

## **Completed Publications**

### **Chapters in Books**

Kindle, K, Taylor, W.C., McKeown, M. and Firtel, R.A. (1977) Analysis of gene structure and transcription in *Dictyostelium discoideum*. **In** Developments in Cell Biology Vol. 1: Development and Differentiation in the Cellular Slime Moulds. Cappuccinelli, P. and Ashworth, J.M. eds. Amsterdam, Elsevier, North Holland. 273-290.

McKeown, M., Kimmel, A.R. and Firtel, R.A. (1981) Organization and expression of the actin multigene family in *Dictyostelium*. **In** Developmental Biology Using Purified Genes, ICN-UCLA Symposia on Molecular and Cellular Biology **23**: Brown, D. and Fox, C.F. eds. 107-116.

Firtel, R.A., McKeown, M., Poole, S., Kimmel, A.R., Brandis, J. and Rowekamp, W. (1981) Developmentally regulated multigene families **In** *Dictyostelium discoideum*. *Genetic Engineering 3*, Setlow, J.K. and Hollaender, A. eds. Plenum, N.Y. 265-318.

McKeown, M., and Firtel, R. A. (1982). The actin multigene family in *Dictyostelium*. Organization of the Cytoplasm, Cold Spring Harbor Symp. Quant. Biol. **46**:495-505.

McKeown, M., MacLeod, C., and Firtel, R. A. (1982). Actin genes in *Dictyostelium*. **In** Muscle Development, Cold Spring Harbor Press, Cold Spring Harbor, New York.

McKeown, M., Hirth, K.-P., Edwards, C. and Firtel, R.A. (1982) Examination of the regulation of the actin multigene family in *Dictyostelium discoideum*. **In** Embryonic Development, Part A: Genetic Aspects. Burger, M. and Weber, R. eds. Alan R. Liss, Inc. N.Y. 51-78.

McKeown, M., Belote, J. M., Andrew, D. J., Scott, T. N. Wolfner, M., and Baker, B. S. (1986). Molecular genetics of sex determination in *Drosophila*. Annual Symposium

of the Society for Developmental Biology **44**, Alan R. Liss, Inc., New York, pp. 3-17.

Belote, J. B., McKeown, M., Andrew, D. J. Scott, T. N., Wolfner, M., and Baker, B. S. (1985). The control of sexual differentiation in *Drosophila melanogaster*. Cold Spring Harbor Symp. Quant. Biol. **50**:605-614.

McKeown, M., Boggs, R.T., Nash, K., Ohkawa, R., Manly, A., Sosnowski, B.A., and Belote, J.M. (1989) The use of germline transformation in the study of sexual differentiation in *Drosophila*. In Gene Transfer in Animals, UCLA Symposia on Molecular and Cellular Biology, New Series, Volume 87 (I. Verma, R. Mulligan, A. Beaudet, eds) Alan R. Liss Inc., New York, NY, 1-8.

McKeown, M. (1990) Regulation of alternative splicing. Genetic Engineering, Principles and Methods, J. Setlow ed. Vol. 12, 139-181.

McKeown, M. (1992) Alternative mRNA splicing. Annual Review of Cell Biology, **8**, 133-155.

#### Refereed Journal Articles

McKeown, M., Kahn, M. and Hanawalt, P.C. (1976) Thymidine uptake and utilization in *Escherichia coli*: a new gene controlling nucleoside transport. J. Bacteriol. **126**: 814-822.

McKeown, M., Taylor, W. C., Kindle, K. L., Firtel, R. A., Bender, W., and Davidson, N. (1978). Multiple, heterogeneous actin genes in *Dictyostelium*. Cell **15**:789-800.

Firtel, R. A., Timm, R. A., Kimmel, A. R., and McKeown, M. (1979). Unusual nucleotide sequences at the 5' end of actin genes in *Dictyostelium discoideum*. Proc. Natl. Acad. Sci. USA **76**:6206-6210.

McKeown, M., and Firtel, R. A. (1981). Differential gene expression and 5' end mapping of actin genes in *Dictyostelium*. Cell **24**:799-807.

