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(54) **SYSTEMS AND METHODS FOR MONITORING AND CONTROLLING INTERNAL PRESSURE OF AN EYE OR BODY PART**

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USPC 600/398, 405, 406, 561; 604/540, 541, 604/9
See application file for complete search history.

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(57) **ABSTRACT**

Systems and methods for automatically monitoring and controlling pressure in a body part are disclosed. The systems include an implantable tube with one open end of the tube implanted in the body part, an implantable valve coupled with the tube having at least one open state and a closed state, an implantable sensor for measuring pressure, and an implantable control device coupled with the sensor and the valve. The control device switches the valve between the at least one open state and the closed state, based on pressure information received from the sensor. When the valve is in the at least one open state, the tube drains fluids from the body part due to a difference of pressure between the open ends of the tube. Methods for using the systems to administer drugs and monitor and control fluid pressures in various biological systems are also disclosed.

27 Claims, 14 Drawing Sheets