

# Publications

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## Recent Publications

Burgon J, Robertson AL, Sadiku P, Wang X, Hooper-Greenhill E, Prince LR, Walker P, Hoggett EE, Ward JR, Farrow SN, Zuercher WJ, Jeffrey P, Savage CO, Ingham PW, Hurlstone AF, Whyte MK, Renshaw SA. (2014)

Serum and Glucocorticoid-Regulated Kinase 1 Regulates Neutrophil Clearance during Inflammation Resolution.

**J Immunol.** 2014 Jan 15. [Epub ahead of print]

Venkatesh B, Lee AP, Ravi V, Maurya AK, Lian MM, Swann JB, Ohta Y, Flajnik MF, Sutoh Y, Kasahara M, Hoon S, Gangu V, Roy SW, Irimia M, Korzh V, Kondrychyn I, Lim ZW, Tay BH, Tohari S, Kong KW, Ho S, Lorente-Galdos B, Quilez J, Marques-Bonet T, Raney BJ, Ingham PW, Tay A, Hillier LW, Minx P, Boehm T, Wilson RK, Brenner S, Warren WC. (2014) Elephant shark genome provides unique insights into gnathostome evolution.

**Nature.** 2014 Jan 9;505(7482):174-9.

Wang, X. Li, JY. Robertson, A. Chai, R. Everett, M. Yoganathan, K Renshaw, SA, Luo HR and Ingham, PW. (2014) Novel natural product inhibitors of neutrophil recruitment identified through a transgenic zebrafish screen.

**Dis Model Mech.** 7(1):163-9

Nachtergaele, S. Whalen, DM. Mydock, L. Zhao, Z. Malinauskas, T. Ingham, PW. Covey, DF. Siebold, C. and Rohatgi, R. (2013)

Structure and Function of the Smoothed Extracellular Domain in Vertebrate Hedgehog Signaling

**eLIFE** Oct 29;2:e01340. doi: 10.7554/eLife.01340.

Maurya, AK. Ben, J, Zhao, Z. Lee, R. Niah, W. Ng, ASM. Elworthy, S. van Eeden, FJ. and Ingham, PW. (2013) Regulation of Gli transcription factor activity by Kif7 in the zebrafish embryo.

**PLoS Genet.** 9(12):e1003955.

Wang X., Zhao, Z. Muller, J. Iyu, A. Khng, A.J. Giccione, E. Ruan, YJ and Ingham, P.W. (2013)

Targeted inactivation and identification of targets of the Gli2a transcription factor in zebrafish.

**Biol Open.** 2013 Sep 9;2(11):1203-13

Jackson H. and Ingham, PW (2013)

Control of muscle fibre-type diversity during embryonic development: The zebrafish paradigm.

**Mech. Devl.** 130:447-457

Hynes NE, Ingham PW, Lim WA, Marshall CJ, Massagué J, Pawson T. (2013)

Signalling change: signal transduction through the decades

**Nat Rev Mol Cell Biol.** 14(6):393-8.

Carney TJ and Ingham PW (2013)

Drugging Hedgehog: signaling the pathway to translation.

**BMC Biol.** 11:37.

Ingham PW (2012)

Zebrafish genetics gets the Scube on Hedgehog secretion.

**Genes Dev.** 26(22):2468-70

Ingham PW. (2012)

Hedgehog signaling.

**Cold Spring Harb Perspect Biol.** 1;4(6).

Maurya AK, Tan H, Souren M, Wang X, Wittbrodt J, Ingham PW. (2011)

Integration of Hedgehog and BMP signalling by the engrailed2a gene in the zebrafish myotome

**Development** 138(4):755-65.

<http://dev.biologists.org/content/138/4/755.long>

Elks PM, van Eeden FJ, Dixon G, Wang X, Reyes-Aldasoro CC, Ingham PW, Whyte MK, Walmsley SR, Renshaw SA. (2011)

Activation of hypoxia-inducible factor-1 $\alpha$  (Hif-1 $\alpha$ ) delays inflammation resolution by reducing neutrophil apoptosis and reverse migration in a zebrafish inflammation model.

**Blood.** 118(3):712-22.

Ingham PW, Nakano Y, Seger C. (2011)

Mechanisms and functions of Hedgehog signalling across the metazoa.

**Nat Rev Genet.** 12(6):393-406.

Wang X, Ono Y, Tan SC, Chai RJ, Parkin C, Ingham PW. (2011)

Prdm1a and miR-499 act sequentially to restrict Sox6 activity to the fast-twitch muscle lineage in the zebrafish embryo.

**Development.** 138(22):4969-78.

<http://dev.biologists.org/content/138/20/4399.long>

Ben J, Elworthy S, Ng AS, van Eeden F, Ingham PW. (2011)

Targeted mutation of the talpid3 gene in zebrafish reveals its conserved requirement for ciliogenesis and Hedgehog signalling across the vertebrates.

