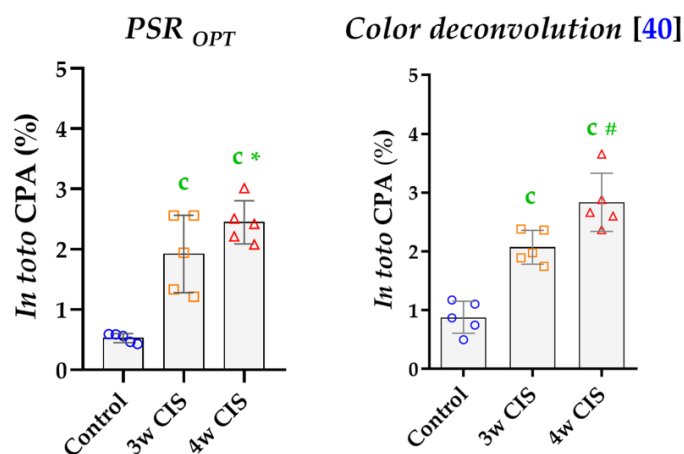
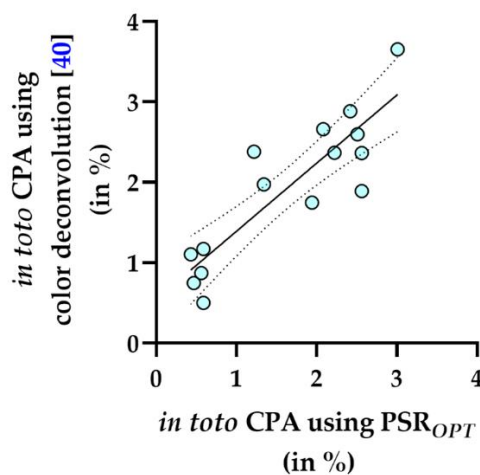


**Supplementary Material 4: Validation of the developed PSR-optimized method vs. previously described PSR-detection method on murine kidney samples.**



**4A.** The PSR<sub>OPT</sub> method was optimized to suit on three different organs and a unique threshold was set to detect fibrosis for all the models. To challenge its validity, this method was compared to the gold-standard method for renal fibrosis, based on a color deconvolution of the signal and an organ-specific threshold (Bienaime *et al.* 2016, [40]). *In toto* CPA values obtained with both methods showed very similar ranges, demonstrating therefore the robustness of PSR<sub>OPT</sub> method. c:  $p < 0.001$  vs. controls, \*:  $p < 0.050$  vs. 3w CIS, #:  $p < 0.010$  vs. 3w CIS.



**4B.** Linear regression of *in toto* CPA values obtained with PSR<sub>OPT</sub> and color deconvolution (Bienaime *et al.* 2016, [40]) methods on all kidney samples. Correlation was excellent between the two methods (Person  $r = 0.874$ ;  $p < 0.001$ ) and data followed a linear trend (goodness-of-fit,  $R^2 = 0.764$ ).