



Technology Summary

Peconic LLC is striving to achieve more advanced medical diagnosis of cancer DNA epigenomes through ultra-high-resolution epigenome monitoring, applicable for research and medical groups. The epigenome, a set of chemical compounds that modify the genome and affect gene expression, constitutes the “readers” of the DNA genome, which instructs all life processes. Monitoring the epigenome provides insight into cell type identification—a critical component in the development of medical diagnostics—and how cells are regulated.

Application & Market Utility

Peconic LLC is developing third-generation technology to monitor thousands of biomarker “readers”. By monitoring the “readers”, environmental influences integrated in a person’s genetic blue print and affecting gene expression can be observed and tracked, providing a complete picture of health prospects. Through these means, Peconic’s ChIP-exo technology can identify cancer subtypes. Classifying a cancer based on its epigenome allows for tailored cancer therapies and improved patient outcomes, and may also translate into increased clinical success in drug discovery.

Next Steps

Seeking research collaboration and licensing opportunities.

TECHNOLOGY READINESS LEVEL

4-7

Seeking

Investment | Licensing | Research

Keywords

- improved cancer diagnosis
- epigenome monitoring
- epigenome profiling
- cell type identification
- cell regulation

Researchers

B. Frank Pugh, Ph.D.

Founder

[Online Bio](#)

Office of Technology Management Contact

Smith, Matthew
mds126@psu.edu
814-863-1122