Reviewer’s report

Title: Renal cell carcinoma primary cultures maintain genomic and phenotypic profile of parental tumor tissues

Version: 1 Date: 25 November 2010

Reviewer: RAPHAEL PARMIGIANI

Reviewer’s report:

In the presented article, entitled “Renal cell carcinoma primary cultures maintain genomic and phenotypic profile of parental tumor tissues”, the authors describe a comparison between the genomic alterations present on ccRCC primary cultures and their corresponding tumor tissues by using SNP arrays.

Their work is well design and the experiments are appropriated for the questions raised. They found a very good overlap between the CNAs present on each primary culture and the corresponding tissue. This way, the authors claimed that ccRCC primary cultures constitute a reliable model for functional studies of renal carcinogenesis.

However, it has to be noted that very similar data has been published using different approaches such as CGH array. The concept that primary cultures are more homogeneous than the original tumor tissue is not novel, which makes the findings quite predictable. The authors should have pointed out that in the same way the more homogeneous cellular content of primary cultures helps to identify the CNAs correctly, it can also eliminate some genomic alterations present on a few cells of the original tissue which could be equally important for the tumorigenesis or mainly for tumor progression. Even though this doesn’t compromise the use of such primary cultures for functional studies, I’m not convinced that the presented findings represent a significant advance on previously published work.

SNP arrays are indeed more precise and sensitive than other approaches already used for the characterization of the CNAs presented on ccRCC tumors, but its use didn’t reveal any relevant new finding to the field.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests