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(71) Applicant: **IDEXX LABORATORIES, INC.** [US/US];
One IDEXX Drive, Westbrook, Maine 04092 (US).

(72) Inventors: **HAMMOND, Jeremy**; c/o IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook, Maine 04092 (US). **AGUIAR, Jason**; c/o IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook, Maine 04092 (US). **ERICSON, Lucy**; c/o IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook, Maine 04092 (US). **BUTCHER, Timothy**; c/o IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook,

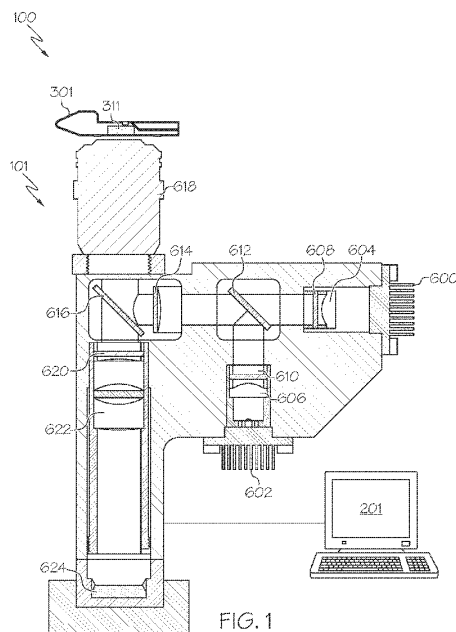
Maine 04092 (US). **LIN, Jui-Ming**; c/o IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook, Maine 04092 (US).

(74) Agent: **EPSTEIN, Matthew D.** et al.; 755 West Big Beaver Road, Suite 1900, Troy, Michigan 48084 (US).

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(54) Title: SYSTEMS AND METHODS FOR BIOLOGICAL OPTICAL IMAGING WITH ARTIFICIAL PARTICLES AS REFERENCES



(57) Abstract: Systems and methods for use with a biological sample include a microscopy device, a diluent, a sample holder, and one or more of lyophilized cakes comprising artificial particles. The lyophilized cakes and the biological sample are mixed with the diluent in the sample holder to form a solution. The biological sample is imaged with the artificial particles as reference markers using the microscopy device. A settling time of the artificial particles is shorter than or equal to a settling time of the biological sample.

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