

## “Developmental Epigenetics and the Failure of Regeneration in the Mammalian Inner Ear”

---



### Neil Segil, PhD

Professor, Department of Stem Cell Biology and Regenerative Medicine

USC Tina and Rick Caruso Department of Otolaryngology – Head and Neck Surgery  
Keck School of Medicine of USC

**Wednesday, October 23, 2019**

**\*\*1-2 p.m.\*\***

**Event Time Changed**

The Saban Research Building Auditorium  
4661 Sunset Blvd., Los Angeles, CA 90027

Lunch will be provided to seminar guests,  
first come, first served.

**Help us save plastic! Bring your own water bottles.  
Water will be available to fill your bottles.**

---

Sensory hair cells of the organ of Corti do not spontaneously regenerate in the mature mammal, making deafness due to hair cell loss permanent. Our working hypothesis is that during developmental maturation, epigenetic barriers arise that block the re-activation of developmental gene regulatory networks essential for regeneration. I will discuss our studies of the epigenetic mechanisms regulating the complex cellular patterning of the organ of Corti during development, the postnatal changes that we hypothesize lead to the failure of regeneration in the mature organ, and the utility of “lineage reprogramming” approaches to define the mechanisms underlying these changes.

---

### Hosted by David Cobrinik, MD, PhD

The Vision Center and The Saban Research Institute  
Children's Hospital Los Angeles  
Associate Professor

Ophthalmology and Biochemistry & Molecular Medicine  
The USC Roski Eye Institute and Norris Comprehensive Cancer Center  
Keck School of Medicine of USC