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Declarations under Rule 4.17:

[Continued on next page]

(54) Title: MULTI-MODALITY CONTRAST AND BRIGHTFIELD CONTEXT RENDERING FOR ENHANCED PATHOLOGY DETERMINATION AND MULTI-ANALYTE DETECTION IN TISSUE

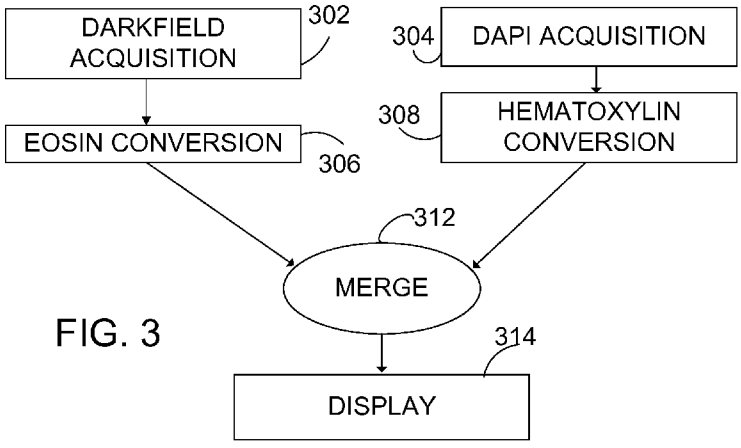


FIG. 3

(57) Abstract: Multiple modality contrast can be used to produce images that can be combined and rendered to produce images similar to those produced with wavelength absorbing stains viewed under transmitted white light illumination. Images obtained with other complementary contrast modalities can be presented using engineered color schemes based on classical contrast methods used to reveal the same anatomical structures and histochemistry, thereby providing relevance to medical training and experience. Dark-field contrast images derived from refractive index and fluorescent DAPI counterstain images are combined to produce images similar to those obtained with conventional H&E staining for pathology interpretation. Such multi-modal image data can be streamed for live navigation of histological samples, and can be combined with molecular localizations of genetic DNA probes (FISH), sites of mRNA expression (mRNA-ISH), and immunohistochemical (IHC) probes localized on the same tissue sections, used to evaluate and map tissue sections prepared for imaging mass spectrometry.

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— *of inventorship (Rule 4.17(iv))*

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