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**Vergleich der immunmodulatorischen Eigenschaften  
der Cystatine  
freilebender und parasitärer Nematoden**

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## Abkürzungsverzeichnis

|                  |   |
|------------------|---|
| Abb.             | Abbildung                                     |
| AEP              | Asparaginylendopeptidase                      |
| Ak               | Antikörper                                    |
| AMC              | Aminomethylcoumarin                           |
| APC              | Antigenpräsentierende Zellen                  |
| APS              | Ammoniumpersulfat                             |
| AS               | Aminosäure                                    |
| ATP              | Adenosintriphosphat                           |
| Av17             | Cystatin von <i>Acanthocheilonema viteae</i>  |
| BCA              | 2,2` Bicinchoninic acid                       |
| bp               | Basenpaare                                    |
| BSA              | Bovines Serumalbumin                          |
| CD               | <i>cluster of differentiation</i>             |
| cDNA             | komplementäre DNA                             |
| cNOS             | konstitutiv exprimierende Stickoxidsynthetase |
| ConA             | Concanavalin A                                |
| cpm              | <i>counts per minute</i>                      |
| Cysele1          | Cystatin von <i>Caenorhabditis elegans</i>    |
| Cysele2          | Cystatin von <i>Caenorhabditis elegans</i>    |
| DEPC             | Diethylpyrocarbonat                           |
| DMSO             | Dimethylsulfoxid                              |
| DNA              | Desoxyribonukleinsäure                        |
| DNase            | Desoxyribonuklease                            |
| dNTP             | Desoxy nukleosidtriphosphat                   |
| dsRNA            | doppelsträngige RNA                           |
| DTT              | Dithiothreitol                                |
| EDTA             | Ethylendinitrilotetraessigsäure               |
| ELISA            | <i>Enzyme Linked Immunosorbent Assay</i>      |
| E / S-Produkt    | Exkretions- / Sekretionsprodukt               |
| F1-Generation    | Nachkommen der ersten Generation              |
| F2-Generation    | Nachkommen der zweiten Generation             |
| FCS              | Fötales Kälberserum                           |
| FE               | Fluoreszierende Einheit                       |
| <sup>3</sup> H   | Tritium                                       |
| IB               | Injektionspuffer                              |
| IE               | Internationale Einheit                        |
| IFN              | Interferon                                    |
| IL               | Interleukin                                   |
| iNOS             | induzierbare Stickoxidsynthetase              |
| IPTG             | Isopropyl-thio-β-D-Galaktopyranosid           |
| kDa              | Kilodalton                                    |
| K <sub>i</sub>   | Dissoziationskonstante                        |
| K <sub>m</sub>   | Michaelis -Menten-Konstante                   |
| k <sub>obs</sub> | pseudo first order-Geschwindigkeitskonstante  |
| L1               | Larve 1                                       |
| L2               | Larve 2                                       |
| L3               | Larve 3                                       |
| L4               | Larve 4                                       |
| LB               | Luria-Bertoni-Broth                           |
| li               | invariante Kette                              |
| LPS              | Lipopolysaccharid                             |
| MHC              | <i>major histocompatibility complex</i>       |
| M-MLV            | Moloney Maus Leukämie Virus                   |
| MPM              | Mausperitonealmakrophagen                     |
| mRNA             | <i>messenger RNA</i>                          |
| NGM              | Nematodenwachstumsmedium                      |
| Ni-NTA           | Nickelnitriлотriacetic                        |

