Reviewer's report

Title: Mapping the interactome of overexpressed Raf kinase inhibitor protein in a gastric cancer cell line

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Reviewer: Dominic M. Desiderio

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The authors studied the overexpression of Raf kinase inhibitor protein (RKIP) and its interactome in a gastric cancer cell line. RKIP fusion proteins were purified, and RKIP-interacting proteins were analyzed with electrospray ionization (ESI) tandem mass spectrometry (MS/MS) to obtain amino acid sequence data. Interaction complexes were further analyzed with Western blot and co-immunoprecipitation to corroborate MS/MS data. The authors found 72 RKIP-interacting proteins, and an interaction complex among RKIP, HSP90, 14-3-3#, and keratin 8. Those data clarify some of the molecular events that participate in gastric cancers. Three separate databases were used to develop interaction network diagrams, and three levels of interactions were found. In all three database analyses, 35 proteins consistently associated with RKIP. Those data, plus significant changes found previously, led to the finding that HSP90, 14-3-3#, and keratin 8 interact with RKIP.

This study could lead to the use of those RKIP-interacting proteins as early-stage biomarkers and therapeutic targets for gastric cancer.

This manuscript is well-written, contains solid experimental data, is easy to read, and presents useful clinical data to detect and treat gastric cancers. It can be published without revision.

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.