



## Supervised machine learning for 3D light microscopy without manual annotation : application to spheroids

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Auteur Rasti, Pejman [1], Huaman, Rosa [2], Riviere, Charlotte [3], Rousseau, David [4]

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Résumé en anglais We demonstrate the possibility to realize supervised machine learning for a cell detection task without having to manually annotate images through the sole use of synthetic images in the training and testing steps of the learning process. This is successfully illustrated on 3D cellular aggregates observed under light sheet fluorescence microscopy with a shallow and deep learning detection approach. A performance of more than 90% of good detection is obtained on real images.

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