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To whom it may concern,

With this letter, I want to express my support for the continuation of the fairSIM project, which provides reconstruction software for structured illumination microscopy (SIM) and contributes to the development of bespoke SIM imaging systems.

The research of my group is focused on cellular and tissue dynamics. We are planning to use high speed super-resolution TIRF-SIM microscopy to visualize intracellular and intercellular cytoskeletal dynamics in developing Drosophila melanogaster embryos. SIM provides the super-resolution necessary to resolve individual actin filaments and microtubules in the medio-apical layer of the amnioserosa cells of the embryos during the process of dorsal closure. Dynamics are relatively rapid, so that video rate or faster imaging will be necessary. The collaboration with the group of Prof. Huser and Dr. Müller, who developed both the fairSIM reconstruction software and a multi-color, video-rate SIM system with real-time reconstruction, are of great help in our endeavors.

FairSIM also provides continuous development and implementation of new algorithms and imaging approaches. As SIM imaging at high frame rates and for prolonged observation times is still complex and hard to achieve successfully, these developments will help to broaden the applicability of SIM.

Sincerely,

Prof. Dr. Christoph Schmidt