**Development.** 138(22):4969-78.

<http://dev.biologists.org/content/138/22/4969.long>

Seger C, Hargrave M, Wang X, Chai RJ, Elworthy S, Ingham PW. (2011)

Analysis of Pax7 expressing myogenic cells in zebrafish muscle development, injury, and models of disease.

**Dev Dyn.** 240(11):2440-51. doi: 10.1002/dvdy.22745. Epub 2011 Sep 26.

Carney TJ, Feitosa NM, Sonntag C, Slanchev K, Kluger J, Kiyozumi D, Gebauer JM, Coffin Talbot J, Kimmel CB, Sekiguchi K, Wagener R, Schwarz H, Ingham PW, Hammerschmidt M. (2010)

Genetic analysis of fin development in zebrafish identifies furin and hemicentin1 as potential novel fraser syndrome disease genes.

**PLoS Genet** 6(4):e1000907

Kim HR, Richardson J, van Eeden F, Ingham PW. (2010)

Gli2a protein localization reveals a role for Iguana/DZIP1 in primary ciliogenesis and a dependence of Hedgehog signal transduction on primary cilia in the zebrafish.

**BMC Biol.** 8(1):65.

Baxendale, S. Chen., C-K. Tang, H. Davison, C., Gleadall, L., Croning, M., Humphray, S., Hubbard, S. & Ingham, PW (2009)

Expression screening and annotation of a zebrafish myoblast library.

**Gen.Exp.Patt.** 9:73-82

Parkin CA, Allen CE, Ingham PW. (2009)

Hedgehog signalling is required for cloacal development in the zebrafish embryo.

**Int J Dev Biol.** 53(1):45-57

Hammond, K.L., Baxendale, S., McCauley, D.W., Ingham, P.W. and Whitfield, T.T. (2009)  
Expression of patched, prdm1 and engrailed in the lamprey somite reveals conserved responses to Hedgehog signalling.

***Evolution and Development*** 11:27-40

Ingham PW (2009)

The power of the zebrafish for disease analysis.

***Hum Mol Genet.*** 18(R1):R107-12.

Packham IM, Gray C, Heath PR, Hellewell PG, Ingham PW, Crossman DC, Milo M, Chico TJ. (2009)

Microarray profiling reveals CXCR4a is downregulated by blood flow in vivo and mediates collateral formation in zebrafish embryos.

***Physiol Genomics.*** 38(3):319-27.

Flinn L, Mortiboys H, Volkmann K, Köster RW, Ingham PW, Bandmann O. (2009)

Complex I deficiency and dopaminergic neuronal cell loss in parkin-deficient zebrafish (Danio rerio).

***Brain.*** 132: 1613-23.

Ingham PW, McMahon AP. (2009)

Hedgehog signalling: kif7 is not that fishy after all.

***Curr Biol.*** 2009 Sep 15;19(17):R729-31.

Loynes CA, Martin JS, Robertson A, Trushell DM, Ingham PW, Whyte MK, Renshaw SA. (2009)

Pivotal Advance: Pharmacological manipulation of inflammation resolution during spontaneously resolving tissue neutrophilia in the zebrafish.

***J Leukoc Biol.*** 87: 203-12

Lee SL, Rouhi P, Dahl Jensen L, Zhang D, Ji H, Hauptmann G, Ingham P, Cao Y.(2009)

Hypoxia-induced pathological angiogenesis mediates tumor cell dissemination, invasion, and metastasis in a zebrafish tumor model.

***Proc Natl Acad Sci U S A.*** 2009 Nov 17;106(46):19485-19490

## **Tom Carney's publications**

Lee RT, Asharani PV, Carney TJ (2014)

Basal keratinocytes contribute to all strata of the adult zebrafish epidermis.

***PLoS One*** 9: e84858.

Fischer B, Metzger M, Richardson R, Knyphausen P, Ramezani T, Franzen R, Schmelzer E, Bloch W, Carney TJ, Hammerschmidt M (2014)

p53 and TAp63 Promote Keratinocyte Proliferation and Differentiation in Breeding Tubercles of the Zebrafish.

***PLoS Genet*** 10: e1004048.

Lee RT, Thiery JP, Carney TJ (2013)

Dermal fin rays and scales derive from mesoderm, not neural crest.

***Curr Biol*** 23: R336-337.

Lee RT, Knapik EW, Thiery JP, Carney TJ (2013)

An exclusively mesodermal origin of fin mesenchyme demonstrates that zebrafish trunk neural crest does not generate ectomesenchyme.

***Development*** 140: 2923-2932.

Talbot JC, Walker MB, Carney TJ, Huycke TR, Yan YL, Bremiller RA, Gai L, Delaurier A, Postlethwait JH, Hammerschmidt M, Kimmel CB (2012)

fras1 shapes endodermal pouch 1 and stabilizes zebrafish pharyngeal skeletal development.

