

Immunobiol., Volume 186, No. 1-2
pp. 1-182. October 1992
ZIMMDO 186 (1-2) (1992)
ISSN 0171-2985

Immunobiology

Volume 186 · No. 1-2 · 1992

8 MUD: GZ 428

186
1992

**Zeitschrift für
Immunitätsforschung**

**Founded by
Paul Ehrlich in 1909**



**Gustav Fischer Verlag
Stuttgart · New York**

Immunobiology

Editors

D. BITTER-SUERMANN, Hannover · M. P. DIERICH, Innsbruck · M. FELDMANN, London · S. H. E. KAUFMANN, Ulm · E. KLEIN, Stockholm · W. KÖHLER, Jena · U. KOSZINOWSKI, Ulm · P. KRAMMER, Heidelberg · A. LANZAVECCHIA, Basel · M. LOOS, Mainz · T. LUGER, Münster · P. MATZINGER, Bethesda · W. R. MAYR, Aachen · L. J. OLD, New York · J. J. OPPENHEIM, Frederick · H. H. PETER, Freiburg · K. PFIZENMAIER, Stuttgart · M. RÖLLINGHOFF, Erlangen · D. SCHENDEL, München · V. SCHIRRMACHER, Heidelberg · C. SORG, Münster · R. VAN FURTH, Leiden · H. WAGNER, München · H. WEKERLE, Martinsried · G. WICK, Innsbruck · R. ZINKERNAGEL, Zürich

Editor-in-Chief

D. GEMSA, Marburg



Editorial Advisory Board

R. AVERDUNK, Berlin · J. F. BACH, Paris · H. BALNER, Rijswijk · R. BENNER, Rotterdam · H. v. BOEHMER, Basel · D. G. BRAUN, Basel · V. BRAUN, Tübingen · J. BROSTOFF, London · A. COUTINHO, Paris · T. DIAMANTSTEIN, Berlin · W. DRÖGE, Heidelberg · P. DUKOR, Vienna · P. ERB, Basel · H.-D. FLAD, Borstel · O. GÖTZE, Göttingen · E. GÜNTHER, Göttingen · U. HADDING, Düsseldorf · H. HAHN, Berlin · K. HÁLA, Innsbruck · G. J. HÄMMERLING, Heidelberg · K. U. HARTMANN, Marburg · H. ZUR HAUSEN, Heidelberg · M. HESS, Bern · J. KALDEN, Erlangen · T. J. KINDT, Rockville · E. KOWNATZKI, Freiburg · W. LEIBOLD, Hannover · K. LENNERT, Kiel · F. LILLY, New York · J. LINDEMANN, Zürich · E. MACHER, Münster · H. METZGER, Bethesda · V. TER MEULEN, Würzburg · H. J. MÜLLER-EBERHARD, Hamburg · W. MÜLLER-RUCHHOLTZ, Kiel · H. PETERS, Göttingen · E. PICK, Tel Aviv · O. PROKOP, Berlin · M. QUASTEL, Beer Sheva · J. P. REVILLARD, Lyon · E. P. RIEBER, München · E. RÜDE, Mainz · E. SCHÖPF, Freiburg · H. G. SCHWICK, Marburg · K. SETHI, Heidelberg · G. SUNSHINE, London · N. TALAL, San Antonio · G. TILL, Ann Arbor · G. UHLENBRUCK, Köln · M. WAGNER, Jena · P. WERNET, Düsseldorf

Gustav Fischer Verlag · Stuttgart · New York · 1992

Terms of delivery

5 issues form one volume. Subscription rate per volume incl. postage and handling DM 410.- (Germany) and DM 413.- (Foreign). Preference-price for members of American Association of Immunologists, Society for Immunology and Deutsche Gesellschaft für Allergologie und Immunitätsforschung DM 256.- (Germany) and DM 259.- (Foreign). Air mail will be charged separately.

All business correspondence should be made with:

Gustav Fischer Verlag GmbH & Co KG, Wollgrasweg 49, D-7000 Stuttgart 70 (Register HR Nr. A 7591/HR B 4976).

Stuttgarter Volksbank 45 290 (BLZ 600 901 00), Deutsche Bank 80 20 000 (BLZ 600 700 70), Postgiro Stuttgart 135 56-709 (BLZ 600 100 70), Landesgirokasse Stuttgart 1120549 (BLZ 600 501 01), Commerzbank 879 9900 (BLZ 600 400 71).

For USA and Canada:

VCH Publishers, Inc., 303 N.W. 12th Avenue, Deerfield Beach, Florida 33442-1705, U.S.A.

