Poc1B and Sas-6 function together during the atypical centriole formation in *Drosophila melanogaster*

Manuscript by Jo et al.

This manuscript describes the formation of the atypical centriole, the Proximal Centriole-Like (PCL) structure, in the Drosophila sperm. It shows that Poc1B recruitment to the PCL depends on Sas-6, and that Poc1B has an effect on Sas-6 localization and amount. Furthermore, Poc1B together with Sas-6 can induce ectopic PCL, suggesting that they function together during the formation of the PCL. The experiments are well done and the manuscript well written. I am in favour of its publication. However, the following modifications should be made before publication.

**Major modifications:**

For all the quantifications (photon counts, focus diameters), the number of measured centrioles must be indicated. What do the 3 horizontal bars represent?

In figure 3, the diameters of Poc1B-GFP and Ana1-GFP in the PCL of spermatides are compared to the one of Sas-6-GFP in the PCL of spermatocytes as "it is known that the Sas-6 localization to the centriole is reduced in spermatids". In these conditions, it is difficult to interpret figure 3B. However, Sas-6-GFP is perfectly visible in the PCL in figure 1B. Then, Sas-6-GFP should be measured in the spermatids and not in the spermatocytes.

**Minor modifications:**

In figure 1, the nuclei and the mitochondria derivatives are difficult to see. Same thing for the presence of Ana1 along the GC. If possible, luminosity should be increased.

Page 3, line 90:
I do not like the presentation of references as PMID numbers. By this way, the authors are not quoted, which might be important for the youngest. I would prefer that the references are presented as usually.

Page 6, line 214:
Hemi instead of hemy

Pages 6-7:
All along the paragraph, replace “Ana2 overexpressed flies” by “Ana2 overexpressing flies” (same for the other proteins and at some other places along the text).

Pages 11-12:
There is a mistake in the numbering of the figure in paragraph 3.7. It should be figure 5.

Page 13, line 403:
Figure 7C

Page 14, line 419:
Poc1B and sas-6

Page 14, lines 444-445:
Since Poc1B

Page 15, line 466:
Supplemental figure 4
The legend of supplemental figure 2 is incomplete.

Legend of supplemental figure 3: 
Indicate that testis protein extracts were used.

Supplemental figure 4: 
Change the order of letters A, B and C.

Caption of supplemental figure 6: 
Sas-6-Ama2 and Sas-6-Poc1B specifically induce formation of centriole attached particles.