

## **Prof Jamie Davies**

### **Selected publications**

#### **2011**

Ganeva V, Unbekandt M, Davies JA (2011) An improved kidney dissociation and reaggregation culture system results in nephrons arranged organotypically around a single collecting duct system. *Organogenesis* 7:83-87.

#### **2010**

Lee WC, Hough MT, Liu WJ, Ekiert R, Lindstrom NO, Hohenstein P, Davies JA  
Dact2 is expressed in the developing ureteric bud/collecting duct system of the kidney and controls morphogenetic behavior of collecting duct cells. *American Journal of Physiology-Renal Physiology* 299:F740-F751.

Siegel N, Rosner M, Unbekandt M, Fuchs C, Slabina N, Dolznig H, Davies JA, Lubec G, Hengstschlager M Contribution of human amniotic fluid stem cells to renal tissue formation depends on mTOR. *Human Molecular Genetics* 19:3320-3331.

Sebinger DDR, Unbekandt M, Ganeva VV, Ofenbauer A, Werner C, Davies JA (2010) A novel, low-volume method for organ culture of embryonic kidneys that allows development of cortico-medullary anatomical organization. *Plos One* 5.

Unbekandt M, Davies JA (2010) Regeneration of organotypic renal tissues from embryonic kidney cell suspensions and formation of fine-grained chimaeric renal tissues. *Kidney International* (in press)

Davies JA (2010) The embryonic kidney: isolation, organ culture, immunostaining and RNA interference. Chapter in *Mouse Cell Culture* Editor - Ward. A. (Humana Press, ISBN 978-1588297723)

#### **2009**

Unbekandt M & Davies JA (2009) Control of Organogenesis. Chapter in *Fundamentals of Tissue Engineering and Regenerative Medicine* (Springer).

Davies JA (2009) Mammalian embryo: branching morphogenesis. *Encyclopedia of Life Sciences* Article A741

Davies JA (2009) Synthetic morphology: modules for engineering biological form. In Columbus F (Ed.), *Synthetic Biology: Parts and Systems, Design Theory and Applications* in press.

Davies JA (2009) Regulation, necessity, and the misinterpretation of knockouts. *BioEssays* 31:826-30

#### **2008**

Sweeney D, Lindström N, Davies JA (2008) Developmental plasticity and regenerative capacity in the renal ureteric bud/collecting duct system. [Development](#) 135:2505-2510.

Lee WC, Berry R, Hohenstein P, Davies JA (2008) siRNA as a tool for investigating organogenesis – the pitfalls and the promises. *Organogenesis* 4(3):176-81

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Davies JA (2008) The embryonic kidney: isolation, organ culture, immunostaining and RNA interference. In *Mouse Cell Culture Editor – Ward A* (Humana Press, ISBN 978-1588297723)

Davies JA (2008) Synthetic Morphology: prospects for engineered, self-constructing anatomies. [J Anat](#) 212:707-19

McMahon AP, Aronow B, Davidson D, Davies JA, Gaido K, Grimmond S, Lessard J, Little M, Potter S, Wilder E, Zhang P (2008) GUDMAP – the genito-urinary developmental molecular anatomy project. [J Am Soc Nephrol](#) 19: 667-671

Unbekandt M & Davies JA (2008) Control of Organogenesis. In *Fundamentals of Tissue Engineering and Regenerative Medicine* (Springer)

## **2007**

Michael L, Sweeney D, Davies JA (2007) The lectin, Dolichos biflorus agglutinin, is a sensitive indicator of branching morphogenetic activity in the developing mouse metanephric collecting duct system. *J Anat* 210: 89-97

Murray P, Camussi G, Davies J, Eggar D, Hengstschlaeger M, Kenny M, Remuzzi G, Werner C. (2007) The KIDSTEM European Research Training Network. *Organogenesis* 3: 2-4

Lee W-C & Davies JA (2007) Epithelial branching: the power of self-loathing. *BioEssays* 29: 205-7

Little M, Brennan J, Georgas K, Davies J, Davidson D, Beverdam A, Bertram J, Capel B, Christiansen E, Cullen L, Fleming J, Gilbert T, Herzlinger D, Kaufman M, Kleymenova E, Koopman P, Kris W, Lewis A, McMahon A, Mendelsohn C, Mitchell E, Saunders P, Spencer T, Spears N, Sweeney D, Thomson A, Valerius T, Yamada G, Yu J (2006) High-resolution anatomical ontologies for the annotation of the developing murine genitourinary tract. *Gene Expr Patterns* 7: 680-99

