

Curriculum Vitae

Barry J. Dickson

Date of Birth: 14. August, 1962
Place of Birth: Melbourne, Australia
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Education:

B.Sc.	1984	University of Melbourne, Australia
B.Sc.(Hons.)	1987	University of Melbourne, Australia Supervisor: Dr. Chris Cobbett Thesis: Interactions between multiple operator sites controlling transcription of the <i>aroFtyrA</i> operon of <i>Escherichia coli</i> K-12.
Ph.D.	1992	University of Zürich, Switzerland Supervisor: Prof. Ernst Hafen Thesis: Specificity and Competence in Cell-Cell Interactions: Induction of the R7 Cell Fate in the Developing Eye of <i>Drosophila melanogaster</i> .

Predoctoral Research Experience:

1984-1986	Research Assistant Epidemiology Unit, Faculty of Medicine, University of Melbourne, and Menzies School of Health Research, Darwin, Australia.
1987-1989	Research Assistant Laboratory of Dr. Jochem Spiess Salk Institute, San Diego, California.

Postdoctoral Training:

1993-1994	Postdoctoral Fellow with Prof. Ernst Hafen, Zoologisches Institut der Universität Zürich, Switzerland.
1994-1995	Postdoctoral Fellow with Prof. Corey Goodman, Department of Molecular and Cell Biology, University of California, Berkeley.

Academic Positions:

1996-1998	Junior Group Leader (Oberassistent) Zoologisches Institut der Universität Zürich, Switzerland
1998-2002	Group Leader Research Institute of Molecular Pathology, Vienna, Austria
2003-2005	Senior Scientist Institute of Molecular Biotechnology Austrian Academy of Sciences (IMBA), Vienna, Austria
from 2006	Director Institute of Molecular Pathology (IMP), Vienna, Austria

Fellowships and Grants:

1992	EMBO Short Term Fellowship
1994-1995	Helen Hay Whitney Postdoctoral Fellowship
1996-1998	Grant No. 31-45842.95 from the Swiss National Science Foundation. (CHF 366,700)
1996-1997	Grant from the Hoffman-La Roche Research Foundation (CHF 58,000)
1998-2000	Grant No. 31-45842.95 extended by the Swiss National Science Foundation. (CHF 366,700). Discontinued 1999 due to relocation.
2001-2004	Human Frontiers of Science Program . Coapplicants: Tadashi Uemura, Liqun Luo and Mu-Ming Poo. (Total \$US250,000)
2001-2004	European Union "FLYSNP" (coordinator). Coapplicants: Ann-Christine Syvänen, Montserrat Aguade, Markus Kostrzewa, Istvan Kiss, Daniel St. Johnston, David Ish-Horowicz. (Total Euro 2,212,099)
2001-2004	Grant No. P15004 from the Austrian Science Foundation (FWF) (Euro 296,851)
2004-2007	Grant No. P16607 from the Austrian Science Foundation (FWF) (Euro 431,424)
2005-2010:	Grant No. Z98-B09 Wittgenstein Prize from the Austrian Science Foundation (FWF); EUR 1.300.000
2006-2009:	Grant No. LS05035 from Vienna Science and Technology Fund (WWTF); EUR 326.746
2006-2009:	Grant No. GZ200.147/1-VI/1a2006 GEN-AU 2 from bm:bwk; EUR 72.628

Awards:

2000	EMBO Young Investigator Award
2003	EMBO Membership
2005	Wittgenstein Prize, Austrian Science Foundation
2006	Remedios Caro Almela Prize for Research in Developmental Neurobiology

Editorial Boards:

2003-	Trends in Neuroscience
2003-	PLoS Biology

2006- Current Opinion in Neurobiology

Theses supervised:

1997	Kirsten-André Senti (Diploma)
1998	Nicole Jücker (Diploma)
1998	Dina El Tounsy (Diploma)
1998	Jürg Berger (Diploma)
2000	Georg Dietzl (Diploma)
2000	Timothy Newsome (PhD)
2001	Gabriele Gahmon (Diploma)
2001	Valérie Vivancos (PhD)
2002	Srikanth Rajagopalan (PhD)
2003	Kirsten Senti (PhD)
2003	Krystyna Keleman (PhD)
2003	Petra Stockinger (Diploma)
2005	Jürg Berger (PhD)
2005	Bettina Spitzweck (Diploma)
2005	Marko Brankatschk (PhD)
2005	Georg Dietzl (PhD)
2006	Africa Couto (PhD)
2006	Giorgio Gilestro (PhD)
2006	Irene Kalchhauser (Diploma)
2006	Duda Kvitsiani (PhD)
2006	Ebru Demir (PhD)
2007	Amina Kurtovic (PhD)

