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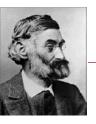
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Scanning Transmission Electron Microscopy. Edited by Stephen J. Pennycook and Peter D. Nellist

Archie Howie



Dear Abbe

Dear Abbe,

We do lots of immunolabeling on small bits of Drosophila tissue that always float on top of the fix due to the surface tension. We can use low amounts of triton x-100 to overcome this, but I would like to be able to leave detergents out until I am convinced the fixation is good. Do you know of a good surfactant that would break the surface tension but not permeabilize cells?

John from Jersey

Dear Johnny,

Ah, in my experience nothing breaks surface tension like a few shots of Becherovka! Not sure I can remember doing it with Drosophila, but I do vividly recall the summer of 1905 when Albert E., his wife Mileva, and I got totally hammered watching the *The Scarlet Pimpernel* (which had recently opened at the New Theatre in London). Albert had just finished working out how special relativity relates to Brownian motion, when I said "Lassen Sie uns getrunken gehen und erhalten!" Always one to rise to the occasion, Mileva challenged me to a game of quarters, which I handily won. Poor Albert spent most of the evening in the men's room praying to the porcelain goddess, while Mileva and I danced the night away. Like you, we ultimately ended up staining some tissue, but I'd better not go there, if you know what I mean.

Dear Abbe,

We would like to monitor our microscope usage more carefully. At the moment people log on and out of the computers with their own logins and record their time in the logbook afterward. The problem is that users are really not writing anything in the logbook, and thus it is difficult to follow who is doing what. We decided to implement some kind of "digital logbook" on the computers that control the microscopes. Hopefully when the user is finally logging out from the computer, he/she would be asked to give information about the usage and possibly about problems/malfunctions. Later, the people who are responsible for maintenance would be able to go through the usage history. Do you know any good software for this?

Teemu in Zurich

Dear Teemu,

Oh, how I long for the days when one's personal integrity and the threat of swift physical violence were all that were needed to cajole users into exhibiting good behavior. One of the most egregious cases I ever witnessed was that of a user who substituted a fine Zeiss objektive with a Lomo Planapo 63× N.A. 1.30. DIN standards be damned! I did not travel all the way to Bern and visit my dear friend Edmund von Fellenberg to collect the fluorite of Oltschenalp just to have it swapped for this obviously inferior piece of glass. No, my friend, try as you might one simply cannot trust today's users to behave in a way that would make Chancellor Bismarck proud. Two tricks that I employ are to coat all parts of the microscope, except the focus knobs, with a thin solution of osmium tetroxide. If anything is amiss, simply look for those users with blackened fingertips or who show signs of respiratory failure. This is a sure indication that they have been overstepping their authority. Alternatively, one can place those ever-present surveillance cameras throughout the lab. I am particularly fond of the models that are fashioned after the HAL 9000 computer. The inner door to our scope room will not unlock until the user has completed the necessary paperwork while the insistent, yet firm, voice of HAL repeatedly tells them that the mission is far too important to be left to mere humans.

Have a technical problem? Personal hygiene problem? Just need to vent? Write to Abbe and give him a piece of your mind at jpshield@uga.edu.

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