- McKeown, M., and Firtel, R. A. (1981). Evidence for subfamilies of actin genes in Dictyostelium as determined by comparison of 3' end sequences. *J. Mol. Biol.* **151**:593-606.
- McKeown, M., Belote, J. M., and Baker, B. S. (1987). A molecular analysis of *transformer*, a gene in *Drosophila melanogaster* that controls female sexual differentiation. *Cell* **48**:489-499.
- Boggs, R.T., Gregor, P., Idriss, S., Belote, J.M., and McKeown, M. (1987) Regulation of sexual differentiation in *Drosophila melanogaster* via alternative splicing of RNA from the *transformer* gene. *Cell* **50**:739-747.
- Nagoshi, R., McKeown, M., Burtis, K., Belote, J., and Baker, B. (1988) The control of alternative splicing at genes regulating sexual differentiation in *Drosophila melanogaster*. *Cell* **53**:229-236.
- McKeown, M., Belote, J.M. and Boggs, R.T. (1988) Ectopic expression of the female *transformer* gene product leads to female differentiation of chromosomally male *Drosophila*. *Cell*, **53**:887-895.
- Oro, A.E., Ong, E.S., Margolis, J.S., Posakony, J.W., McKeown, M., and Evans, R.M. (1988) The *Drosophila* gene *knirps-related* is a member of the steroid receptor superfamily. *Nature* **336**:493-496.
- Belote, J.M., McKeown, M., Boggs, R.T., Ohkawa, R. and Sosnowski, B.A. (1989). The molecular genetics of *transformer*, a genetic switch controlling sexual differentiation in *Drosophila*. *Dev. Genetics* **10**: 143-154.
- Tearle, R.G., Belote, J.M., McKeown, M., Baker, B.S., and Howell, A.J. (1989) Cloning and characterization of the *scarlet* gene of *Drosophila melanogaster*. *Genetics* **122**: 595-606.
- Sosnowski, B.A., Belote, J.M., and McKeown, M. (1989) Sex-specific alternative splicing of RNA from the *transformer* gene results from sequence-dependent splice site blockage. *Cell* **58**: 449-459.

- Gregor, P., Mano, I., Maoz, I., McKeown, M. and Teichberg, V.I. (1989) Molecular structure of the chick cerebellar kainate binding subunit of a putative glutamate receptor. *Nature* **342**: 689-692.
- Belote, J.M., Hoffmann, F.M., McKeown, M., Chorsky, R.L. and Baker, B.S. (1990) Cytogenetic analysis of chromosome region 73AD of *Drosophila melanogaster*. *Genetics* **125**, 783-793.
- Oro, A.E., McKeown, M. and Evans, R.M. (1990) Relationship between the product of the *Drosophila ultraspiracle* locus and the vertebrate retinoic acid responsive transcription factor, the retinoid X receptor. *Nature* **347**, 298-301.
- Oro, A.E., McKeown, M. and Evans, R.M. (1992) The *Drosophila* Retinoid X Receptor homolog *ultraspiracle* functions in both female reproduction and eye morphogenesis. *Development* **115**, 449-462.
- Yao, T.-P., Segreaves, W.A., Oro, A.E., McKeown, M. and Evans, R.M. (1992) *Drosophila* *ultraspiracle* modulates ecdysone receptor function via heterodimer formation. *Cell* **71**, 11-20.
- Yao, T.-P., Forman, B.M., Jiang, Z., Cherbas, L., Chen, J.-D., McKeown, M., Cherbas, P., and Evans, R.M. (1993) Functional ecdysone receptor is the product of *EcR* and *ultraspiracle* genes. *Nature* **366**, 476-479.
- Sosnowski, B.A., Davis, D.D., Boggs, R.T., Madigan, S.J., McKeown, M. (1994) Multiple portions of the *Drosophila transformer* gene are required for efficient in vivo sex-specific regulated RNA splicing and in vitro Sex-lethal binding. *Developmental Biology* **161**, 302-312.
- McKeown, M. (1994) Sex determination and differentiation. *Developmental Genetics* **15**, 201-204.
- Yu, R.T., McKeown, M., Evans, R.M. and Umesono, K. (1994) Relationship between *Drosophila* gap gene *tailless* and a vertebrate nuclear receptor, Tlx. *Nature* **370**, 375-379.

- Zelhof, A.C., Yao, T.-P., Evans, R.M. and McKeown, M. (1995) Identification and characterization of a novel *Drosophila* nuclear receptor with the ability to regulate ecdysone signaling. *Proc. Natl. Acad. Sci. USA* **92**, 10477-10481.
- Zelhof, A.C., Yao, T.-P., Chen, J.D., Evans, R.M. and McKeown, M. (1995) Seven-up inhibits Ultraspiracle-based signaling pathways in vitro and in vivo. *Mol. Cell. Biol.* **15**, 6736-6745.
- Madigan, S.M., Edeen, P., Esnayra, J. and McKeown, M. (1996) *att*, a target for regulation by *tra2* in the testis of *Drosophila melanogaster*, encodes alternative RNAs and alternative proteins. *Mol. Cell. Biol.* **16**, 4222-4230
- Finley, K.D., Taylor, B.T., Milstein, M. and McKeown, M. (1997) *dissatisfaction*, a gene involved in sex-specific behavior and neural development of *Drosophila melanogaster*. *Proc. Natl. Acad. Sci. USA.* **94**, 913-918.
- Zelhof, A.C., Ghbeish, N., Tsai, C., Evans, R.M. and McKeown, M. (1997) A role for ultraspiracle, the *Drosophila* RXR, in morphogenetic furrow movement and photoreceptor cluster formation. *Development* **124**, 2499-2506.
- Brunel, C.A, Madigan, S.J., Cassill, J.A., Edeen, P. and McKeown, M. (1998) *pcdr*, a Novel Gene with Sexually Dimorphic Expression in the Pigment Cells of the *Drosophila* Eye. *Development, Genes and Evolution* **208**, 327-335.
- Finley, K.D., Edeen, P.T., Foss, M., Gross, E., Ghbeish, N., Palmer, R.H., Taylor, B.J. and McKeown, M. (1998) *dissatisfaction* Encodes a Tailless-like Nuclear Receptor Expressed in a Subset of CNS neurons Controlling *Drosophila* Sexual Behavior. *Neuron* **21**, 1363-1374.
- Scully, A.L., McKeown, M., and Thomas, J.B. (1999) Isolation and characterization of Dek, A *Drosophila* Eph protein tyrosine kinase. *Mol. Cell. Neurosci.* **13**, 337-347.