Publications:

Research Articles

1. Andrews, A.E., Dickson, B.J., Lawley, B., Cobbett, C. and Pritchard, A.J. (1991). Importance of the position of TYR R boxes for repression and activation of the *tyrP* and *aroF* genes of *Escherichia coli*. **J Bacteriol.** 173: 5079-85.
2. Dickson, B.J., Sprenger, F. and Hafen, E. (1992). Prepattern in the developing *Drosophila* eye revealed by an activated torso-sevenless chimeric receptor. **Genes Dev.** 6: 2327-39.
3. Dickson, B.J., Sprenger, F., Morrison, D. and Hafen, E. (1992). Raf functions downstream of Ras1 in the sevenless signal transduction pathway. **Nature** 360: 600-3.
4. Olivier, J.P., Raabe, T., Henkemeyer, M., Dickson, B.J., Mbamalu, G., Margolis, B., Schlessinger, J., Hafen, E. and Pawson, T. (1993). A *Drosophila* SH2-SH3 adaptor protein implicated in coupling the sevenless receptor tyrosine kinase to an activator of Ras guanine nucleotide exchange, Sos. **Cell** 73: 179-91.
5. Biggs, W., Zavitz, K.H., Dickson, B.J., van der Straten, A., Brunner, D., Hafen, E. and Zipursky, S.L. (1994). The *Drosophila* *rolled* locus encodes a MAP kinase required in the sevenless signal transduction pathway. **EMBO J** 13: 1628-35.
6. Reichmann-Fried, M., Dickson, B.J., Hafen, E. and Shilo, B.-Z. (1994). Elucidation of the role of *breathless*, a *Drosophila* FGF receptor homologue, in tracheal cell migration. **Genes Dev.** 8: 428-39.
7. Dickson, B.J., Dominguez, M., van der Straten, A. and Hafen, E. (1995). Control of *Drosophila* photoreceptor cell fates by Phyllopod, a novel nuclear protein acting downstream of the Raf kinase. **Cell** 80: 453-62.
8. Raabe, T., Olivier, J.P., Dickson, B.J., Liu, X., Gish, G., Pawson, T. and Hafen, E. (1995). Biochemical and genetic analysis of the Drk SH2/SK3 adaptor protein of *Drosophila*. **EMBO J** 14: 2509-18.
9. Dickson, B.J., van der Straten, A., Dominguez, M. and Hafen, E. (1996). Mutations modulating Raf signalling in *Drosophila* eye development. **Genetics** 142: 163-171.
10. Mitchell, K.J., Doyle, J.L., Serafini, T., Kennedy, T.E., Tessier-Lavigne, M., Goodman, C.S., and Dickson, B.J. (1996). Genetic analysis of *Netrin* genes in *Drosophila*: Netrins guide CNS commissural axons and peripheral motor axons. **Neuron** 17: 203-215.
11. van der Straten, A., Rommel, C., Dickson, B.J., and Hafen, E. (1997). The heat shock protein 83 (Hsp83) is required for Raf-mediated signalling in *Drosophila*. **EMBO J** 16: 1961-1969.
12. Burke, R., Nellen, D., Bellotto, M., Hafen, E., Senti, K.-A., Dickson, B.J., and Basler, K. (1999). Dispatched, a novel sterol-sensing domain protein dedicated to the release of cholesterol-modified hedgehog from signaling cells. **Cell** 99: 803-815.
13. Newsome, T.P., Åsling, B., and Dickson, B. J. (2000). Analysis of *Drosophila* photoreceptor axon guidance in eye-specific mosaics. **Development** 127: 851-860.
14. Newsome, T.P., Schmidt, S., Dietzl, G., Keleman, K., Åsling, B., Debant, A., and Dickson, B.J. (2000). Trio combines with Dock to regulate Pak activity during photoreceptor axon pathfinding in *Drosophila*. **Cell** 101: 283-294.
15. Senti, K.-A., Keleman, K., Eisenhaber, F., and Dickson, B.J. (2000). *brakeless* is required for lamina targeting of R1-R6 axons in the *Drosophila* visual system. **Development** 127: 2291-2301.
16. Rajagopalan, S., Vivancos, V., Nicolas, E., and Dickson, B.J. (2000). Selecting a longitudinal pathway: Robo receptors specify the lateral position of axons in the *Drosophila* CNS. **Cell** 103: 1033-1045.
17. Rajagopalan, S., Nicolas, E., Vivancos, V., Berger, J., and Dickson, B.J. (2000). Crossing the midline: Roles and regulation of Robo receptors. **Neuron** 28: 767-777.
18. Wittwer, F., van der Straten A., Keleman, K., Dickson, B.J. and Hafen, E. (2001). Lilliputian: an AF4/FMR2-related protein that controls cell identity and cell growth. **Development** 128: 791-800.
19. Tapon, N., Ito, N., Dickson, B.J., Treisman, J.E., and Hariharan, I.K. (2001) The *Drosophila* tuberous sclerosis complex gene homologs restrict cell growth and cell proliferation. **Cell** 105: 345-355.
20. Maurel-Zaffran, C., Suzuki, T., Gahmon, G., Treisman, J.E. and Dickson, B.J. (2001). Cell-autonomous and -nonautonomous functions of LAR in R7 photoreceptor axon targeting. **Neuron** 32: 225-235.
21. Berger, J., Suzuki, T., Senti, K.-A., Stubbs, J., Schaffner, G., and Dickson, B.J. (2001). Genetic mapping with SNP markers in *Drosophila*. **Nature Genetics** 29: 475-481.

