

## CURRICULUM VITAE

**Name:** Brian Dale

**Qualifications:** B.Sc., M.Sc., Ph. D., D.Sc., FRCPath., FRSB.

**Position:** Director and Owner  
Centre for Assisted Fertilization  
Naples

**Date of Birth:** 31/8/1951

**Place of Birth:** Stockport, England

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## UNIVERSITY EDUCATION

B.Sc. 1st Class Honours Zoology	University of Manchester	1972
M.Sc. in Zoology	University of Manchester	1973
Ph.D. in Cell Biology	University of Manchester	1979
D.Sc. in Science	University of Manchester	1990

## CAREER

1977-1981 Post-doctoral fellow of the Royal Society and EMBO, Stazione Zoologica, Naples.

1983-1984 Visiting Scientist, National Institute of Health, Bethesda, U.S.A.

1992 Visiting Professor, Dept of Anatomy and Human Biology, University of W.Australia.

1993-1999 Director of Research at the Stazione Zoologica, Naples.

1994-present Scientific Director to:  
International Hospital, Istanbul, Turkey  
Saudi German Hospital, Jeddah, Saudi Arabia.  
IVF centre, Schaffhausen, Switzerland.  
IVF centre, St Gallen, Switzerland.  
IVF centre, Castelfranco-Veneto, Italy.  
Centre for Reproductive Biology, Naples and Rome, Italy  
International Fertility Associates Ltd.

## GRANTS

- 1984-1990 Project Coordinator-NATO Grant's for collaborative research no's 668/84, (30)0255/88 and CRG910025
- 1985 Co-principal investigator-N.I.H. Grant no. HD 19770-01AI
- 1981-1985 Fellowships, Browne Research Fund (Royal Society, UK).
- 1989 Project co-ordinator, Grant from Ares Serono to study early human development.
- 1989 Collaborator, Monbusho International Research Grant from the Japanese Ministry of Education Culture and Science.
- 1994-1998 Associated Contractor for EEC Human Capital and Mobility Grant no. ERB4050PL941173.

## **POSITIONS**

- 1992 Scientific Advisor to the Reproductive Technology Council of Western Australia.
- 1993-present Founder and Editor-in Chief of ZYGOTE an International Developmental Biology Journal published by Cambridge University Press.
- 1994-2000 Founder Member and Executive Committee member of Alpha, an International Society for Embryologists.
- 1994-98 Member of the Advisory Committee of the European Society for Human Reproduction and Embryology.
- 1995 Member of Regional Committee for IVF, Campania, Italy.
- 1998 Fellow of the Royal Society of Biology, London.
- 2010 Fellow of the Royal College of Pathologists, London

## **SCIENTIFIC PRODUCTIVITY 1973-2016**

Peer Reviewed Scientific papers –140

Books – 9

Patents - 3

Cecchi MD, Cohen J, Dale B: Filtering system and method for incubators.

United States Patent 6,013,119. Jan 11, 2000.

Cecchi MD, Cohen J, Dale B: Volatile organic compound and particulate filter assembly for purifying a gas stream.

United States Patent 6, 200, 362 B1, March 16, 2001.

Cecchi MD, Cohen J, Dale B: Connection device for connecting a filtering system to an incubator.

United States Patent 6, 225, 110, B1, May 1, 2001.

