

## **LEA4 Protein Is Likely to Be Involved in Direct Protection of DNA Against External Damage**

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### **Abstract**

© 2016, Springer Science+Business Media New York. Anhydrobiotic larvae of an African chironomid *Polypedilum vanderplanki* are known to be highly resistant to various abiotic stress factors, including ultraviolet radiation. The comparison of survival rates after different doses of UV irradiation between *P. vanderplanki* larvae and closely related non-anhydrobiotic *Polypedilum nubifer* larvae showed strongly enhanced resistance of *P. vanderplanki* to UV irradiation, especially in completely desiccated state. Plasmid-based assay showed an evidence of contribution of LEA4 protein to the protection of the larvae's DNA against UV damage.

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### **Keywords**

Anhydrobiosis, LEA, Plasmid, *Polypedilum vanderplanki*, Ultraviolet (UV)