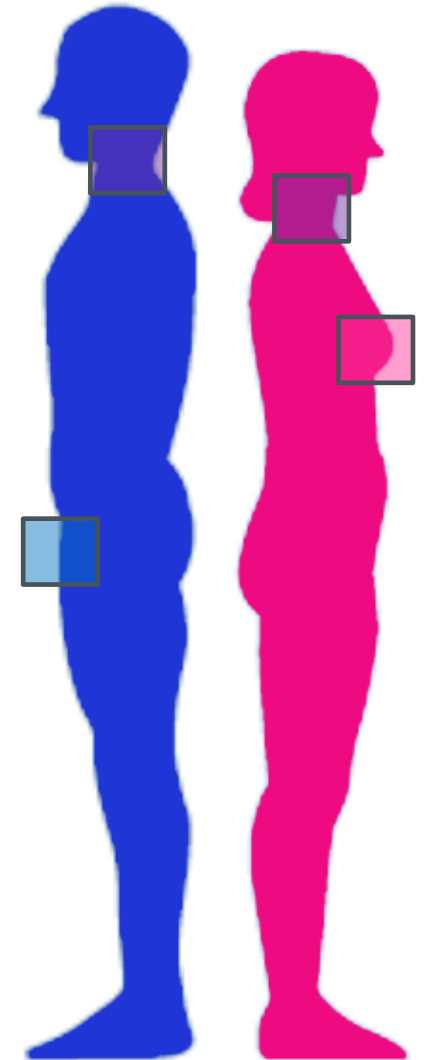

OUR NANOFORMULATION

GNR's cancer-type-directed nanoformulations will remove the tumor lesion by avoiding invasive surgery. It will also avoid the need of first-line prolonged drug treatment options, which are the primary cause of disease recurrence.

It is unique amongst cancer treatment regimes, because unlike current regimes it is not dependent on cellular process to kill cell tumors.

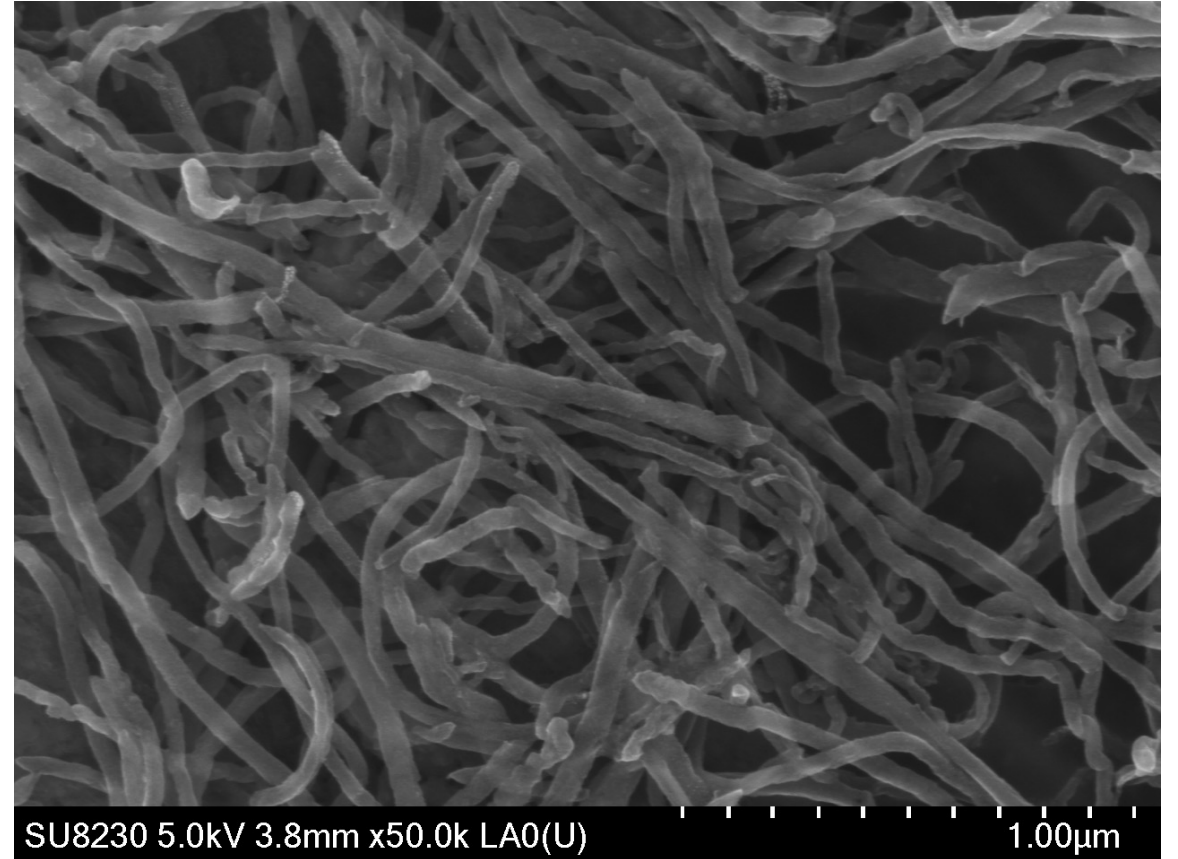
The advantages of photothermal platform developed with our nanoformulations is:

