

The title of the project

Identification of possible biological stains for differential staining of Normal and Malignant tumour tissue

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Potential Partner[s]

Biology School/Chemistry school lecturers

Objective

1. To search for suitable natural stains derived from national plants of Malaysia
2. To determine the differential staining of the new stain on human normal and malignant tumour tissue

Brief methodology/design

[for Chemist/biologist – to write the methodology for the first objective. – the stains must have these qualities

1. permanent
2. able to differentiate acidic nucleus from basic cytoplasm
3. able to pick up loss of desmosomes when normal epithelial cell become malignant
4. able to detect change in nuclear: cytoplasmic ratio – the first change occurring when cells turn malignant [normal n:c ratio is 1:4-8]

For the 2nd objective – 100 Normal and 100 Epithelial Malignant human tissues obtained from the archives of Pathology laboratory. The ability to differentiate will be scored and statistically analysed

Outcome of the projects

1. to replace immunochemistry which is expensive – cost up to 100 ringgit per test [we use a lot in Pathology lab] –most of the operating budget of all pathology labs in the world is consumed by purchasing immunohistochemistry
1. A new biodegradable tissue stain for histo-pathology use