



## Tubers To Tumors

Brain tumors can be one of the most difficult types of cancer to treat. Improvements by Wisconsin-based Quantum Devices, Inc., in the Light Emitting Diodes (LEDs) developed for ASTROCULTURE<sup>®</sup> has helped advance photodynamic therapy. ASTROCULTURE<sup>®</sup> is a commercial plant research facility developed by the Wisconsin Center for Space Automation and Robotics, a Commercial Space Center. Photodynamic therapy is a method used to destroy the tumor without damaging the delicate brain tissue around it. The LEDs, which remain cool to the touch for hours even though they can produce up to several times the energy of the Sun in the wavelengths at which they operate, are used in conjunction with light sensitive chemotherapy drugs for this process. Since the LED unit can be purchased for a fraction of the cost of a laser, this work has helped reduce the cost of treatment while making it more effective. In addition, the LEDs seem to be able to stimulate the growth of tissues to aid in the healing of wounds, and investigations into this effect are underway.

**For more information, please visit:**

**<http://commercial.nasa.gov>**

**or write to:**

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