- It is a minimally invasive therapeutic method.
- directly targets the tumor cells and remains inert until the activating laser is applied
- Only the tumor lesion is treated with organs being kept intact.
- It addresses genetically-heterogeneous tumors as the critical mass of nanoparticles at the tumor site is very sufficient to damage all tumor cells whether directly targeted or not - which is equivalent to performing micron-precision surgery.
- Has excellent and safe systemic delivery properties without toxic effects, as the carbon nanotube is very biocompatible
- With respect to outcomes, there are no irreparable side-effects or the threat of developing resistance.



OUR NANOFORMULATION

What differentiates GNR's nanoformulation is that they are modified with a targeting moiety that would direct them to cell surface receptors of specific cancer types. The field of cancer biomarkers and accessible bioinformatics, it has made it possible to designate specific targeting molecules to specific cancers and their subtypes.



OUR NANOFORMULATION

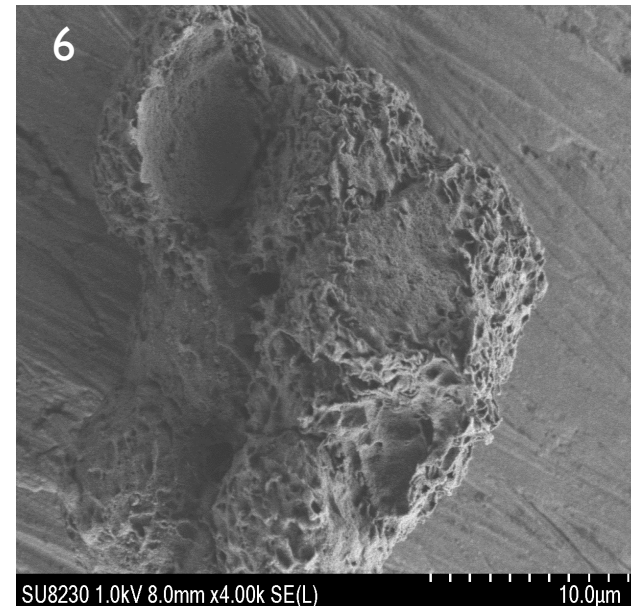
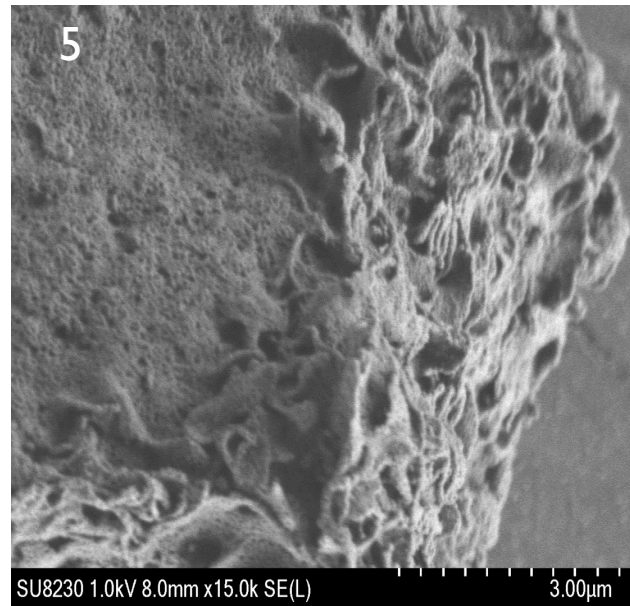
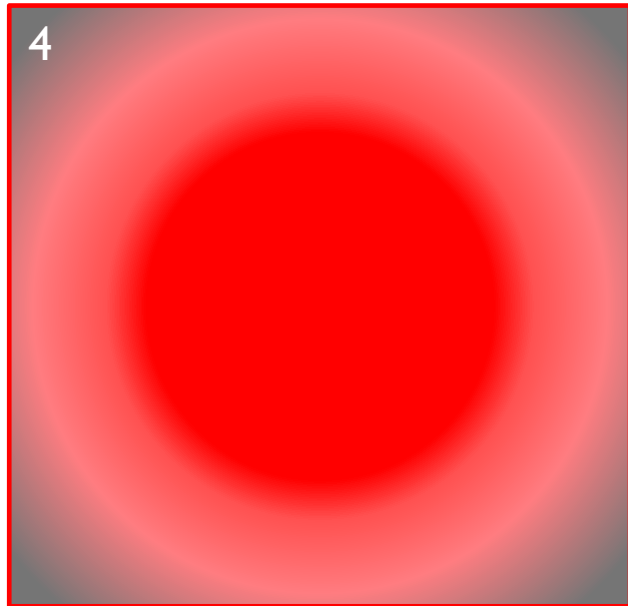
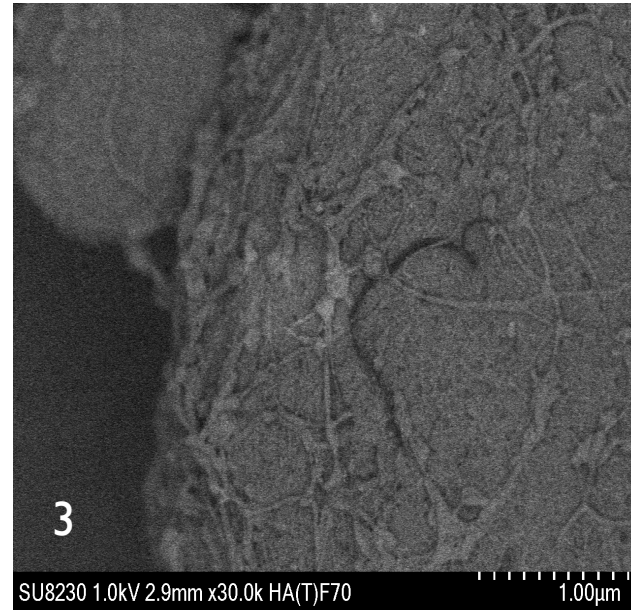
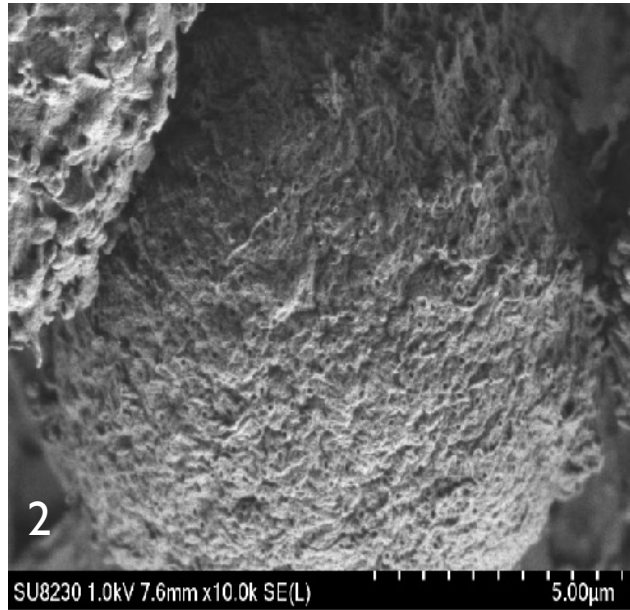
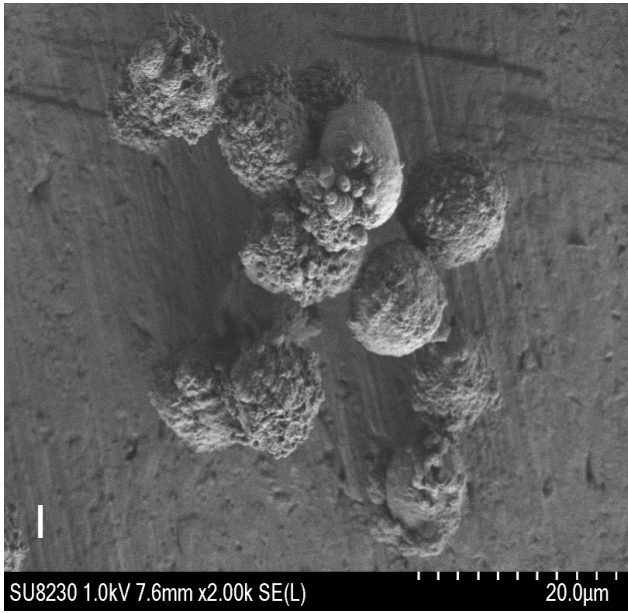
GNR's patented nanotherapeutic technology offers a new class of cancer agents to rapidly advance the field nanotechnology into cancer therapeutics.

