This writing is associated with MATLAB code that reproduces results presented in the paper:

I. Kopriva, M. Popović Hadžija, M. Hadžija, G. Aralica, " Unsupervised segmentation of low-contrast multichannel images: discrimination of tissue components in microscopic images of unstained specimens," *Scientific Reports* **5**, 11576; doi:10.1038/srep11576 (2015).

Matlab script in the file SREP_11576 reproduces results presented in Figures 1 to 4 in the main paper and Figures S5 and S6 in Supplementary Note.

In addition to Matlab code, subdirectories /Figure_2, /Figure_3, /Figure_4, /Figure_S5 and /Figure_S6 contain RGB images of unstained specimens as well a stained images (in correspondence with the names used in the paper) used to construct ground truth and interpret results of derived EKM_NMU and EKM_NMF_L0 algorithms.

For synthetic image shown in Figure 1, results are reproduced completely.

For experimental images shown in Figures 2a, 3a, 4a, S5a and S6a separated components are shown. They also can be saved on hard disk if comment sign is removed from line 306 in the code. Selection of components of interest and displaying them according to the chosen color coded scheme is left to the user.

To run the script please set up a path to the directory where code and data are stored. Afterwards, the code should run without problems.

For more information please contact me at `ikopriva@irb.hr` or at `ikopriva@gmail.com`.

More detailed description of the figures stored in:

/Figure_2

Figure_2a.jpg   color microscopic image of unstained specimen of human liver with primary tumor (hepatocellular carcinoma).

Figure_2b.jpg   "ground truth - different slides" color microscopic image of the specimen stained by Hep Par.

Figure_2e.jpg   color microscopic image of the specimen shown in Figure_2a stained subsequently by H&E.

/Figure_3

Figure_3a.jpg   color microscopic image of unstained specimen of human liver with metastasis of colon cancer.

Figure_3b.jpg   "ground truth - subsequent slides" color microscopic image of the specimen stained by Hep Par.

Figure_3d.jpg   color microscopic image of the specimen shown in Figure_3a stained subsequently by H&E.

Figure_3e. jpg   "ground truth - subsequent slides" color microscopic image of the specimen stained by CDX2.

Figure_3f.jpg   "ground truth - subsequent slides" color microscopic image of the specimen stained by CK20.

/Figure_4

Figure_4a.jpg   color microscopic image of unstained specimen of human liver with metastasis of gastric cancer.

Figure_4b.tif   "ground truth - subsequent slides" color microscopic image of the specimen stained by Hep Par.

Figure_4d.jpg	color microscopic image of the specimen shown in Figure_4a stained subsequently by H&E.
Figure_4e.tif	"ground truth - subsequent slides" color microscopic image of the specimen stained by CDX2.
Figure_4f.jpg	"ground truth - subsequent slides" color microscopic image of the specimen stained by LCA.

/Figure_S5

Figure_S5a.jpg	color microscopic image of unstained specimen of mouse fatty liver.
Figure_S5b.jpg	"ground truth - different section" color microscopic image of the specimen stained by H&E.
Figure_S5c.jpg	"ground truth - different section" color microscopic image of the specimen stained by SUDAN 3.

/Figure_S6

Figures_S6a.jpg	color microscopic image of unstained specimen of mouse fatty liver.
Figure_S6b.jpg	"ground truth - different section" color microscopic image of the specimen stained by H&E.
Figure_S6c.jpg	"ground truth - different section" color microscopic image of the specimen stained by SUDAN 3.