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# Ophthalmic Research

Journal for Research in  
Experimental and  
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## EVER 2005

European Association for Vision and Eye Research

### Abstracts

October 5–8, 2005  
Vilamoura, Portugal

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*J. Jonas, Heidelberg, Germany*

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**Protein adsorption to silicone-hydrogel contact lenses – An in vivo study**

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**Purpose** To analyse the protein adsorption to different types of silicone-hydrogel contact lenses (CL).

**Methods** The CL used in these work were Purevision<sup>™</sup>, Focus<sup>®</sup> Night & Day<sup>™</sup>, Acuvue<sup>®</sup> Advance<sup>™</sup> with Hydraclear. It was also used conventional disposable hydrogel Acuvue<sup>®</sup> for comparison. The adsorbed proteins were recovered after the contact lenses removed from patients from both sexes with mean ages of  $22.1 \pm 4.2$  years. Every patient used a conventional disposable hydrogel during 15 days and a silicone-hydrogel CL during 1 month, one in each eye, in a daily wear schedule. Proteins were analyzed by SDS-Page.

**Results** Conventional hydrogel and silicone-hydrogel CL used by the same patient exhibit different adsorbed proteins. This result suggests that the tear film proteins may establish different interactions with a conventional hydrogel and a silicone-hydrogel. It was also observed different proteins adsorbed on the several types of silicone-hydrogel CL used in this study. The CL with no surface treatment (Acuvue<sup>®</sup> Advance<sup>™</sup> with Hydraclear) appears to adsorb a major amount of proteins compared with the one with surface treatment (Purevision<sup>™</sup> and Focus<sup>®</sup> Night & Day<sup>™</sup>).

**Conclusion** The CL material influences, as well as the presence of a surface treatment, the type of tear film protein adsorbed.