***Development*** 139: 2804-2813.

Lossner C, Wee S, Ler SG, Li RH, Carney T, Blackstock W, Gunaratne J (2012)

Expanding the zebrafish embryo proteome using multiple fractionation approaches and tandem mass spectrometry.

***Proteomics*** 12: 1879-1882.

Feitosa NM, Zhang J, Carney TJ, Metzger M, Korzh V, Bloch W, Hammerschmidt M (2012)

Hemicentin 2 and Fibulin 1 are required for epidermal-dermal junction formation and fin mesenchymal cell migration during zebrafish development.

***Dev Biol*** 369: 235-248.

Asharani PV, Keupp K, Semler O, Wang W, Li Y, Thiele H, Yigit G, Pohl E, Becker J,

Frommolt P, Sonntag C, Altmüller J, Zimmermann K, Greenspan DS, Akarsu NA, Netzer C,

Schonau E, Wirth R, Hammerschmidt M, Nurnberg P, Wollnik B, Carney TJ (2012)  
Attenuated BMP1 function compromises osteogenesis, leading to bone fragility in humans  
and zebrafish.

***Am J Hum Genet*** 90: 661-674.

Carney TJ, Feitosa NM, Sonntag C, Slanchev K, Kluger J, Kiyozumi D, Gebauer JM, Coffin  
Talbot J, Kimmel CB, Sekiguchi K, Wagener R, Schwarz H, Ingham PW, Hammerschmidt M  
(2010)

Genetic analysis of fin development in zebrafish identifies Furin and Hemicentin1 as  
potential novel Fraser Syndrome disease genes.

***PLoS Genetics*** 6: e1000907.

Slanchev K, Carney TJ, Stemmler MP, Koschorz B, Amsterdam A, Schwarz H,  
Hammerschmidt M (2009)

The epithelial cell adhesion molecule EpCAM is required for epithelial morphogenesis and  
integrity during zebrafish epiboly and skin development.

***PLoS Genetics*** 5: e1000563.

Lopes SS, Yang X, Muller J, Carney TJ, McAdow AR, Rauch GJ, Jacoby AS, Hurst LD,  
Delfino-Machin M, Haffter P, Geisler R, Johnson SL, Ward A, Kelsh RN (2008)

Leukocyte tyrosine kinase functions in pigment cell development.

***PLoS Genetics*** 4: e1000026.

Dutton JR, Antonellis A, Carney TJ, Rodrigues FS, Pavan WJ, Ward A, Kelsh RN (2008)  
An evolutionarily conserved intronic region controls the spatiotemporal expression of the  
transcription factor Sox10.

***BMC Developmental Biology*** 8

Blentic A, Tandon P, Payton S, Walshe J, Carney T, Kelsh RN, Mason I, Graham A (2008)  
The emergence of ectomesenchyme.

***Developmental Dynamics*** 237, 592-601

Janicke M, Carney TJ, Hammerschmidt M (2007)

Foxi3 transcription factors and Notch signaling control the formation of skin ionocytes from  
epidermal precursors of the zebrafish embryo.

***Developmental Biology*** 307, 258-271

Carney TJ, von der Hardt S, Sonntag C, Amsterdam A, Topczewski J, Hopkins N, Hammerschmidt M (2007)

Inactivation of serine protease Matriptase1a by its inhibitor Hai1 is required for epithelial integrity of the zebrafish epidermis.

**Development** 134, 3461-3471

Kirby BB, Takada N, Latimer AJ, Shin J, Carney TJ, Kelsh RN, Appel B (2006)

In vivo time-lapse imaging shows dynamic oligodendrocyte progenitor behavior during zebrafish development.

**Nature Neuroscience** 9, 1506-1511

Carney TJ, Dutton KA, Greenhill E, Delfino-Machin M, Dufourcq P, Blader P, Kelsh RN (2006)

A direct role for Sox10 in specification of neural crest-derived sensory neurons.

**Development** 133, 4619-4630

Wada N, Javidan Y, Nelson S, Carney TJ, Kelsh RN, Schilling TF (2005)

Hedgehog signaling is required for cranial neural crest morphogenesis and chondrogenesis at the midline in the zebrafish skull.

**Development** 132, 3977-3988

Elworthy S, Lister JA, Carney TJ, Raible DW, Kelsh RN (2003)

Transcriptional regulation of mitfa accounts for the sox10 requirement in zebrafish melanophore development.

**Development** 130, 2809-2818

Dutton KA, Pauliny A, Lopes SS, Elworthy S, Carney TJ, Rauch J, Geisler R, Haffter P, Kelsh RN (2001)

Zebrafish colourless encodes sox10 and specifies non-ectomesenchymal neural crest fates.

**Development** 128, 4113-4125

Orford SJ, Carney TJ, Olesnicki NS, Timmis JN (1999)

Characterisation of a cotton gene expressed late in fibre cell elongation.

**TAG Theoretical and Applied Genetics** 98, 757-764