## **PUBLICATIONS**

- Dale, B. (1973)- Blood pressure and its hydraulic functions in *Helix pomatia* L. *J. exp. Biol.*, 59 : 477-490.
- Dale, B. (1974a) – The eco-physiological significance of the circulatory mechanics of *Lymnaea stagnalis* L. *Comp. Biochem. Physiol.* 47A : 1105-1113.
- Dale, B. (1974b) – Extrusion, retraction and respiratory movements in *Helix pomatia* in relation to distribution and circulation of the blood. *J.Zool., Lond.* 173 : 427-439.
- Dale, B. Denis-Donini, S. DeSantis, R., Monroy A and Taglietti, V. (1978) Sperm-egg interactions in the ascidians. *Biol. Cellulaire* 32: 129-133.
- Dale, B., De Felice, L.J. and Taglietti, V. (1978) – Membrane Noise and conductance increase during single spermatozoon-egg interactions. *Nature. Lond.* 275 : 217-219.
- Dale, B. (1979) – Radiation response of an intraspecific somatic cell hybrid (L5178Y, X-ray resistant line X L5178Y, X-ray sensitive line). *Radiat. Res.* 79 : 338-348.
- De Felice, L.J. and Dale, B. (1979) – Voltage response to Fertilization and Polyspermy in Sea Urchin Eggs and Oocytes. *Develop. Biol.* 72 : 327-341.
- Dale, B., De Santis A., and Hoshi, M. (1979) – Membrane response to 1-methyl-adenine requires the presence of the nucleus. *Nature Lond.* 282 : 89-90.
- Dale, B. and Monroy, A. (1981) – How is polyspermy prevented; a critical review. *Gamete Res.* 4: 151-169.
- Dale, B. and De Santis A. (1981a) – The effect of cytochalasin b and d on the fertilization of sea urchins. *Develop. Biol.* 83: 232-237.
- Dale, B. and De Santis A: (1981b) – Maturation and fertilization of the sea urchin oocyte: an electrophysiological study. *Develop. Biol.* 85: 474-484.
- Dale, B., Dan-Sohkawa, M., De Santis, A. and Hoshi, M. (1981) – Fertilization of the starfish *Astropecten aurantiacus*. *Exp. Cell. Res.* 132 : 505-510.
- Dale, B., De Santis A. and Hagstrom, B.E. (1982) – The effect of nicotine on sperm-egg interaction in the sea urchin; polyspermy and electrical events. *Gamete Res.* 5: 125 – 135.
- Dale, B., De Santis A., Ortolani G., Rasotto M. and Santella L. (1982) – Electrical coupling of blastomeres in early embryos of ascidians and sea urchins. *Exp. Cell Res.* 140: 457-461.
- Dale, B., De Santis A. and Ortolani G., (1983) – Electrical response to fertilization in ascidian oocytes. *Develop. Biol.* 99, 188-193.

- Dale, B. and De Felice, L.J. (1984) – Sperm activated channels in ascidian oocytes. *Develop. Biol.* 101 : 235-239.
- Monroy, A., Rosati, F. and Dale, B. (1984) – Sperm-egg interaction. *Boll. Zool.* 51; 103-119.
- Dale, B.(1994) – Book Review. “Mechanism and Control of Animal Fertilization”, Ed. J.F. Hartmann. *Quart.Rev.Biol.* 59; 177-178
- Dale, B. and Russo, P. (1984) – Electrical response to fertilization in starfish eggs and oocytes. *Cell.Biol.Int.Rep.* 8 : 1015.
- Dale, B., De Felice, L.J. and Ehrenstein, G. (1985) – Injection of a soluble sperm fraction into sea urchin eggs triggers the cortical reaction. *Experientia* 41 : 1068-1070.
- Dale, B. and Santella, L. (1985) – Sperm – oocyte interaction in the sea urchin. *J. Cell Sci.* 74 : 153-167.
- Dale, B. (1985) – Sperm receptivity in sea urchin oocytes and eggs. *J.Exp.Biol.* 118: 85-97.
- Talevi, R., Dale, B., and Campanella, C. (1985) – Fertilization and activation potentials in *Discoglossus pictus* (Anura) eggs: A delayed response to activation by pricking. *Develop.Biol.* 111: 316-323.
- Talevi, R. and Dale, B. (1986) – Electrical characteristics of Ascidian egg fragments. *Exp. Cell. Res.* 162 : 539-543.
- De Felice, L., Dale, B. and Talevi, R. (1986) – Distribution of fertilization channels in ascidian oocyte membranes. *Proc.R.Soc. Lond. B.* 229: 209-214.
- Ciccarelli, C., Russo, P., De Santis, A. and Dale B. (1987) – pH in the jelly layer of starfish oocytes. *Develop. Growth Differ.* 29: 257-261
- Dale, B. (1987) – Mechanism of Fertilization. *Nature Lond.* 325; 762-763
- Dale, B. (1987) – Fertilization channels in ascidian eggs are not activated by Ca. *Exp. Cell. Res.* 172: 474-480.
- De Santis, A., Ciccarelli, C. and Dale, B. (1987) – Free cations in echinoderm oocytes and eggs. *Eur. Biophysics Journal* 14: 471-476.
- Dale, B. and Russo, P. (1988) – Sulfhydryl groups are involved in the activation of sea urchin eggs. *Gamete Res.* 19 : 161-168.
- Dale, B. (1988) – Primary and secondary messengers in the activation of ascidian eggs. *Exp. Cell Res.* 177 : 205-211.
- Dale, B. and Talevi, R. (1989) – Distribution of ion channels in ascidian eggs and zygotes. *Exp. Cell. Res.* 181 : 238-244.

