

One Pot Diagnostics

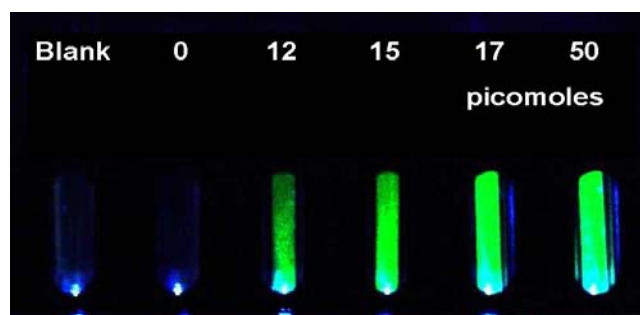


pathogen detection * ultrasensitive detection *in vivo* diagnostics *
drug delivery peptides * liposomes

Advanced Biomedical (ABL) specialises in sensitive “one pot” diagnostics, which are particularly suited to low-skill strip tests and simple automated assays for complex samples, including hormones, drugs of abuse, explosives, pesticides, antibiotics, pathogens, their toxins and antibiotic resistance.

Unique peptides are simply modified to detect a wide range of analytes and rapidly generate quantitative amplified responses for any reader including the naked eye. Signals include fluorescence, colour, conductivity, electrochemical & luminescence.

- Limits of detection picogram / nanogram
- Biochemical (antibody, receptor, enzyme)
- Physicochemical (pH, temperature, redox) and
- Cell-based (pathogen, intracellular) responses
- Multi-analyte panels and multiplexed assays
- Stable, low background, safe reagents
- Suitable for at line, in situ and near patient tests
- Complex samples and materials including food, water, blood, tissue, saliva, sweat & urine



ABL's unique technical position is provided by peptides which are engineered to trigger signal development in small nanometer-sized assemblies. These peptides are made specific to particular analytes by simple chemical modifications of the peptides. The analyte-sensitized peptide trigger may also be armed with a second sensitivity allowing it to be switched on or off, to provide a preformed assembly for simple automation, pre-incubation control, minimization of non-specific background or integration into microelectronic devices. By changing the payload in the assembly, the analyte-sensitized peptide can trigger development of many different optical and electrical signals. The small size and high stability of the sensing assembly allows penetration into complex samples to target trace analytes *in situ* or report on localized responses *in vivo* (eg tissue, cells).

- Unlike homogeneous competitive assays, non-specific background is minimized allowing high sensitivities to be achieved.
- Unlike heterogeneous non-competitive assays, multiple washing and reagent addition steps are not required allowing simple automation or low skill tests.
- Unlike particle-based assays and quantum dots, the assemblies do not only bind as passive labels, but also respond to diagnostic specificities.
- Ultra-high sensitivity can be achieved when used with individual particle or single molecule detection systems.

ABL – Ultrasensitive-Homogeneous Diagnostics For Your Analyte

Reagent supply, assay solutions and *licenses available.

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