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# VII ABBREVIATIONS

| | |
|---|---|
| Å | Angstrom |
| aa | amino acid |
| ATP | adenosine triphosphate |
| bp | base pair |
| BSA | bovine serum albumin |
| ccc | covalently closed circular |
| CLSM | Confocal Laser Scanning Microscope |
| CPP | cell permeable or penetrating peptide |
| Cy3 | Indocarbocyanine |
| Cy5 | Indodicarbocyanine |
| Da | Dalton |
| DAPI | diamidino-2-phenylindol dihydochloride |
| DEPC | diethylpyrocarbonate |
| DHBV | duck hepatitis B virus |
| DMEM | DULBECCOs Modified EAGLE Medium |
| DMSO | dimethylsulfoxide |
| DNA | deoxyribonucleic acid |
| ECL | enhanced chemoluminescence |
| EDTA | ethylenediamin-tetraaceticacid |
| EGTA | [ethylenbis(oxyethylennitrilo)] tetraaceticacid |
| ELISA | enzyme-linked immunosorbent assay |
| endo | endogen |
| EM | electron microscope |
| ER | endoplasmatic reticulum |
| et al. | et alii, latin, meaning 'and others' |
| FITC | fluorescein isothiocyanat |
| GFP | green fluorescent protein |
| x g | gravitation |
| HBc | hepatitis B core protein |
| HBs (L, M, S) | hepatitis B surface protein (large, middle and small) |
| HBV | hepatitis B virus |
| HIV | human immunodeficiency virus |
| HSV-1 | herpes simplex virus type 1 |
| Huh7 | human hepatoma (carcinoma) cell line 7 |
| IF | immunofluorescence |
| kb | kilo bases |
| MAb | monoclonal antibody |
| min | minute |
| mRNA | messenger ribonucleic acid |
| MTS | membrane translocating sequence |
| NLS | nuclear localization signal |
| NPC | nuclear pore complex |
| nt | nucleotide(s) |
| OD | optical density |
| ORF | open reading frame |
| p17, p21… | protein of 17, 21… kDa |
| PHH | primary human hepatocytes |
| pol | polymerase |
| pgRNA | pregenomic ribonucleic acid |
| PAGE | polyacylamide gel electrophoreses |
| PKC | protein kinase C |
| PMSF | phenylmethylsulfonylfluorid |
| PTD | protein transduction domain |
| PVDF | polyvinylendifluorid |
| RNA | ribonucleic acid |
| rpm | rounds per minute |
| RT | room temperature |
| Sf | *Spodoptera frugiperda* |
| SDS | sodium dodecyl sulfate polyacrylamide |
| SV 40 | simian virus 40 |
| T | triangulation number |
| TLM | translocation motif |
| TRIS | tris-(hydroxymethyl) - aminomethane |
| U | unit |
| V | volt |
| VLP | virus like particle |
| WHBV | woodchuck hepatits B virus |
| wt | wildtype |

# VIII FIGURE INDEX

# IX CURRICULUM VITAE

## BOERRIES BRANDENBURG

Date & Place of Birth: 27. February 1976, Berlin, Germany

Education:
- 1990–1995 Robert Koch – High school, Berlin
- 1995–2002 Freie University Berlin, Major: Biology
  Master thesis, Robert Koch-Institute, Berlin, Molecular Virology, Dr. E. Hildt
- 2002–2005 Ph.D. thesis, Robert Koch-Institute, Berlin, Molecular Virology, Dr. E. Hildt

## PUBLICATIONS

Beutin L., Kaulfuss S., Cheasty T., **Brandenburg B.**, Zimmermann S., Gleier K., Willshaw G. and Smith H., (2002), Characteristics and association with disease of two major subclones of Shiga toxin producing strains of E. coli O157 that are present among isolates from patients in Germany, Diagnostic Microbiology and Infectious Disease, 44(4):337-46.

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**Brandenburg B.**, Stoeckl L., Gutzeit C., Roos M., Lupberger J., Gelderblom H. and Hildt E. (2005), Cell permeable nucleocapsids as a novel tool for efficient gene transfer in primary human hepatocytes; submitted.

**Brandenburg B.**, Gutzeit C. and Hildt E. (2005), Cytoplasmic trafficking and nuclear uptake of Hepatitis B Virus capsid; manuscript in preparation.

## ORAL PRESENTATIONS

**Brandenburg B.**, Stoeckl L., Gelderblom H., Hofschneider P. H., Hildt E., (2003), Efficient packaging of nucleic acids into cell-permeable nucleocapsids that serve as a novel tool for gene transfer. International HBV Meeting, Bergamo, Italy.

**Brandenburg B.**, Stoeckl L., Gelderblom H., Hofschneider P. H., Hildt E., (2004), Efficient gene transfer mediated by cell-permeable nucleocapsids. Annual Meeting of the German Virological Society (GfV), Tuebingen, Germany.

**Brandenburg B.**, Cindy Gutzeit, Eberhard Hildt (2005), Intracellular trafficking of hepatitis B virus nucleocapsids. Annual Meeting of the German Virological Society (GfV), Hannover, Germany.

## POSTER

Stoeckl L., **Brandenburg B.**, Hofschneider P. H., Hildt E. (2002) Cell permeable nucleocapsids as a novel tool for safe and efficient gene transfer. Annual meeting of the German Virological Society (GfV), Erlangen, Germany.

**Brandenburg B.**, Stoeckl L., Gelderblom H., Hildt E., (2003), Strategies for packaging of DNA in Virus like Particles. Annual Meeting of the German Virological Society (GfV), Berlin, Germany.

**Brandenburg B.**, Gutzeit C., Luckow A., Hildt E., (2004), The cytoplasmic way of the HBV core. Annual Meeting of the German Virological Society (GfV), Tuebingen, Germany.
Lupberger J., Schneider M., **Brandenburg B.**, Hildt E., (2004), The isolation and funktional characterisation of the Hepatitis B Virus polymerase. Annual Meeting of the German Virological Society (GfV), Tuebingen, Germany.

**Brandenburg B.**, Stoeckl L., Gelderblom H., Hofschneider P. H., Hildt E., (2004), Efficient packaging of nucleic acids into cell-permeable nucleocapsids that serve as a novel tool for gene transfer. European Association For The Study Of The Liver (EASL), Berlin, Germany.

**Brandenburg B.**, Gutzeit C., Hildt E. (2004), Cell permeable HBV nucleocapsids as a new model to investigate the intracellular trafficking in intact cells, Molecular Biology of Hepatitis B Virus, Boston, USA.

**Brandenburg B.**, Stoeckl L., Gutzeit C., Gelderblom H., Hofschneider P. H., Hildt E., (2004), Efficient packaging of nucleic acids into cell-permeable nucleocapsids that serve as a novel tool for gene transfer. Molecular Biology of Hepatitis B Virus, Boston, USA.

## SCHOLARSHIPS / AWARDS

01/2002 – 03/2005 German National Academic Foundation – Fellowship (Studienstiftung des Deutschen Volkes)

07/2003 – 03/2005 e-Fellows-scholarship (supported by McKinsey, Roche, Siemens and Deutsche Bank)

10/2004 Poster prize, International Meeting – Molecular Biology of HBV, Boston, USA.

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…impotent target cells… klang trotzdem gut!

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