



AfaSci, Inc. CA. USA

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
National Institutes of Health



National Institutes of Health Commercialization Assistance Program  
(NIH-CAP)

## Company Profile

**Industry Sector:** Instruments for Research and Drug discovery

**Company Overview:** AfaSci, Inc. has been a pioneer in the development of a wireless, non-invasive rodent behavior monitoring system in an animal's homecage. This instrumented homecage behavioral monitor is marketed as the SmartHomeCage™ series for in vivo high throughput screening of new drugs and for behavioral phenotyping of transgenic or gene knockout mice. Technological innovation and a deep understanding of the biological research and drug discovery marketplace have allowed AfaSci to be awarded multiple grants from the Small Business Innovative Research grants and the Small Business Technology Transfer Program (SBIR/STTR) of the National Institute of Health (NIH). AfaSci has established research collaborations with SRI International (California), Pennsylvania State University (Pennsylvania), and George Washington University, (Washington, D.C.).

**Target Market(s):** Academic and industrial biological science research laboratories.

## Management

### Leadership:

Simon Xie, M.D., Ph.D, President and Chief Scientific Officer  
Jingxi Zhang, M.D., Ph.D, Chief Technology Officer  
Sue Li, Ph.D, Controller

### Scientific Advisory Board:

Lawrence Toll, Ph.D.: Senior Director of Neuropharmacology, SRI International, CA  
Taline, Khroyan, Ph.D.: Principal Investigator in pharmacology and drug abuse research, SRI International, CA  
Jidong Fang, M.D., Ph.D: Pennsylvania State University School of Medicine, PA  
Lawrence Rothblat, Ph.D.: the George Washington University, Washington, D.C.

## Key Value Drivers

### Functions of SmartHomeCage™ series

- Rodent sleep/wake monitoring: Continuous monitoring from seconds to weeks
- Detection of locomotion (traveling distance and speed) and movement patterns
- Light/dark preference test to measure anxiety
- Stereotypic behaviors: grooming and rearing
- Abnormal behaviors (tremor and seizure) and death event
- Cognitive function assessment using visual discrimination
- Automated rodent sleep deprivation apparatus with online-sleep detection

### Competitive Advantage:

- Non-invasive technology and wireless operating
- Automated data analysis programs are sophisticated yet user-friendly
- AfaSci provides individualized guidance and advice on test protocol and behavioral paradigms

**Plan & Strategy:** Seeks investors and a professional manager to lead commercialization

\*Technology funded by the NCRR, NIMH and IHLB and being commercialized under the NIH-CAP