Dale, B., Hagstrom, B. and Santella, L. (1989) – Partially fertilized sea urchin eggs: An electrophysiological and morphological study. *Develop. Growth Differ.* 31: 165-170.

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Marthy, J. and Dale, B. (1989) – Dye-coupling in the early squid embryo. *Rouxs Archivs. Dev Biol.* 198: 211-218.

Dale, B. (1990) – Fertilization in aquatic animals. In “*Experimental Embryology in aquatic plants and animals* “. Ed H.J. Marthy, *Nato ASI Series A: Life Sciences Vol. 195*, Plenum, New York.

Dale, B. and De Felice L. (1990) – Soluble sperm factors, electrical events and egg activation. In “*Mechanism of Fertilization: Plants to Humans* “. Ed B. Dale, *Nato ASI Cell Biology Series H. Vol 45*. Springer Verlag, Heidelberg.

Brownlee, C. and Dale, B. (1990) – Temporal and spatial correlation of fertilization current, calcium waves and cytoplasmic contraction in eggs of *Ciona Intestinalis*. *Proc. R. Soc. Lond.* 239 : 321-328.

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Dale, B., De Felice, L. and Talevi, R. (1991). – L-type calcium currents in ascidian eggs. *Exp. Cell Res.* 192:302-306

Dale, B., Santella, L., and Tosti, E. (1991).- Gap junctional permeability in early and cleavage arrested ascidian embryos. *Development* 112: 153-160.

Dale, B., Gualtieri, R., Talevi, R., Tosti, E., Santella, L. and Elder, K. (1991) – Intercellular communication in the early human embryo. *Mol. Reprod. Develop.* 29: 22-28.

Tosti, A and Dale, B. (1992) Lithium and phorbol ester modify the activating capacity of ascidian spermatozoa. *Experientia*, 48, 57-60.

Gualtieri, R., Santella, L. and Dale B. (1992). Tight junctions and cavitation in the human pre-embryo. *Molec. Rprod. Develop.* 32:81-87.

Santella, L., Alikani, M., Talansky, B.E., Cohen, J., and Dale, B.(1992). Is the human oocyte plasma membrane polarized? *Human Rprod.* 7: 999-1003.

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Gianaroli, L. Tosti, E., Magli, C., Iaccarino, M., Ferraretti, A. and Dale, B. (1994). The Fertilization Current in the Human Oocyte. *Molec. Reprod. Develop.* 38, 209-214.

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Dale, B., Tosti, E., and Iaccarino, M. (1995). Is the plasma membrane of the human oocyte re-organized following fertilization and early cleavage. *Zygote.* 3, 31-37.

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Dale, B., Monfrecola, V., Fortunato, A. and Tosti, E. (1996). A soluble sperm factor gates calcium activated K<sup>+</sup> channels in human oocytes. *J. Assist. Reprod. Genetics.* 13, 573-577.

Gianaroli, L., Magli, C., Ferraretti, A., Fiorentino, A., Panzella, S., Tosti, E., and Dale, B. (1996). Reducing the time of sperm-oocyte interaction in human IVF improves the implantation rate. (*Human Reproduction.* 11, 166-171).

