UNIVERSAL APPROACH FOR SENSOR & PROBE DEVELOPMENT AND THEIR APPLICATION TO BIOIMAGING

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ABSTRACT: The conventional bioprobe design has been carried out by so-called hypothesis-driven approach. The basic assumption of hypothesis-driven approach is that the scientist “knows the target” in advance, and then design the recognition motif for it. An alternative approach is diversity-driven approach, in which a broad range of fluorescence molecules in a library format are constructed by combinatorial chemistry, as a tool box for unbiased screening. Among several diversity sources, “Diversity Oriented Fluorescence Library Approach (DOFLA)” using fluorophore core with diverse recognition motives around has been the most fruitful in novel bioprobe generations. Using DOFLA, various colorful bioimaging probes based on BODIPY structure from stem cells to Neurons will be demonstrated.

References: