EVALUATION OF TOPICALLY APPLIED CROSS-LINKED HYALURONIC ACID (REMEND®) ON THE OCULAR SURFACE OF CLINICALLY HEALTHY DOGS (CE Plummer, 1 BC Martins, 2 C Bolch, 3 PS Martinez, 1 Carbia BE, 1) College of Veterinary Medicine, University of Florida; 1 School of Veterinary Medicine, University of California- Davis; 2 Institute for Vision Research, University of Florida; 3

Purpose. To evaluate the effects of a topically applied cross-linked HA (Remend Eye Lubricating Drops® - Bayer Animal Health) on the ocular surface of clinically normal dogs. **Methods**. Twenty dogs with normal ophthalmic examinations received tear ferning tests (TF-M7, TF-M5, and TF-R), Schirmer's tear test I (STT-I), tear film breakup time (TFBUT), slit lamp biomicroscopy, indirect ophthalmoscopy and rose Bengal dye staining (RB) on the first day of examination (day 0), 1 week after initial examination (day 7), and 2 weeks after examination (day 14). Following examination and baseline testing, subjects received cross-linked HA (Remend ®) two times a day (BID) on the right eye (OD). The left eye (OS) served as control and received saline BID. Tear fluid samples from both treated and control eyes were evaluated for HA levels by ELISA prior to and at several time points following treatment. **Results**. For the duration of the study, there was no statistically significant difference in aqueous tear production (STT-I) or RB retention between study and control eyes. There was a statistically significant improvement in TFBUT between study and control eyes on Day 7 ($p<0.001$) and Day 14 ($p<0.001$). There was a statistically significant improvement in TF-M7 scores ($p<0.02112$) and TF-R scores by Day 14 ($p< 0.01097$). HA was present in measurable quantities in the tear fluid at 30 minutes and one hour after topical application in treated eyes. **Conclusions**. Topically-applied cross-linked HA may improve tear quality, especially tear film stability, in dogs. Supported by Bayer Animal Health. **None**.