

## **TLC Highlights Data Presentations on Lead Product Candidate TLC599 at Osteoarthritis Research Society International (OARSI) 2019 World Congress**

**SOUTH SAN FRANCISCO, CA and TAIPEI, Taiwan – May 6, 2019** – TLC (Nasdaq: TLC, TWO: 4152), a clinical-stage specialty pharmaceutical company dedicated to the development and commercialization of novel nanomedicines designed to target areas of unmet medical need in osteoarthritis, pain management, ophthalmology and oncology, presented data from numerous recent studies on its lead product candidate, TLC599, at the Osteoarthritis Research Society International (OARSI) World Congress, which took place May 2 to 5, 2019 in Toronto, Canada.

### **Oral Presentation on Clinical Data from Phase II Study**

#### **Single Intra-articular Injection of TLC599 Provided Sustained Pain Relief through 24 Weeks in Participants with Symptomatic Knee Osteoarthritis**

Dr. David Hunter, Professor of Medicine at University of Sydney, presented the abstract with results of a Phase II clinical trial for TLC599. A summary of the findings is as follows:

- TLC599 provided significant improvements in WOMAC (Western Ontario and McMaster Universities Osteoarthritis Index) and VAS (visual analog scale) Pain as early as within the first week.
- TLC599 had significantly greater WOMAC Pain reductions at every scheduled visit; similar results were observed in WOMAC Function scores.
- TLC599 had significantly greater VAS Pain reductions at every scheduled visit.
- Acetaminophen consumption in the TLC599 group was numerically less at each time point; after 12 weeks, acetaminophen consumption was 5 times greater in the placebo group than the TLC599 group.
- Most adverse events (AE) were mild to moderate; there were no deaths or life-threatening AEs, no treatment-related serious AEs, nor discontinuations due to AE.

### **Poster Presentation on Cartilage Damage**

#### **Cartilage Damage and Synovial Toxicokinetic Study of a Sustained Release Liposomal Formulation of Dexamethasone Sodium Phosphate (TLC599) following Intra-articular Injection in Healthy Dogs and Rabbits**

This poster evaluated cartilage damage by TLC599 in comparison to current steroid treatments, as well as toxicokinetic and pharmacokinetic profiles of TLC599 in five preclinical studies. Highlights of the findings are as follows:

- The concentration of dexamethasone phosphate (DP) in synovial fluid following injection of TLC599 maintained through 120 days, demonstrating prolonged local exposure.
- No marked cartilage toxicity was observed after single-dose and multiple-dose injections of TLC599. In contrast, proteoglycan loss in cartilage was observed for both triamcinolone acetonide (TA) and an extended release formulation of TA.

“TLC was honored to have Dr. David Hunter as the oral presenter of our clinical data at OARSI,” TLC President George Yeh commented. “Dr. Hunter is one of the leaders in OA research and the principal investigator in our clinical trials. I would also like to congratulate Dr. Hunter on winning this year’s OARSI Clinical Research Award, which represents the recognition of his significant contribution in clinical research related to osteoarthritis.”

The abstracts and more information on the presentations can be accessed under “News and Events” in the Investors section of TLC’s website at [www.tlcbio.com](http://www.tlcbio.com).

Press Release

**About TLC599**

TLC599 is a BioSeizer sustained release formulation of dexamethasone sodium phosphate (DSP) intended for the treatment of osteoarthritis (OA) pain. OA is a joint disorder involving the degeneration of the articular cartilage that leads to inflammation of the soft tissue and bony structures of the joint. Current intraarticular sustained release anti-inflammatory treatments for OA have potentially toxic side effects and may lead to the destruction of cartilage filler proteins. An *in vivo* toxicity study by staining of the cartilage showed TLC599 to be cartilage sparing compared to current treatments. In its Phase II clinical trial, TLC599 was well-tolerated, fast-acting, and demonstrated statistically significant and clinically meaningful improvement in pain relief compared to placebo from Day 3 through Weeks 12, 16, 20 and 24; over half of the patients in the TLC599 group had a durable response, maintaining  $\geq 30\%$  in WOMAC Pain score reductions at all visits through 24 weeks.

**About TLC**

Taiwan Liposome Company (Nasdaq: TLC, TWO: 4152) is a clinical-stage specialty pharmaceutical company dedicated to the research and development of novel nanomedicines that maximize the potential of its proprietary lipid-assembled drug delivery platform (LipAD™). TLC believes that its deep experience with liposome science allows TLC to combine onset speed and benefit duration, and improve active drug concentrations while decreasing unwanted systemic exposures. TLC's BioSeizer® technology is designed to enable local sustained release of therapeutic agents at the site of disease or injury; its NanoX™ active drug loading technology is designed to alter the systemic exposure of the drug, potentially reducing dosing frequency and enhancing distribution of liposome-encapsulated active agents to the desired site. These technologies are versatile in the choice of active pharmaceutical ingredients and scalable with respect to manufacturing. TLC has a diverse, wholly owned portfolio of therapeutics that target areas of unmet medical need in pain management, ophthalmology, and oncology. TLC is consistently ranked in the top 5% among all listed companies in Taiwan's Corporate Governance Evaluations.

**Media Contact:**

Dawn Chi  
Corporate Communications  
+886 2 2655 7377 ext. 136  
[dawn@tlcbio.com](mailto:dawn@tlcbio.com)

**Investor Contact:**

Xuan Yang  
Solebury Trout  
+1 646 378 2975  
[xyang@troutgroup.com](mailto:xyang@troutgroup.com)