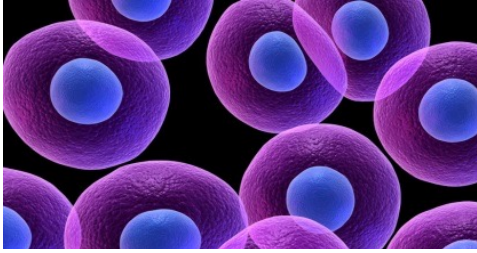


**Sensing and drug delivery
in live cells**



**Killing of antibiotic resistant bacteria
Inhibition of antibiofilm formation**



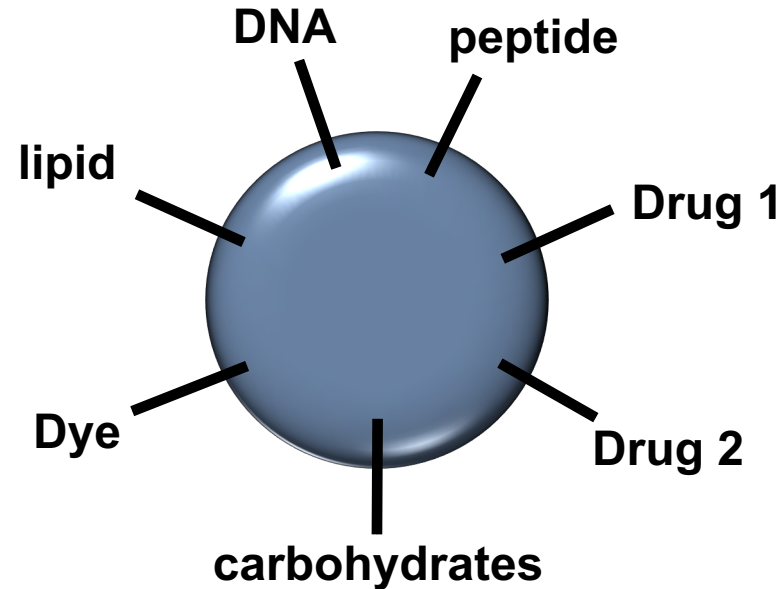
DNA sensors for complex media



The Kanaras group



Advanced Nanomaterials



Importance of nanomaterials:

- a) Carrier of multiple molecules
- b) Higher reactivity at the local microenvironment.
- c) Biodegradable (for organic particles).
- d) Properties of the core if inorganic (i.e. electrochemical, optical, magnetic, thermal).

**Functional Nanomaterials and
Applications Lab**

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What we can offer: Designed nanomaterials with tailored properties for sensing and killing multidrug resistant bacteria, and for preventing biofilm formation (e.g. nano-coatings).

Recent relevant work on nanoparticles for bacteria killing: ACS Appl. Mater. Interfaces **2020**, *12*, 27994–28003