH, Reis A, Boos D, Wuhr M, Madgwick S, Jones KT[1] & Stemmann O[1] **(2006)** Essential CDK1-inhibitory role for separase during meiosis I in vertebrate oocytes. **Nature Cell Biology** 8:1035-7 ([1]joint communicating authors).
27. Reis A, Chang HY, Levasseur M & Jones KT **(2006)** APC^{cdh1} activity in mouse oocytes prevents entry into the first meiotic division. **Nature Cell Biology** 8:539-40.
28. Reis A, Levasseur M, Chang HY, Elliott DJ & Jones KT **(2006)** The CRY box: a second APC^{cdh1} -dependent degron in mammalian cdc20. **EMBO Reports** 7:1040-5.
29. Knott JG, Gardner AJ, Madgwick S, Jones KT, Williams CJ & Schultz RM **(2006)** Calmodulin-dependent protein kinase II triggers mouse egg activation and embryo development in the absence of Ca^{2+} oscillations. **Developmental Biology** 296:388-95.
30. Madgwick S, Levasseur M & Jones KT **(2005)** Calmodulin-dependent protein kinase II, and not protein kinase C, is sufficient for triggering cell-cycle resumption in mammalian eggs. **Journal of Cell Science** 118:3849-59.
31. Coward K, Ponting CP, Chang HY, Hibbitt O, Savolainen P, Jones KT & Parrington J **(2005)** Phospholipase C zeta, the trigger of egg activation in mammals, is present in a non-mammalian species. **Reproduction** 130:157-63.

32. Chang HY, Levasseur M, & Jones KT **(2004)** Degradation of APC^{cdc20} and APC^{cdh1} substrates during the second meiotic division in mouse eggs. **Journal of Cell Science** 117:6289-96. (cover illustration of this article)
33. Madgwick S, Nixon VL, Chang HY, Herbert M, Levasseur M & Jones KT (**2004**) Maintenance of sister chromatid attachment in mouse eggs through Maturation-Promoting Factor activity. **Developmental Biology** 275:68-81.
34. Venables JP, Dalgliesh C, Skitt L, Paronetto MP, Skitt L, Thornton JK, Saunders PT, Sette C, Jones KT & Elliott DJ **(2004)** SIAH1 targets the alternative splicing factor T-STAR for degradation by the proteasome. **Human Molecular Genetics** 13:1525-34.
35. Hyslop LA, Nixon VL, Levasseur M, Chapman F, Chiba K, McDougall A, Venables JP, Elliott DJ & Jones KT **(2004)** Ca^{2+}-promoted cyclin B1 degradation in mouse oocytes requires the establishment of a metaphase arrest. **Developmental Biology** 269:206-19.
36. Carroll M, Levasseur M, Wood C, Whitaker, M, Jones KT & McDougall A **(2003)** Exploring the mechanism of the sperm-triggered calcium wave pacemaker in ascidian zygotes. **Journal of Cell Science** 116:4997-5004.
37. Soeller C, Jacobs MD, Donaldson PJ, Cannell MB, Jones KT & Ellis-Davies GCR **(2003)** Application of two-photon flash photolysis to reveal intercellular communication and intracellular Ca^{2+} movements. **Journal of Biomedical Optics** 8:418-27.
38. Nixon VL, Levasseur M, McDougall A & Jones KT (**2002**) Ca^{2+} oscillations promote APC/C-dependent cyclin B1 degradation during metaphase arrest and completion of meiosis in fertilizing mouse eggs. **Current Biology** 12:746-50.
39. Hyslop LA, Carroll M, Nixon VL, McDougall A & Jones KT **(2001)** Simultaneous measurement of intracellular nitric oxide and free calcium levels in chordate eggs demonstrates that nitric oxide has no role at fertilization. **Developmental Biology** 234:216-30.
40. Rice A, Parrington J, Jones KT & Swann K **(2000)** Mammalian sperm contain a Ca^{2+} -sensitive phospholipase C activity that can generate $InsP_3$ from PIP_2 associated with intracellular organelles. **Developmental Biology** 228:125-35.
41. McDougall A, Levasseur M, O'Sullivan AJ & Jones KT **(2000)** Cell cycle-dependent repetitive Ca^{2+} waves induced by a cytosolic sperm extract in mature ascidian eggs mimic those observed at fertilization. **Journal of Cell Science** 113:3453-62.
42. Jones KT & Nixon, VL **(2000)** Sperm-induced Ca^{2+} oscillations in mouse oocytes and eggs can be mimicked by photolysis of caged inositol 1,4,5-trisphosphate: evidence to support a continuous low level production of inositol 1,4,5-trisphosphate during mammalian fertilization. **Developmental Biology** 225:1-12.
43. Stricker SA, Swann K, Jones KT & Fissore RA **(2000)** Injections of porcine extracts trigger fertilization-like calcium oscillations in oocytes of a marine worm. **Experimental Cell Research** 257:341-7.
44. Jones KT, Matsuda M, Parrington J, Katan M & Swann K **(2000)** Different Ca^{2+} releasing abilities of sperm extracts compared with tissue extracts and phospholipase C isoforms in sea urchin egg homogenate and mouse eggs. **Biochemical Journal** 346:743-9.
45. Parrington J, Jones KT, Lai A & Swann K **(1999)** The soluble sperm factor that causes Ca^{2+} release from sea-urchin (Lytechinus pictus) egg homogenates