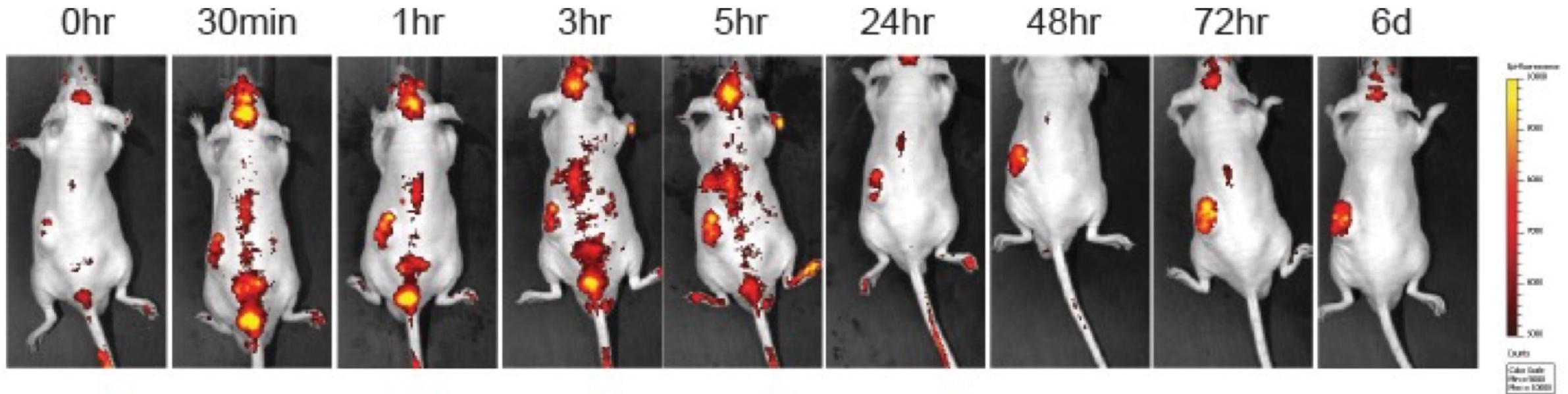
For the last decade, GNR's R&D has been working with multi-walled carbon nanotubes (MWCNTs) to exploit its inherent photothermal properties to develop a cancer targeting agent that will result in the directed ablation of tumors.

The properties of nanoformulation included:

- Surface modification facilitate different conjugation chemistries
- The generation of greater than 400 °C when exposed to laser light
- The near-field heat generated by MWCNTs physical destroys the tumors, without damaging vulnerable surrounding tissues







With its nanoformulation, GNR has been quickly able to demonstrate:

- Tagging of different targeting molecules
- Targeted photo-ablation of moiety expressing cancer cells
- The wavelength of the ablative laser is almost invisible to human tissue, therefore, the nanoformulation is able to absorb the majority of the light
- In pre-clinical animal models have been able to:
 - Prolonged retention of the nanoparticles, greater than 6 days, at the tumor site. This provides a wide window to deliver the photothermal treatment
 - Less than 4-minute laser exposure to ablate <1 cm diameter tumor.
 - No tumor recurrence >5 weeks.

