APPENDIX

Abbreviations

A amper
AA amino acid
Ab antibody
Amp ampicillin
APC allophycocyanin
ATP adenosine triphosphate

BM bone marrow

BMM bone marrow derived macrophages

base pair

BSA bovine serum albumin
°C degree Celsius
cDNA complementary DNA
CFU colony forming unit

CFU-G colony forming unit - granulocyte

CFU-GM colony forming unit –granulocyte/macrophage

CFU-M colony forming unit - macrophage CFU-Eos colony forming unit - eosinophil

c-kitSCF-receptorCTPcytosine triphosphatedCTPdesoxycytosine-5-phosphateCMPcommon myeloid progenitor

DEPC diethylpyrocarbonate
DMSO dimethylsulfoxide
DNA desoxyribonucleic acid
DNase desoxyribonuclease

dNTP desoxyribonucleotid triphosphate
EDTA ethylendiamine-tetraacetate
eGFP enhanced Green Fluorescent Protein

Eos eosinophil

EoPeosinophil progenitorEPerythroid progenitor

FACS fluorescence activated cell sorting

FCS foetal calf serum

FITC fluorescein-isothiocyanate

flox

5-FU 5-fluorouracil G guanine g gram

Gapdh Glycerinaldehyde-3-phosphate dehydrogenase

G-CSF granulocyte-colony stimulating factor

GM-CSF granulocyte/macrophage-colonystimulating factor

GMP granulocyte-monocyte progenitor

Gr granulocyte h hours

HSC hematopoietic stem cell

Icsbp Interferon consensus sequence binding protein

IFN interferon
Ig immunoglobulin
IL, Il interleukin
i.p. intraperitoneal

Irf Interferon-regulatory factor

kb kilo bases kDa kilo Dalton

Klf Krüppel-like factor

kg kilogram
l liter
LB Luria Broth
LN lymph node
Ly lymphocyte
M molar

MACS magnetic cell sorting

Mf macrophage

MHC Major Histocompatibility Complex

mM millimolar
min minutes
ml milliliter
Mo monocyte
mRNA messenger RNA

NCBI National Center for Biotechnology Information

 $\begin{array}{ccc} ng & nanogramm \\ NK & natural killer cell \\ nm & nanometer \\ \mu Ci & micro Curie \\ \mu g & microrogram \\ \mu l & microroliter \\ \mu M & micromolar \end{array}$

PAGE polyacrylamide gel electrophoresis

PBS phosphate buffered saline PCR polymerase chain reaction

PE phycoerythrin

Pen/Strep penicillin/streptamycin PL peritoneal lavage RNA ribonucleic acid ribonuklease **RNase** rpm rounds per minute RT room temperature **RTase** reverse transcriptase SDS sodium dodecylsulfate **SCF** stem cell factor

 $\begin{array}{ccc} s, sec & secundes \\ Spl & spleen \\ T & thymidine \end{array}$

Taq Thermophilus aqaticus
TEMED tetra-methyl-ethylendiamine

Thy thymus

TPO thrombopoietin tRNA transfer-RNA

U enzyme activity unit

UV ultra violet V Volt

w/v wight per volume

wt wild type

Acknowledgments

First of all I wish to thank Prof. Dr. Ivan Horak for giving me the opportunity to work in his department and for continuous support during this time. I owe my thanks to the project supervisor Dr. Dirk Carstanjen for expertise project guidance and constructive critisism. To Prof. Dr. Hartmut Oschkinat I would like to thank for evaluating this work.

I am grateful to my collegues in the department for providing stimulating working environment, for friendly discussions and useful suggestions. In particular, I owe my warm thanks to Claudia Pallasch and Bianca Wittig for expert care about transgenic mice, Janet Klemm and Melanie Benedict for scilfull technical assistance and Alexandra Kiesling for her indispensable administrative help.

This work greatly benefited from the support provided by other research teams. I would like to thank Dr. Greg Terszowski, Department for Immunology, University of Ulm for eosinophil progenitor cell isolation and eosinophil colony analysis. I thank Daniela Struck, Institute for Microbiology, Charité, Berlin for performing the histopatology analysis and interleukin production measurment of mice infected with *N.brasiliensis*. To Dr. Klaus Erb, Infection Research Center, University of Würzburg I thank for providing the *N.brasiliensis* larvae, to Dr. Klaus Kästner for providing the Klf4^{fl/fl} mice and to Daniel Metzger, INSERM, Strasbourg, France for providing the Cre-ER^{T2} vector. I would also like to thank Dr. Lars Bullinger, University of Ulm, Germany for providing the Affymetrix chips and performing the gene expression analysis of myeloid progenitors by this technology.

I want to thank my husband Nikola for his patience, love and support.