

**ABL specialises in disease-responsive delivery of drugs and diagnostics**

*Bioburst* delivery results in rapid release of drug payloads or activation of diagnostic contrast agents when *Bioburst* senses abnormal micro-physiology or biochemistry in diseased tissue (as shown below by quantitative *in vivo* bioimaging of release in a tumour).

**ABL's unique technical position** is provided by peptides which are engineered to trigger the release or activation of payloads held in liposomes. These are small enough (40 – 100 nm) to escape from blood capillaries supplying diseased tissue. By changing their payload, either drugs can be released or *in vivo* diagnostic agents can be activated to provide image contrast for diseased tissue.

No significant toxicity has been detected for *Bioburst* assemblies:

- no detectable erythrocyte lysis
- insignificant immune response to peptides (locked into liposome membrane)
- no detectable adverse effects from excess doses.

*Bioburst* is made selective to the particular diseased tissue by simple modifications of the peptides to provide multiple triggers. These can be tailored to particular diseased states:

- physiochemical triggers: pH (sensitivity <0.4 units), redox, temperature, light;
- enzymic triggers e.g.: proteases, phosphorylases, phosphatases, glycosidases;
- receptor/ligand and antigen binding.
- More than one trigger can be incorporated into the same peptide to operate in series and a response to both is required for payload release or activation.
- Multiple triggers can be incorporated to operate in parallel to release or activate payload proportionately to each of (or to any of) the selected biochemistries (eg for prostate specific activation *via* PSA plus hypoxia triggering).

Liposomes are made from generally-regarded as safe (GRAS) materials.

**Let us *Bioburst* your drug.**

**Materials supply, delivery solutions and \*licenses available.**

