Acute kidney injury (AKI) is a common surgical complication that affects up to 50 percent of ICU patients. It leads to increases in mortality, hospital stays, and costs. Early detection of changes in renal function is critical to prevent disease progression. Existing methods of monitoring kidney health, however, take hours to obtain results and fail to detect changes until after kidney injury has occurred. The proposed technology enables continuous, real-time monitoring of urine flow and kidney health. Low oxygen is a major determinant of AKI. By placing a probe in pre-existing catheter technologies, the monitor measures oxygen tension in the urine to facilitate early detection and intervention of AKI.

**TECHNOLOGY SUMMARY**
Acute kidney injury (AKI) is a common surgical complication that affects up to 50 percent of ICU patients. It leads to increases in mortality, hospital stays, and costs. Early detection of changes in renal function is critical to prevent disease progression. Existing methods of monitoring kidney health, however, take hours to obtain results and fail to detect changes until after kidney injury has occurred. The proposed technology enables continuous, real-time monitoring of urine flow and kidney health. Low oxygen is a major determinant of AKI. By placing a probe in pre-existing catheter technologies, the monitor measures oxygen tension in the urine to facilitate early detection and intervention of AKI.

**FEATURES AND BENEFITS**
- Enables early detection of changes in renal function and AKI risk.
- Facilitates real-time monitoring of kidney health.
- Reduces length of ICU stay and decreases ICU costs.
- Integrates with pre-existing catheters.

**INVENTOR PROFILE**
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