22. Keleman, K. and Dickson, B.J. (2001). Short- and long-range repulsion by the *Drosophila* Unc5 netrin receptor. **Neuron** 32: 605-617.
23. Hakeda-Suzuki, S., Ng, J., Tzu, J., Dietzl, G., Sun, Y., Harms, M., Nardine, T., Luo, L., and Dickson, B.J. (2002). Rac function and regulation during *Drosophila* development. **Nature** 416: 438-442.
24. Ng, J., Nardine, T., Harms, M., Tzu, J., Goldstein, A., Dietzl, G., Sun, Y., Dickson, B.J. and Luo, L. (2002). Rac GTPases control axon growth, guidance and branching. **Nature** 416: 442-447.
25. Keleman, K., Rajagopalan, S., Cleppien, D., Teis, D., Paiha, K., Huber, L.A., Technau, G.M., and Dickson, B.J. (2002). Comm sorts Robo to control axon guidance at the *Drosophila* midline. **Cell** 110: 415-427.
26. Senti, K.-A., Usui, T., Boucke, K., Greber, U., Uemura, T, and Dickson, B. J. (2003). Flamingo regulates R8 axon-axon and axon-target interactions in the *Drosophila* visual system. **Curr. Biol.** 13: 828-832.
27. Ryder, E., et al. (2004). The DrosDel collection: A set of P-element insertions for generating custom chromosomal aberrations in *Drosophila melanogaster*. **Genetics** 167: 797-813.
28. Lundstrom, A., Gallio, M., Englund, C., Stenberg, P., Hemphala, J., Aspenstrom, P., Keleman, K., Falileeva, L., Dickson, B.J., and Samakovlis, C. (2004). Vilse, a conserved Rac/Cdc42 GAP mediating Robo repulsion in tracheal cells and axons. **Genes & Development** 18: 2161-2171.
29. Keleman, K., Ribeiro, C., and Dickson, B.J. (2005). Comm function in commissural axon guidance: cell-autonomous sorting of Robo *in vivo*. **Nature Neuroscience** 8: 156-163.
30. Demir, E. and Dickson, B.J. (2005). *fruitless* splicing specifies male courtship behavior in *Drosophila*. **Cell** 121: 785-794
31. Stockinger, P., Kvitsiani, D., Rotkopf, S., Tirian, L. and Dickson, B.J. (2005). Neural circuitry that governs *Drosophila* male courtship behavior. **Cell** 121: 795-807
32. Couto, A., Alenius, M. and Dickson, B.J. (2005). Molecular, anatomical, and functional organization of the *Drosophila* olfactory system. **Curr. Biol.** 15: 1535-1547.
33. Brankatschk, M. and Dickson, B.J. (2006) Netrins guide *Drosophila* commissural axons at short range. **Nature Neuroscience**, 9, 188-194.
34. Kvitsiani, D. and Dickson, B.J. (2006) Shared neural circuitry for female and male sexual behaviours in *Drosophila*. **Curr. Biol.** 16: 355-356
35. Vrontou, E., Nilsen, S., Demir, E., Kravitz, E.A., and Dickson, B.J. (2006) *fruitless* regulates aggression and dominance in *Drosophila*. **Nature Neuroscience**, 9, 1469-1471.
36. Sweeney, L.B., Couto, A., Chou, Y.-H., Berdnik, D., Dickson, B.J., Luo, L., and Komiyama, T. (2007). Temporal target restriction of olfactory receptor neurons by Semaphorin-1a/PlexinA-mediated axon-axon interactions. **Neuron**, 53: 185-200.
37. Kurtovic, A., Widmer, A., and Dickson, B.J. (2007). A single class of olfactory neurons mediates behavioural responses to a *Drosophila* sex pheromone. **Nature** 446, 542-546.
38. Schnorrer, F., Kalchauer, I., and Dickson, B.J. (2007). The putative transmembrane receptor Kon-tiki couples to Dgrip to mediate myotube targeting in *Drosophila*. **Developmental Cell**, in press