also triggers Ca^{2+} oscillations after injection into mouse eggs. **Biochemical Journal** 341:1-4.

46. Jones KT, Cruttwell C, Parrington J & Swann K **(1998)** A mammalian sperm cytosolic phospholipase C activity generates inositol trisphosphate and causes Ca^{2+} release in sea urchin egg homogenates. **FEBS Letters** 437:297-300.
47. Jones KT, Soeller C & Cannell MB **(1998)** The passage of Ca^{2+} and fluorescent markers between the sperm and egg after fusion in the mouse. **Development** 125:4627-35.
48. Galione A, Jones KT, Lai FA & Swann K **(1997)** A cytosolic sperm protein factor mobilizes Ca^{2+} from intracellular stores by activating multiple Ca^{2+} release mechanisms independently of low molecular weight messengers. **Journal of Biological Chemistry** 272:28901-5.
49. Gangeswaran R & Jones KT **(1997)** Unique protein kinase C profile in mouse oocytes: lack of calcium-dependent conventional isoforms suggested by rtPCR and Western blotting. **FEBS Letters** 412:309-12.
50. Bos-Mikich A, Whittingham DG & Jones KT **(1997)** Meiotic and mitotic Ca^{2+} oscillations affect cell composition in resulting blastocysts. **Developmental Biology** 182:172-9.
51. Jones KT & Whittingham DG **(1996)** A comparison of sperm- and IP_3-induced Ca^{2+} release in activated and aging mouse oocytes. **Developmental Biology** 178:229-37.
52. Kono T, Jones KT, Bos-Mikich A, Whittingham DG & Carroll J **(1996)** A cell cycle-associated change in Ca^{2+} releasing activity leads to the generation of Ca^{2+} transients in mouse embryos during the first mitotic division. **Journal of Cell Biology** 132:915-23.
53. Jones KT, Carroll J & Whittingham DG **(1995)** Ionomycin, thapsigargin, ryanodine, and sperm induced Ca^{2+} release increase during meiotic maturation of mouse oocytes. **Journal of Biological Chemistry** 270:6671-7.
54. Jones KT, Carroll J, Merriman JA, Whittingham DG & Kono T **(1995)** Repetitive sperm-induced Ca^{2+} transients in mouse oocytes are cell cycle dependent. **Development** 121:3259-66.
55. Carsberg CJ, Jones KT, Sharpe GR & Friedmann PS **(1995)** Intracellular calcium modulates the responses of human melanocytes to melanogenic stimuli. **Journal of Dermatological Sciences** 9:157-64.
56. McGovern UB, Jones KT & Sharpe GR **(1995)** Intracellular calcium as a second messenger following growth stimulation of human keratinocytes. **British Journal of Dermatology** 132:892-6.
57. Jones KT & Sharpe GR **(1994)** Staurosporine, a non-specific PKC inhibitor, induces keratinocyte differentiation and raises intracellular calcium, but Ro31-8220, a specific inhibitor, does not. **Journal of Cell Physiology** 159:324-30.
58. Jones KT & Sharpe GR **(1994)** Thapsigargin raises intracellular free calcium levels in human keratinocytes and inhibits the coordinated expression of differentiation markers. **Experimental Cell Research** 210:71-6.
59. Jones KT & Sharpe GR **(1994)** Ni^{2+} blocks the Ca^{2+} influx in human keratinocytes following a rise in extracellular Ca^{2+}. **Experimental Cell Research** 212:409-13.
60. Jones KT & Sharpe GR **(1994)** Intracellular free calcium and growth changes in single human keratinocytes in response to vitamin D and five 20-epi-analogues. **Archives of Dermatological Research** 286:123-9.

61. Jones KT & Sharpe GR **(1994)** Proliferating cell nuclear antigen decreases in normal human keratinocytes with differentiation stimuli but not in an HPV immortalised cell line. **Acta Dermatologica Venereoligica** 74:241-4.