- Tsai, C.-C., Kao, H.-Y., Yao, T.-P., McKeown, M., and Evans, R.M. (1999) SMRTER, a *Drosophila* nuclear receptor co-regulator, reveals that EcR mediated repression is critical for development. *Molecular Cell*. **4**, 175-186.
- Palmer, R. H., Fessler, L. I., Edeen, P. T., Madigan, S. J., McKeown, M., and Hunter, T. (1999) DFak56 is a novel *Drosophila melanogaster* focal adhesion kinase. *J. Biol. Chem.* **274**, 35621-35629.
- Brunel, C., Ehresmann, B., Ehresmann, C., and McKeown, M. (2001) Selection of Genomic Target RNAs by Iterative Screening. *Bioorganic and Medical Chemistry*. **9/10**, 2533-2541.
- Ghbeish, N., Tsai, C.-C., Schubiger, M., Zhou, J.Y., Evans, R.M. and McKeown, M. (2001) The dual role of Ultraspiracle, the *Drosophila* RXR, in the ecdysone response. *Proc. Natl. Acad. Sci, USA*. **98**, 3867-3872.
- Lorén, C.E., Scully, A., Grabbe, C., Edeen, P.T., Thomas, J, McKeown, M., Hunter, T. and Palmer, R.H. (2001) Identification and characterization of DAlk: a novel *Drosophila melanogaster* RTK which drives ERK activation in vivo. *Genes to Cells* **6**, 531-544.
- Ghbeish, N. and McKeown, M. (2002) Analyzing the repressive function of Ultraspiracle, the *Drosophila* RXR, in *Drosophila* eye development. *Mech Dev* **111**, 89-98.
- Pitman, J.L., Tsai, C.-C., Edeen, P.T., Finley, K.D., Evans, R.M. and McKeown, M. (2002) DSF nuclear receptor acts as a repressor in culture and in vivo. *Dev Biology* **245**, 315-328.
- Finley, K.D., Edeen, P.T., Cumming, R.C., Mardahl-Dumesnil, M.D., Taylor, B.J., Rodriguez, M.H., Hwang, C.E., Benedetti, M, and McKeown, M. (2003) blue cheese mutations define a novel, conserved gene involved in progressive neural degradation. *J. Neuroscience* **23**, 1254-1264.

- Tsai C.C, Kao H.Y, Mizutani A, Banayo E, Rajan H, McKeown M, and Evans R.M. (2004) Ataxin 1, a SCA1 neurodegenerative disorder protein, is functionally linked to the silencing mediator of retinoid and thyroid hormone receptors. *Proc Natl Acad Sci U S A.* **101**:4047-52.
- Ditch, L.M., Shirangi, T., Pitman, J.L., Latham, K.L., Finley, K.D., Edeen P.T., Taylor, B.J., McKeown, M. ( 2005) *Drosophila* retained/dead ringer is necessary for neuronal pathfinding, female receptivity and repression of fruitless independent male courtship behaviors. *Development* **132**:155-64.
- Wang, L, Rajan, H, Pitman, J.L, McKeown, M, Tsai, C.C. (2006) Histone deacetylase-associating Atrophin proteins are nuclear receptor corepressors. *Genes Dev.* **20**:525-530.
- Shirangi, TR, Taylor, BJ, McKeown, M. (2006) A double-switch system regulates male courtship behavior in male and female *Drosophila melanogaster*. *Nature Genetics* **38**:1435-1439.
- Shirangi, TR, McKeown, M. (2007) Sex in flies: What mind body dichotomy. *Developmental Biology* **306**, 10-19.

#### Non-Refereed Journal Articles

- Harris, W. A., and McKeown, M. (1986). Binary decisions in neurogenesis. *Trends in Neurosci.* **9**:383-386.
- McKeown, M. (1992) Sex differentiation: The role of alternative splicing. *Current Opinion in Genetics and Development* **2**, 299-303
- Belote, J., and McKeown, M. (1985). Post-replication repair of an X-ray damaged chromosome following fertilization in *Drosophila melanogaster*. *DIS* **6**:33.34.
- Oro, A.E., McKeown, M. and Evans, R.M. (1992) The *Drosophila* nuclear receptors in development: New insight into the actions of nuclear receptors in development. *Current Opinion in Genetics and Development* **2**, 269-274.

McKeown, M. and Madigan, J.M. (1992) Sex determination and differentiation in invertebrates: *Drosophila* and *C. elegans*, *Current Opinion in Cell Biology* **4**, 948-954.

McKeown, M. (1993) New insights into the role of small nuclear RNAs in RNA splicing. *Current Opinion in Cell Biology* **5**, 448-454.