Dailey, T., Dale, B., Cohen, J. and Munne', S. (1996). Association between Nondisjunction and Maternal Age in Meiosis II Human Oocytes. *Am. J. Hum. Genet* 59, 176-184.

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Grumetto, L., Wilding, M., De Simone, M. L., Tosti, E., Galione, A. and Dale, B. (1997). Nitric oxide triggers the fertilisation current in ascidian. *Biochem, Biophys. Res. Comm.* 239, 723-728.

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Menezo Y and Dale, B (1998) Mammalian embryo quality: is it possible to estimate it and when? *J. Assisted Reprod. Gen* 15, 458-460.

Menezo Y. Hamamah, S Hazout, A and Dale, B. (1998) Time to switch from co-culture to sequential defined media for transfer at the blastocyst stage. *Human reprod.* 13, 2043-2044.

Wilding, M., Menezo, Y., Cohen, J. And Dale, B. (1998). Regulation of intracellular pH in mammalian preimplantation embryos. *Ass. Reprod. Rev*

Wilding, M., Russo, G.L., Marino M., Grumetto L. DeSimone M., Tosti, E and Dale, B. (1998) Activation of *Ciona intestinalis* at fertilization is controlled by nicotinamide nucleotide metabolism. In "New developments in Marine Biotechnology" (Eds LeGal and Halvorson) Plenum Press, New York. Pp121-123.

Russo, G.L., Kyojuka, K., Marino M., Tosti, E, Wilding, M. DeSimone, M and Dale, B. (1998) Meiotic cell cycle control by mos in ascidian oocytes. In "New developments in Marine Biotechnology" (Eds LeGal and Halvorson) Plenum Press, New York. Pp121-123.

De Simone, M.L., Grumetto, L., Tosti, E., Wilding, M. and Dale, B. (1998). Non-specific currents at fertilization in sea urchin eggs. *Zygote* 6, 11-15

Wilding, M., and Dale, B. (1998). Soluble extracts from ascidian spermatozoa trigger intracellular calcium release independently of the activation of the ADP ribose channel. *Zygote* 6, 149-154.

Wilding, M., Russo, G.L., Marino, M., Dale, B., and Galione, A. (1998). ADP ribose gates the fertilization current in ascidian oocytes. *Am. J. Physiol.* 275, C1277-C1283

Dale, B., Menezo, Y., Cohen, J., Di Matteo, L. and Wilding, M. (1998). Intracellular pH regulation in the human oocyte. *Hum. Reprod.* 13, 964-970.

Dale, B., Marino, M. and Wilding, M. (1999). Sperm-induced calcium oscillations. *Mol. Hum. Reprod.* 5,1-4.

Dale, B., Fiorentino, A., DeStefano, R., DiMatteo, L., Wilding, M. and Zullo, F. (1999). Pregnancies after activated oocyte transfer: a new alternative for infertility treatment. *Human Reproduction.* 14, 1771-1772.

Dale, B., Di Matteo, L., Marino, M., Russo, G. and Wilding, M. (1999). Soluble sperm activating factors. In "The Male Gamete: From Basic Knowledge to Clinical Applications". Cache River Press. IL, USA

Boni, R. Tosti, E., Roviello, S and Dale, B (1999) Intercellular communication in in vivo and in vitro produced bovine embryos. *Biology of Reproduction.* 61, 1050-1055.

Yazaki, I, Dale, B and Tosti, E. (1999). Functional gap junctions in the Early Sea Urchin Embryo are localised to the vegetal pole. *Developmental Biology.* 212, 508-510.

Dale, B., Marino, M. and Wilding M (1999). The Ins and Outs of Meiosis. *J. Exp. Zool.* 285, 226-236.

Marino, M., Wilding, M. and Dale, B. (2000). Interaction of cell cycle kinases, microtubules and chromatin in ascidian oocytes during meiosis. *Molec.Reprod. Develop.* 56, 155-162.

Wilding, M., Marino, M., Monfrecola, V. Dale, B. (2000). Meiosis associated calcium waves in ascidian oocytes are correlated with the position of the male centrosome. *Zygote*, 8, 285-293.

