

**Michael Ashburner – A Personal Appreciation**  
**Steve Russell**  
**Head, Department of Genetics**



**The fly genomics bid was successful (2000)**

I first met Michael at the end of 1989 when I was a graduate student in Glasgow. He came to the Genetics Department to give a seminar, talking about the work Paul Lasko had been doing on *vasa*, and was very generous with his time as we talked about my ongoing work on the isolation and identification of sex-specifically expressed *Drosophila* genes. He told me about the work on hybrid lethality Pierre Hutter was doing in his lab at the time and we got into a lively debate about the possible role of dosage compensation in the phenotype. I mentioned a couple of mutants reported in the Red Book I had been unable to

track down, *killer of male A* and *killer of male B*, that I was interested in because they were reported to be embryonic male-specific lethal (in contrast to the well characterised *msl* genes which are larval lethal). Three years later, by which time I was a postdoc in his lab, he returned from a trip visiting Didier Contamine in Gif-sur-Yvette clutching 2 vials of said mutations - remembering the discussion we had several years ago astounded me and is an indication of his prodigious talent for storing information. We put an undergraduate student on it, sadly they had been miss-mapped and were allelic to *msl-1* and *msl-2*. After my PhD I was interested in going to the Salk to work on the molecular biology of sex-specific splicing with Michael McKeown in San Diego and came to Cambridge to be interviewed for an EMBO fellowship by Michael. A couple of months later (the fellowship application was not successful) I met Michael at a London fly meeting - "did you get the EMBO?" He asked, nope, "come and work in my lab if you like" - what will I do? - "whatever you like but it would be nice if you did some work on puff genes". This it appears was my "interview" and in October 1990 I started as a postdoc in his lab.

At the time the lab was shared with Michael Akam's group and full to the brim of postdocs and PhD students doing exciting and ground-breaking molecular biology. I started on cloning puff genes and continued some work on male-specific genes I had identified. My bench was outside Michael's tiny office, a pot of strong viscous coffee on the go all day and ever-present clouds of cigarette smoke, there was constant chat & discussion about science, new papers, politics and new things he picked up on his many travels. Michael was constantly on his computer, a Mac Plus, attached to the world by a temperamental 1KB/s serial link - "Russell - reboot the pad" would be an almost daily request, running down to the basement to switch it off and on again. Michael wasn't only a desk jockey, at least once a week he would sit down at the microscope and read polytene chromosome *in situ* hybridisations prepared by Tamsin Majerus as part of the European *Drosophila* genome project (thousands of these over 5 or 6 years). When we finally cloned our first puff gene (*Eip78C*) we did a lot of work together examining the effects of *Eip78C* mutations and over expression on puffing - I made the slides and Michael measured the puffs with an aged eyepiece micrometer. Around 1991 Michael returned from a trip to London with a polaroid of a gel and a tube containing a purified PCR product generated by Peter Koopman in Robin Lovell-Badge's lab purporting to be a potential fly Sox gene - we were sceptical, but I potted around doing the usual round of Southern & Northern blots, genomic and cDNA library screening. Eventually (the

genetics turned out to be a bit tortuous for reasons I won't go into) we had the first fly Sox gene, *Dichaete* - Michael was incredibly supportive of my desire to devote my time to this newly discovered gene family. When I came to the lab, I was employed on an MRC programme grant that Michael had held for many years and when it was renewal time he was incredibly generous in offering me co-applicant status to develop the Sox work. As the Century was ending, genomics technologies were on the rise and BBSRC launched a call for genomics infrastructure proposals, "Investigating Gene Function". Michael suggested I take the lead in developing this multi-million grant application and provided incredible support to help me garner UK fly community support and put the grant together (along with Cahir O'Kane and David Glover). When it was eventually successful and we established the FlyChip microarray facility, a proteomics facility with the Biochemistry Department and a large-scale transposon screen, he continued to help me, pushing for my appointment as a University Lecturer.

As the new century progressed Michael became increasingly involved in bioinformatics and genome biology, FlyBase, Gene Ontology, the EBI (where he was co-director for several years) but he never lost touch with the lab in Genetics, providing unbelievable mentorship and guidance for scientists joining the group, many of whom established their highly successful careers based on the work they took from his lab. Pioneering work by postdocs including: Dan Barbash (hybrid lethality), Casey Bergman (transposon evolution), Saverio Brogna (nonsense mediated decay), Jose de Celis (wing development), Rachel Drysdale (FlyBase), Jose Ranz (chromosomal rearrangements), Luís Teixeira (wolbachia), were just some of the scientists who benefited from Michael's support and sponsorship, and that I had the privilege of interacting with. To get a better idea of his impact on the field check out his page on the FlyTree site (<https://academictree.org/flytree/tree.php?pid=13863>). There were also many visitors to the lab, Michael had a long-standing connection with Igor Zhimulev's lab in Novosibirsk and the lab hosted many of his students for research visits (invariably sending them home with suitcases packed full of reagents!). Obaid Sidiqqi, who sadly passed away in 2013, was a regular visitor whom I had the pleasure of working with in the mid-late '90s. Everyone would surely attest to the incredible generosity with which Michael shared his time, knowledge, expertise and lab with scientists at all career stages.

Life in the lab was always interesting. We had parties, retreats, more parties (Francesca was unfailingly the hostess with the mostest!), he was a man who was generous of spirit and had an endless supply of often scurrilous tales about the great and the good - never malicious but always good humoured and frequently self-deprecating. The announcement: "Roote, Russell - oysters!" would initiate a trip round the corner to the local Loch Fyne for said seafood and a glass of Chablis. Chelsea buns in the tea room were a sure-fire route to type II diabetes, but it didn't stop us consuming them by the truckload. Michael was a man of tremendous humanity and an innate sense of what was right. Some might have found him a shade intimidating or curmudgeonly, I feel this is because he worked incredibly hard and at times did not want to be interrupted - I would generally gauge his concentration levels by the density of Gauloise smoke - and pick the right time to chat with him. Certainly, he did not suffer fools gladly but he was incredibly generous with his time and genuinely relished thinking about tricky problems in fly genetics or biology. I am deeply indebted to him for my entire career, it is impossible for me to imagine where I would have ended up were it not for his unfailing support and mentorship, certainly I never imagined when I stepped through the door of the Department I would still be here 33 years later, never mind being Head of Department. There is not another scientist I have, or ever will, respect more. I loved the man and he will be sorely missed in Cambridge and across the globe.