# JelliSee Accommodating IOL Design Parameters

- Based on Biomechanics of a Child's Natural Lens
- Required features
  - 7 diopters amplitude of accommodation
  - Independent of capsular fibrosis
  - Independent of capsule elasticity
  - Requires less than 0.2 mm overall diameter change of the lens capsule to achieve full accommodation/ dis-accommodation
  - Requires less than 0.08 N cumulative radial force
  - Foldable
  - In the bag placement

### Accommodating IOL - Engineering design



#### • An accommodated IOL that disaccommodates

- One-piece foldable IOL
- Elasticity is built in
- Does not rely on retained capsular elasticity
- *Flexible but firm* anterior surface, liquid-filled lens
- Actuators apply radial outward force to the *anterior* surface



# FEA analysis Dynamic range of 7.0 D

Only 114 microns of total diameter change required for full range of accommodation

AIOL Dioptric Power



## <u>**Confirmed</u>** in the Lab (Adrian Glasser PhD) <u>**Demonstrated**</u> in a Primate (U of Wisconsin)</u>

#### Adrian Glasser PhD





- Primate
  - 15 months post -op
  - 7.0 diopters amplitude of accommodation
    - 2.0 latent (Atropine)
    - 5.0 diopters active (pilocarpine)



### Proven in a Human– One year post-op 70-Year-old compared to healthy 10-year-old child





