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Mentor's assesment Mgr. Samarjeeta Singa

FUNCTIONAL ANALYSIS OF CIRCADIAN CLOCK GENE *TIMELESS* IN TEMPERATURE COMPENSATION MECHANISM

Samarjeet joined our laboratory couple of years ago. At that time he was the first non-European and the only vegetarian in the team... He also does not drink alcohol. I believe it might have been rather difficult times for him at the beginning. But Samarjeet is definitely determined person and got over all these treacherous cultural differences smoothly.

During the course of his PhD study, Samarjeet had to acquire reasonable amount of experimental skills in the laboratory, get familiar with *Drosophila* genetics, and chronobiology. At the beginning of the project, we had started with TALENS, a tool that already became fairly obsolete, at least in *Drosophila* genetics. Then, first reports on CRISPR/CAS in a fly appeared and Samarjeet decided to use this emerging technique. However, at that point it was not really clear how efficient the tool would be.

Samarjeet designed a couple of gRNAs, cloned them into plasmids and created transgenic flies. And at the end it worked! He shrewdly designed an efficient screening protocol targeting temperature compensation mutants and using this protocol he screened more than 600 lines, identifying quite a collection of interesting mutants. This part is already published, which is important because students at our university must have a first author paper to be able to submit their PhD thesis. I believe that the most interesting stuff is the unpublished part, which has the potential to target some prestigious journals. I am not going to talk about his thesis any more, but I would like to emphasize the amount of work Samarjeet performed.

An important part of duties during the PhD study is teaching and that is a field where Samarjeet stands out as well. He actively participated in teaching methods of molecular biology and during the last year he co-supervised undergrad student in his *Drosophila* experiments.

Taken together, my general impression is that Samarjeet is hardworking and enthusiastic scientist. Personally, he is a great team member, willing to help others and going very well with everybody. I would like to thank him for joining our group for a few years and I am sure he is the person who should stay in the scientific field.

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