



SAN DIEGO'S NATIONAL CANCER INSTITUTE – DESIGNATED CANCER CENTERS



C3 / Pedal the Cause 2014

“Highly selective, synthetic, cleavage specificity-based nanobiosensors for tumorigenic and anti-tumorigenic MMPs”

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Abstract:

There is consensus among professionals that matrix metalloproteinases (MMPs), the specialized enzymes produced in cancer, are a promising drug target. Despite the urgent need and significant value for cancer patients, MMP biosensors are currently unavailable. As a result, physicians are blindfolded and incapable of selecting optimal treatment regimens for patients.

To overcome these deficiencies, researchers will now be able to test the unique fully synthetic nanobiosensors, which allow the read-out of the individual MMPs in cells/tissues. As a result of this work, clinicians will be armed with a multitude of novel diagnostic/prognostic molecular tools, which can then be used to rationally design a knowledge-based personalized medicine treatment for the individual patients.