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Mentor's statement to bachelor thesis of Bianca Spitzbart

Bianca as a student of Biological Chemistry program was interested in our project modeling cancer in fruit fly *Drosophila melanogaster*. We had used this model to verify effects of somatic mutations found in human breast cancer tissues. When we introduced these mutations into the *Drosophila* genome, they caused a massive overgrowth of imaginal discs. We wanted to regulate the expression of the mutated dco protein in flies and therefore we made a construct for conditional expression. I thought that an analysis of regulated overexpression of the mutated protein could be a nice short project for Bianca. Unfortunately, we were waiting too long for the production of the transgenic flies and thus I had to come up with an alternative project for Bianca. We decided to test a known inhibitor of human homolog CKIε for the effect on function of *Drosophila* dco protein – it could be interesting to test in our model if this inhibitor could suppress the cancer. Unfortunately, there was not very much time left for Bianca to finish the experiments and therefore she could try it just once. Even very limited results which she was able to obtain suggested that the inhibitor could indeed work even in flies but not with very good reproducibility.

Since Bianca's experimental work was not really extensive – I should stress here again that it was rather an unfortunate circumstances and mostly my fault – I suggested that she should focus more on a review of this topic in her bachelor thesis and make it stronger from this point of view. Since the topic is quite difficult (most of the students who touched this topic had troubles to comprehend it), Bianca kept trying to discuss it with me and tried to understand it. Little longer part focused to general aspects of *Drosophila* research in Bianca's review/introduction illustrates the difficulties. But Bianca finally extended even the part related to CKIε and dco biology and together with the limited experimental part makes it a satisfactory bachelor thesis and I would recommend it for a successful defense.

In České Budějovice, June 14th, 2012

Mgr. Tomáš Doležal, Ph.D