Wilding, M. Dale, B. Marino, M. DiMatteo, L. Alviggi, G. DePlacido, G. (2001). Mitochondrial Aggregation patterns and activity in human oocytes and pre-implantation embryos. *Human Reproduction*, 16, 909-917.

Dale, B. Wilding M., Botta, G, Marino, M., DiMatteo, L., DePlacido, G., Izzo, A. (2001) Pregnancy after cytoplasmic transfer to reduce embryo fragmentation in a couple suffering from idiopathic infertility. *Human Reproduction* ,16, 1469-1472.

Wilding, M., Carotenuto, R., Infante, V, Dale, B., Marino, M., DiMatteo, L., Campanella, C. (2001). Confocal microscopy analysis of the activity of mitochondria contained within the mitochondrial cloud during oogenesis in *Xenopus laevis*. *Zygote* 9, 347-352.

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Dale, B., Wilding, M., DiMatteo L. and Zullo F. (2002). Case Report. Absence of sperm sex chromosome aneuploidies in an XO/XY male. *Fertility and Sterility*, 78, 634-636.

Dale, B., Fiorentino, A., DeSimone, M., DiMatteo, L., Marino, M., Wilding, M., Fehr, P., Bassan E., Maselli, M., Cappiello, F., Zullo, F. (2002). Zygote versus embryo transfer: a prospective randomised multicentre trial. (*J Ass. Reprod. and Genetics* ., 19, 456-461.

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Wilding, M., Di Matteo, L. and Dale, B. (2005). The maternal age effect in human assisted reproduction: a hypothesis based on oocyte metabolism. *Zygote* 13, 317-323.

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Dale, B., DiMatteo, L., Wilding, M. (2007). Mitochondria in Reproduction: Future assays for embryo selection. in "Human Preimplantation Embryo Selection" Eds Elder Kay and Cohen Jacques. pp 275-285. Informa Healthcare.

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## **Autocertificazione su Documentazione Esibita**

Il sottoscritto Professor Brian Dale, nato a Stockport, Inghilterra il 31/08/1951 residente in Sorrento, NA, in Via Rota 43, codice fiscale DLABRN51M31Z114H laureato in Biologia in 1973 ricevendo il Master in 1973, il Dottorato in Biologia in 1976 e il D.Sc. in 1990 (Università, UK).

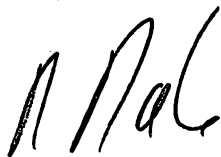
Sono Fellow del Istituto di Biologi Inglese dal 1998 e Fellow della Royal Società di Patologia di Londra dal 2010 e sono iscritto al Albo di biologi italiana dal 06/11/2003 con N. 053408

Ai sensi della Legge del DPR 20/10/1998 n 403, altresì consapevole che ai sensi del Art 26 Legge 4/1/1968 No 15, le dichiarazioni mendaci, la falsità negli atti e l'uso di atti falsi sono puniti ai sensi del codice penale e delle Leggi in materia.

### **Dichiara**

Che tutta la documentazione inerente i titoli professionali, le abilitazioni conseguite e le certificazioni esibite, curriculum vitae, prodotta in copia ed allegate alla presente sono conforme agli originale in suo possesso. Allega al'uopo copia documento di riconoscimento.

In fede



Prof Brian Dale

Biologo



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To certify that

*Brian Dale*

has been admitted as a

*Fellow*

by resolution of the Council and  
is entitled to employ the designation  
**Chartered Biologist**

Membership Number 4006093

Honorary Secretary

Election Date 24<sup>th</sup> June 1998

Registered Charity Number 277981



# Ordine Nazionale dei Biologi

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ROMA, 6/11/03

DR. DALE

ELOT. 00370/03

BRIAN

VIA FUORIPIZZA, 50

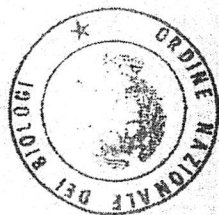
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IL CONSIGLIERE SEGRETARIO  
(DR. ERMANNO CALCATELLI)

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