Comparison of low molecular and high molecular weight reagents for localizing tissue components in histological studies

Reactive dyes having a chromophore attached to a substituent is capable of directly reacting with biological system. The covalent bonds that attach reactive dye to natural fibers make them among the most permanent of dyes. Reactive dyes are by far the best choice for dyeing cotton and other cellulose fiber at home or in the art studio. The macro and micro stains have ability to penetrate into cell. The merits of low molecular weight reagents (mini-stains) for localizing tissue components are compared with those of high molecular weight (macro-stains), with respect to stoichiometry, ease of tissue penetration, and particularly specificity. Macro-stains, which are based mainly on antibodies, are likely to be more specific, but they always don’t do so. The designing of mini stains was observed in designing the stains and its application to the delivery of Cupromeronic blue to particular substrates in the critical electrolyte concentration system. This has led to much greater resolving power of mini-stains in electron histochemistry and identification of four specific binding sites for proteoglycans along the collagen fibrils, validating the ‘one proteoglycan: one binding site’ hypothesis. The study has elaborated the use of mini stains in elucidating the histological studies.

Biography
Samina Qasim is an MPhil Scholar in the Department of Applied Chemistry and Biochemistry, Government College University, Faisalabad, Pakistan. She is the In-charge of Government High School Chiniot, Pakistan. She has published her research works in reputed journals.