### S1 Table  Comparison of intensity and volume of insulin vesicle and mitochondria instances from four mentioned methods in example datasets.

<table>
<thead>
<tr>
<th>Organelle</th>
<th>Data type</th>
<th>Method</th>
<th>Mean</th>
<th>Standard deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insulin vesicle</td>
<td>Intensity</td>
<td>Post-processing tool</td>
<td>0.409</td>
<td>0.025</td>
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<tr>
<td></td>
<td></td>
<td>Connected region labelling</td>
<td>0.410</td>
<td>0.024</td>
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<td></td>
<td></td>
<td>Watershed</td>
<td>0.398</td>
<td>0.032</td>
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<tr>
<td></td>
<td></td>
<td>Watershed + Gaussian filer</td>
<td>0.400</td>
<td>0.025</td>
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<td>Volume</td>
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<td>Watershed</td>
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<td>Watershed + Gaussian filer</td>
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<td>Watershed + Gaussian filer</td>
<td>443.766</td>
<td>2307.269</td>
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</tbody>
</table>

Dataset 769.5 for insulin vesicle and 783.5 for mitochondria results.