|                  |   |
|------------------|---|
| NK-Zellen        | Natürliche Killerzellen   |
| NO               | Stickoxid   |
| NOS              | Stickoxidsynthetase   |
| Ov17             | Cystatin von <i>Onchocerca volvulus</i>   |
| Ov33             | Protein von <i>Onchocerca volvulus</i> , Homolog zu einem Aspartylproteinaseinhibitor von <i>Ascaris suum</i> |
| OvA              | Ovalbumin   |
| OvA-Maus         | Ovalbumin-Rezeptor-transgene Maus   |
| p                | Irrtumswahrscheinlichkeit   |
| PBMC             | Periphere mononukleäre Blutzellen   |
| PBS              | Phosphatgepufferte Lösung   |
| PCR              | Polymerase Kettenreaktion   |
| PEG              | Polyethylenglycol   |
| PG               | Prostaglandin   |
| PHA              | Phytohämagglutinin  |
| PMSF             | Phenazine methosulfate  |
| PPD              | <i>purified proteine derivative</i>   |
| r                | rekombinant   |
| RNA              | Ribonukleinsäure  |
| RNase            | Ribonuklease  |
| RNAi             | <i>RNA interference</i>   |
| rpm              | <i>rotation per minute</i>  |
| RPMI             | Roswell Park Memorial Institute   |
| RT               | Raumtemperatur  |
| RT-PCR           | Reverse Transkriptase-PCR   |
| SAP              | Shrimps Alkalische Phosphatase  |
| SDS              | Sodiumdodecylsulfat   |
| SEM              | <i>standard error of means</i>  |
| ssRNA            | Einzelstrang-RNA  |
| STP              | Squalen Tween Pluronic  |
| Tab.             | Tabelle   |
| TAE              | Tris Acetat EDTA  |
| Taq              | <i>Thermophilus aquaticus</i>   |
| TBS              | Tris Borat Saline   |
| TEMED            | Tetramethylethylendiamin  |
| TGF              | <i>transforming growth factor</i>   |
| Th0              | T-Helferzellen 0  |
| Th1              | T-Helferzellen 1  |
| Th2              | T-Helferzellen 2  |
| Th3              | T-Helferzellen 3  |
| TMB              | 3,3',5,5'-Tetramethylbenzidine  |
| TNF              | Tumornekrosefaktor  |
| v <sub>0</sub>   | Anfangsgeschwindigkeit  |
| v <sub>i</sub>   | Endgeschwindigkeit  |
| v <sub>max</sub> | Maximalgeschwindigkeit  |
| v <sub>s</sub>   | Geschwindigkeit im Gleichgewicht  |
| U                | Unit  |
| X-gal            | 5-Bromo -4-Chloro-3-indolyl-β-Galaktosid  |

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## 8. Publikationen und Tagungsbeiträge

### Publikationen

**Schierack P., Lucius R., Sonnenburg B., Schilling K., Hartmann S.**

Is the immunomodulatory function of filarial cystatin parasite specific?

Zur Publikation eingereicht.

**Rajakumar S., Bleiss W., Oberländer U., Schierack P., Marko A., Lucius R.**

Established infections of *Meriones unguiculatus* with *Acanthocheilonema viteae* protect against superinfection.

Zur Publikation eingereicht.

### Vorträge

**Schierack P., Lucius R., Sonnenburg B., Hartmann S.**

Is the immunomodulatory function of filarial cystatin parasite specific?

Conference on filariasis. Bernhard Nocht Institut For Tropical Medicine.

Hamburg, Deutschland, 19-22. September 2001

**Schierack P., Lucius R., Sonnenburg B., Hartmann S.**

Is the immunomodulatory function of filarial cystatin parasite specific?

20. Tagung der Deutschen Gesellschaft für Parasitologie.

Lübeck-Travemünde, Deutschland, 20.-23. März 2002

### Poster

**Schierack P., Sonnenburg B., Lucius R., Hartmann S.**

Is the immunomodulatory function of nematode cystatin specific for parasites?

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## Lebenslauf

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Hiermit erkläre ich an Eides statt, daß ich die Dissertation „Vergleich der immunmodulatorischen Eigenschaften der Cystatine parasitärer und freilebender Nematoden“ selbst verfaßt und keine als die angegebenen Quellen und Hilfsmittel verwendet habe.

Berlin, 1.7.02

Peter Schierack