



Universiteit  
Leiden  
The Netherlands

## Structure and function of the UVDE repair protein

Paspaleva, K.

### Citation

Paspaleva, K. (2009, April 1). *Structure and function of the UVDE repair protein*. Retrieved from <https://hdl.handle.net/1887/13711>

Version: Corrected Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/13711>

**Note:** To cite this publication please use the final published version (if applicable).

# Structure and function of the UVDE repair protein

Keti Paspaleva



# Structure and function of the UVDE repair protein

**PROEFSCHRIFT**

ter verkrijging van de graad van Doctor aan de Universiteit Leiden,  
op gezag van Rector Magnificus Prof. mr. P.F. van der Heijden,  
volgens besluit van het College voor Promoties  
te verdedigen op woensdag 1 april 2009  
klokke 16.15

door

**Keti Paspaleva**

geboren te Bourgas in 1978

## **PROMOTIECOMMISSIE**

Promotor: Prof. dr. J.P. Abrahams

Co-promotor: Dr. N. Goosen

Referent: Dr. H. Vrieling

Overige leden: Prof. dr. M. Noteborn

Prof. dr. J. Brouwer

Prof. dr. T. Sixma

Dr. E. Thomassen

Prof. dr. B. van Houten (University of Pittsburgh, USA)

For my parents and my beloved granny



## CONTENTS

|                                           |                                                                                                 |     |
|-------------------------------------------|-------------------------------------------------------------------------------------------------|-----|
| <b>Chapter 1</b>                          | General introduction                                                                            | 9   |
| <b>Chapter 2</b>                          | Crystal structure of the DNA repair enzyme UV damage endonuclease                               | 45  |
| <b>Chapter 3</b>                          | Involvement of a carboxylated lysine in UV damage endonuclease from <i>Thermus thermophilus</i> | 61  |
| <b>Chapter 4</b>                          | Damage recognition by UV damage endonuclease from <i>Schizosaccharomyces pombe</i>              | 79  |
| <b>Chapter 5</b>                          | Active site organisation of UVDE - a $Mn^{2+}$ dependent nuclease                               | 103 |
| <b>Summary and general discussion</b>     |                                                                                                 | 129 |
| <b>Samenvatting en algemene discussie</b> |                                                                                                 | 132 |
| <b>Curriculum vitae</b>                   |                                                                                                 | 135 |
| <b>List of publications</b>               |                                                                                                 | 135 |
| <b>Acknowledgements</b>                   |                                                                                                 | 136 |