Reviews and Commentaries

1. Dickson, B. and Hafen, E. (1993). Genetic dissection of eye development in *Drosophila*. In: Bate, M. and Martinez-Arias, A (eds). *The Development of Drosophila melanogaster*. **Cold Spring Harbor Laboratory Press**. pp 1327-62.
2. Dickson, B. and Hafen, E. (1994). Genetics of signal transduction in invertebrates. **Curr. Opin. Genet. Dev.** 4: 64-70.
3. Dickson, B.J. (1995). Nuclear factors in sevenless signalling. **Trends Genet.** 11: 106-111.
4. Dickson, B.J. (1998). Photoreceptor development: Breaking down the barriers. **Curr. Biol.** 8: R90-R92.
5. Dickson, B.J. (1998). A roundabout way of avoiding the midline (News and Views). **Nature** 391: 4412-4413.
6. Dickson, B.J. (2000). Reverse gear for *Drosophila*. (News and Views). **Nature** 405: 896-897.
7. Dickson, B.J. (2001). Rho GTPases in growth cone guidance. **Curr. Op. Neurobiol.** 11: 103-110.
8. Dickson, B.J., Cline, H., Polleux, F., and Ghosh, A. (2001) Making connections. **EMBO Reports** 2: 182-186.
9. Dickson, B.J. (2001). Moving On (Perspectives). **Science** 291: 1910-1911.

10. Dickson, B.J. and Senti, K.-A. (2002) Axon Guidance: Growth cones make an unexpected turn. **Curr. Biol.** 12: R218-R220
11. Dickson, B.J. and Keleman, K. (2002) Quick Guide: Netrins. **Curr. Biol.** 12: R154-R155.
12. Dickson, B.J. (2002) Molecular Mechanisms of Axon Guidance. **Science** 298: 1959-1964.
13. Dickson, B.J. (2003) Wiring the Brain with Insulin (Perspectives). **Science** 300: 440-441.
14. Schnorrer, F. and Dickson, B. J. (2004) Axon Guidance: Morphogens Show the Way. **Curr. Biol.** 14: R19-R21.
15. Dickson, B.J. and Walsh, C.A. (2004) Development: Editorial Overview. **Curr. Op. Neurobiol.** 14: 1-5.
16. Schnorrer, F. and Dickson, B. J. (2004) Muscle Building: Mechanisms of Myotube Guidance and Attachment Site Selection. **Developmental Cell** 7: 9-20.
17. Holt, C.E. and Dickson, B.J. (2005) Sugar Codes for Axons? **Neuron** 46: 169-172.
18. Dickson, B.J. (2005) Wnts send axons up and down the spinal cord. **Nature Neuroscience** 8: 1130-1132.
19. Yu, J.Y. and Dickson, B.J. (2006) Sexual behaviour: Do a few dead neurons make the difference? **Curr. Biol.** 16, 23-25.
20. Dickson B.J. and Gilestro, G.F. (2006) Regulation of commissural axon pathfinding by slit and its robo receptors. **Annu. Rev. Cell Dev. Biol.** 651-675.