

## postdoc position

# understanding chromatin-associated processes in living mammalian cells: nucleotide excision DNA repair

*Nuclear Organization Group (NOG), University of Amsterdam*

and

*Netherlands Institute for Systems Biology (NISB) ([www.sysbio.nl](http://www.sysbio.nl))*

### Job description

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Aim of this project is to unravel the interplay in time and space between proteins involved in chromatin-associated processes, in particular DNA repair in living mammalian cells. The project builds on the detailed in vivo kinetic behaviour of the core repair proteins that has been analysed in a preceding project. The present project will concentrate on chromatin remodelling before repair, chromatin reassembly after repair is complete, as well as DNA damage signalling to other nuclear systems. Experimental results, mainly on cultured living cells, will be integrated in quantitative and predictive models that guide us towards new experiments. This project is carried out in tight cooperation with groups in Rotterdam, Leiden and Heidelberg.

### Requirements

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Candidates should fulfil the following criteria.

- PhD in molecular or cellular biology or in biophysics
- excellent skills in culturing mammalian cells and in molecular genetic methodologies
- able to combine experimental and modelling approaches
- able to communicate with scientists in biology, physics and computational sciences

### Funding

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This project is funded by a grant from the Netherlands Organisation for Health Research and Development (ZonMW) and the Netherlands Organisation for Scientific Research (NWO) to the Van Driel group in Amsterdam group, the Mullenders group at the Leiden University and the Vermeulen and Houtsmuller groups at the Erasmus University Rotterdam.

### Conditions of employment

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Estimated maximum salary per month: around Eur 3500

Employment basis: Temporary for specified period

Duration of the contract: two years

### Additional Information

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Additional information about the vacancy can be obtained from:

Prof. Dr. Roel van Driel

Telephone number: +31 (0)20 525 51 50

E-mail address: [r.vandriel@uva.nl](mailto:r.vandriel@uva.nl)

## Application

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You can apply for this job until August 22 (2009) by sending your application to prof. Dr Roel van Driel; University of Amsterdam and Netherlands Institute for Systems Biology, P.O. Box 94215 1090GE Amsterdam, The Netherlands

E-mail: r.vandriel@uva.nl

Applicants should send a CV, list of publications and the name and address of at least two persons that can be approached to obtain further information.

## Recent relevant recent publications from the NOG group

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- Mone, M.J., T. Bernas, C. Dinant, F.A. Goedvree, E.M. Manders, M. Volker, A.B. Houtsmuller, J.H. Hoeijmakers, W. Vermeulen, and R. van Driel. 2004. In vivo dynamics of chromatin-associated complex formation in mammalian nucleotide excision repair. *Proc Natl Acad Sci U S A*. 101:15933-7.
- Politi, A., M.J. Mone, A.B. Houtsmuller, D. Hoogstraten, W. Vermeulen, R. Heinrich, and R. van Driel. 2005. Mathematical Modeling of Nucleotide Excision Repair Reveals Efficiency of Sequential Assembly Strategies. *Mol Cell*. 19:679-690.
- Dinant, C., M.S. Luijsterburg, T. Hofer, G. von Bornstaedt, W. Vermeulen, A.B. Houtsmuller, and R. van Driel. 2009. Assembly of multiprotein complexes that control genome function. *J Cell Biol*. 185:21-6.
- Luijsterburg, M.S., J. Goedhart, J. Moser, H. Kool, B. Geverts, A.B. Houtsmuller, L.H. Mullenders, W. Vermeulen, and R. van Driel. 2007. Dynamic in vivo interaction of DDB2 E3 ubiquitin ligase with UV-damaged DNA is independent of damage-recognition protein XPC. *J Cell Sci*. 120:2706-16.
- Solimando, L., M.S. Luijsterburg, L. Vecchio, W. Vermeulen, R. van Driel, and S. Fakan. 2009. Spatial organization of nucleotide excision repair proteins after UV-induced DNA damage in the human cell nucleus. *J Cell Sci*. 122:83-91.
- Luijsterburg, M.S., C. Dinant, E. Wiernasz, H. Lans, J. Stap, M.I. Fousteri, D.O. Warmerdam, M.C. Brink, S. Lagerwerf, J.W. Dobrucki, G. Jansen, W. Vermeulen, L.H.F. Mullenders, A.B. Houtsmuller, P.J. Verschure, and R. Van Driel (2009). Heterochromatin Protein 1 is Involved in the DNA Damage Response. *J. Cell Biol*. 185:577-86.
- Luijsterburg, M.S., G. Von Bornstaedt, A.Z. Politi, A.M. Gourdin, M.J. Moné, D.O. Warmerdam, J. Goedhart, A.B. Houtsmuller, W. Vermeulen, R. Van Driel and T. Höfer. Modeling the Assembly and Function of a Chromatin-Associated Mammalian DNA Repair Complex In Vivo. *Submitted*.