

## KU Industry Outreach Case Study: **Pinnacle Technology, Inc.**



*Close-up of a Pinnacle biosensor*

**Location:** Lawrence, Kansas

**Established:** 1995 in Lawrence, Kansas

**Leadership:**

Donna Johnson, President  
David Johnson, Vice President

**Business:** Biomedical devices and industrial control systems



*KU biochemistry graduate Daniel Aillon works for Pinnacle as a chemist.*

### **The Need**

Current techniques used to monitor brain chemistry during research on Parkinson's Disease, Alzheimer's Disease, and stroke have a lag time of several minutes, involve a hard connection, and require unconscious animal test subjects.

### **The Research**

KU research resulted in an enzyme-based electrochemical biosensor that offers researchers the ability to monitor *in vivo* changes in glutamate or glucose concentration in real time. The device is wireless and utilizes conscious test subjects, making the results more meaningful and reliable.

### **The Market**

The use of animal test subjects by hospitals, universities and pharmaceutical companies is expected to grow 50% in the next five years. Growth in the biosensor device market is expected to exceed 20% per year during that period. Pinnacle provides a turn-key compliment of biosensors, electronics packages, and other devices required to perform this type of research, and is well-positioned to take advantage of market growth.

### **The Vision**

Pinnacle has room to expand at its existing Lawrence location, and hopes to double or triple in size in five years. It has received more than \$5 million in SBIR grants to develop new products for market. It's possible the biosensor could be adapted for human subjects at some point in the future. Most Pinnacle employees are KU graduates, and the university is a ready source of well-prepared employees.

### **Collaboration with KU**

KU licenses its biosensor technology to Pinnacle. Faculty members working with Pinnacle on research projects include chemists George Wilson, Susan Lunte and Michael Johnson. KU has considerable faculty expertise in the neurosciences, plus a new Bioengineering Research Center that could potentially help Pinnacle reduce rejection of the biosensor by test subjects and lengthen implantation time.

### **More Information**

To learn more about how KU can collaborate with your company on research projects, contact:

**Carey Novak**

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