



# MGD5 MICROBUBBLE GENERATION SYSTEM



## artenga makes bubbles

We provide medical researchers an effective means to develop treatments and diagnosis using microbubbles.

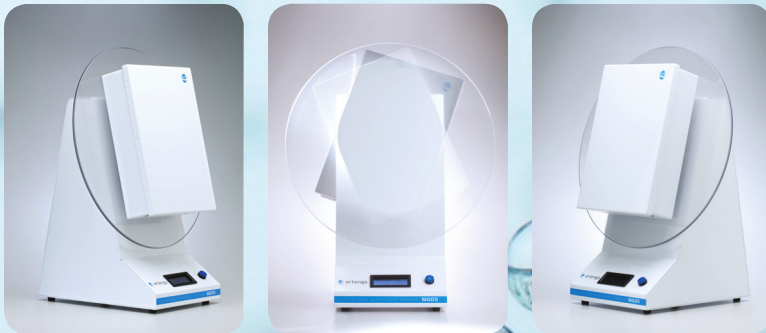
The MGD5 generates gas microbubbles on demand with parameters which can be adjusted and optimized for different applications.

### Research Opportunities

- Localized drug and gene therapy delivery
- Ultrasound and microbubble sonoporation to improve drug uptake and efficacy
- Enhance ultrasound therapies
- Drug/bubble combinations
- Targeted delivery
- Molecular imaging
- Co-development and engineering specific to your application

### Artenga Microbubbles

- 2 micron mean bubble diameter
- Sharp size distribution peak - 99% under 2.5 $\mu$ m
- 4-5 micron size variants available
- Microbubble gas types: octafluoropropane, perfluorobutane, decafluorobutane, other PFC variants, air, PFC and air mix, nitrogen, other gas types
- Vary shell material: lipids, surfactants, PEG, other
- Concentration 1 x 10<sup>9</sup> microbubbles/ml
- Homogeneous concentration; microbubble population evenly distributed throughout carrier liquid
- Bind drugs and targeting material to bubble shells
- Incorporate linkers and diagnostic compounds in bubble shells
- Repeatable means to separate bubbles from carrier liquid, purify, and concentrate as required
- Terminally sterilized; solution biologically filtered; sterility testing of lots upon request
- ISO13485 compliant manufacturing available



### ARTENGA INC.

169 Ethel St. Ottawa, ON K1L 5X3 Canada  
613-322-8585 | sales@artenga.com  
[www.artenga.com](http://www.artenga.com)