Davies JA (2007) Developmental biologists' choice of subjects approximates to a power law, with no evidence for the existence of a special group of 'model organisms'. *BMC Dev Biol* 1;7:40

Blenkiron M, Arvind DK, Davies JA (2007) Design of an irreversible DNA memory element. *Natural Computing* 6: 403-411

## **2006**

Davies JA (2006) A method for cold storage and transport of viable embryonic kidney rudiments. *Kidney International* 70: 2031-2034

Davies JA, Armstrong J (2006) The anatomy of organogenesis: novel solutions to old problems. *Progr Histochem Cytochem* 40: 165-176

Lee WC and Davies JA (2006) Dapper1 and dapper2 are expressed in distinct parts of developing metanephroi. *Nephrol Dial Transplant* 21(Suppl 4): 18-19

Davies JA (2006) The embryonic kidney: isolation, organ culture, immunostaining and RNA interference. Chapter in *Mouse Cell Culture* Eds Ward A and Tosh D (In press)

Davies JA (2006) A method for cold storage and transport of viable kidney rudiments. *Kidney International* (In press)

Dolichos biflorus agglutinin, is a sensitive indicator of branching morphogenetic activity in the developing mouse metanephric collecting duct system. *Journal of Anatomy* (In press)

## **2005**

Davies JA (2005) [Mechanisms of Morphogenesis](#). Sole author. Academic Press

Davies JA (2005) [Branching Morphogenesis](#). Editor and contributor of one Chapter. Landes Biomedical

Davies JA (2005) Watching tubules glow and branch. *Curr Op Genet Devel* 15: 364-370

Michael L, Sweeney DE, Davies JA (2005) A role for microfilament-based contraction in branching morphogenesis of the ureteric bud. *Kidney International* 68: 2010-2018

Willnow TE, Antignac C, Brändli A, Christensen EI, Cox RD, Davidson D, Davies JA, Devuyt O, Eichele E, Hastie N, Verroust P, Schedl A, Meij IC (2005) The European Renal Genome Project – an integrated approach towards understanding the genetics of kidney development and disease. *Organogenesis* 2: 42-47

## **2004**

Davies JA (2004) Inverse correlation between an organ's cancer rate and its evolutionary antiquity. *Organogenesis* 1: 60-63

Davies JA, Lodomery M, Hohenstein P, Michael L, Spraggon L, Schafe A, Freeman T, Hastie N (2004). siRNA treatment of mouse kidney rudiments shows Wt1 to be required for nephron differentiation and supports the idea of a Pax2-Wt1-Wnt4 pathway. *Human Molecular Genetics Hum Mol Genet* 13: 235-46

Michael L, Davies JA (2004) Pattern and regulation of cell proliferation during morphogenesis of the mouse ureteric bud. *J Anat* 204: 241-255

## **2003**

Davies JA (2003) Development of the collecting duct system – chapter in *The Development of the Kidney* (Eds Bard, Vize & Woolf, Academic Press)

Davies JA (2003) Journals: impact factors are too highly valued. (letter, subject to editorial but not peer review) Nature 421: 210

Davies JA, Yates E, Turnbull J (2003) Importance of 2-O-sulphation for interactions between heparin and the GDNF signalling system. Growth Factors 21: 109-119

## **2002**

Barnett MW, Fisher CE, Perona-Wright G, Davies JA (2002) Signalling by glial cell line-derived neurotrophic factor (GDNF) requires heparan sulphate glycosaminoglycan. J Cell Sci 115: 4495-4503

Davies, JA (2002) The Extracellular Matrix (Nature Encyc Life Sci, article 1274)

Davies JA (2002) The individual success of musicians, like that of physicists, follows a stretched exponential distribution. Eur Physics Journal B 27:445-447. This paper was the subject of an article in The Guardian, 18th July 2002

Davies JA (2002) The Kidney Development Database. Chapter in Analyzing Gene Expression (Ed. S Lorkowski)

Davies JA (2002) Morphogenesis of the kidney. ScientificWorldjournal 2: 1937-1950

Davies JA (2002) Do different branching epithelia use a conserved developmental mechanism? BioEssays 24: 937-948

Davies JA & Fisher CE (2002) Genes in renal development. Experimental Nephrology 10: 102-113