AutoMax needs only single-stack regular FISH documentation images for automatic reading and scoring

Joachim Moecks¹, Alexander Dressel¹, Pham Dinh Tuan² and Hans-Ulrich Schildhaus³
¹Biomcon GmbH, Germany
²Mathematical Consultant, France
³Medical Faculty Göttingen, Germany

Introduction: Systems for computerized reading of FISH images usually require high quality multi-stack images for valid processing. For the clinical routine this may lead to an actual slower process than performed by the common manual processing. AutoMax is a novel proprietary system developed by Biomcon to provide solutions for automated FISH analysis taking the challenge to base the automatic analysis on a much lower quality standard. AutoMax bases the analysis on regular single-stack images as they arise by routine in the lab documentation. This enables integrating AutoMax into the standard workflow, while keeping the benefits of standardization and speed.

Material & Methods: The present analysis deals with images that were not produced on purpose for automatic analysis but were the side product of the routine clinical assessment. AutoMax developed highly adaptive features in order to meet the wide variety of appearances of these images. Several color purifying steps enhance markedly the signal to noise ratio of the images and can cope also with low quality. AutoMax features a dual image analysis philosophy aside of traditional image analysis approaches, AutoMax employs in addition novel methods from “topological” thinking.

Results: Validation of AutoMax for single-stack documentation images from clinical routine is at the time of this submission underway. The presentation will report results, strengths and issues with the AutoMax approach.

Biography
Joachim Moecks holds a PhD in Applied Mathematics from the University of Heidelberg, Germany. He has worked in various fields of Bioscience and Medicine with contributions in biomath and biostats. He has published more than 70 peer review papers with subject-matter or methodological emphasis. Presently, he is a Science Head of Biomcon, focusing on biomath and biostats contribution for biomarkers in molecular pathology in collaboration with university pathology institutes and pharma companies.

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