© Gustav Fischer Verlag · Stuttgart · New York 1992

All rights reserved

Printed by Ungeheuer+Ulmer KG GmbH+Co, Ludwigsburg

Printed in Germany

Valid rate-card as advertised in February, 1989.

The articles published in this journal are protected by copyright. All rights are reserved, especially the right to translate into foreign languages. No part of the journal may be reproduced in any form – through photocopying, microfilming or other processes – or converted to a machine language, especially for data processing equipment – without the written permission of the publisher. The rights of reproduction by lecture, radio and television transmission, magnetic sound recording or similar means are also reserved.

Photocopies for personal and other individual use may only be made as single copies of single articles or portions thereof. Every copy made within the realm of a commercial enterprise serves a commercial purpose in accordance with § 54 (2) of the copyright law of the Federal Republic of Germany and obliges payment of a fee to VG WORT, Abteilung Wissenschaft, Goethestraße 49, 8000 München 2, to whom requests for the modalities of payment should be addressed.

Immunobiology

Zeitschrift für Immunitätsforschung

Editors

D. BITTER-SUFERMANN, Hannover · M. P. DIERICH, Innsbruck · M. FELDMANN, London · S. H. E. KAUFMANN, Ulm · E. KLEIN, Stockholm · W. KÖHLER, Jena · U. KOSZINOWSKI, Ulm · P. KRAMMER, Heidelberg · A. LANZAVECCHIA, Basel · M. LOOS, Mainz · T. LUGER, Münster · P. MATZINGER, Bethesda · W. R. MAYR, Wien · L. J. OLD, New York · J. J. OPPENHEIM, Frederick · H. H. PETER, Freiburg · K. PFIZENMAIER, Stuttgart · M. RÖLLINGHOFF, Erlangen · D. SCHENDEL, München · V. SCHIRRMACHER, Heidelberg · C. SORG, Münster · R. VAN FURTH, Leiden · H. WAGNER, München · H. WEKERLE, Martinsried · G. WICK, Innsbruck · R. ZINKERNAGEL, Zürich

Editor-in-Chief

D. GEMSA, Marburg

Editorial Advisory Board

R. AVERDUNK, Berlin · J. F. BACH, Paris · H. BALNER, Rijswijk · R. BENNER, Rotterdam · H. v. BOEHMER, Basel · D. G. BRAUN, Basel · V. BRAUN, Tübingen · J. BROSTOFF, London · A. COUTINHO, Paris · T. DIAMANTSTEIN, Berlin · W. DRÖGE, Heidelberg · P. DUKOR, Vienna · P. ERB, Basel · H.-D. FLAD, Borstel · O. GÖTZE, Göttingen · E. GÜNTHER, Göttingen · U. HADDING, Düsseldorf · H. HAHN, Berlin · K. HÁLA, Innsbruck · G. J. HÄMMERLING, Heidelberg · K. U. HARTMANN, Marburg · H. ZUR HAUSEN, Heidelberg · M. HESS, Bern · J. KALDEN, Erlangen · T. J. KINDT, Rockville · E. KOWNATZKI, Freiburg · W. LEIBOLD, Hannover · K. LENNERT, Kiel · F. LILLY, New York · J. LINDEMANN, Zürich · E. MACHER, Münster · H. METZGER, Bethesda · V. TER MEULEN, Würzburg · H. J. MÜLLER-EBERHARD, Hamburg · W. MÜLLER-RUCHHOLTZ, Kiel · H. PETERS, Göttingen · E. PICK, Tel Aviv · O. PROKOP, Berlin · M. QUASTEL, Beer Sheva · J. P. REVILLARD, Lyon · E. P. RIEBER, München · E. RÜDE, Mainz · E. SCHÖPF, Freiburg · H. G. SCHWICK, Marburg · K. SETHI, Heidelberg · G. SUNSHINE, London · N. TALAL, San Antonio · G. TILL, Ann Arbor · G. UHLENBRUCK, Köln · M. WAGNER, Jena · P. WERNET, Düsseldorf

Vol. 186



Gustav Fischer Verlag · Stuttgart · New York · 1992

Contents Volume 186 · 1992

Original Papers

BRAND, J.-M., H. KIRCHNER, P. NEUSTOCK, and A. KRUSE: Induction of Cytokines in Human Whole Blood Cultures by a Mitogen Derived from <i>Mycoplasma arthritidis</i> and by Staphylococcal Enterotoxin B	246
FRANCH, A., S. CASSANY, C. CASTELLOTE, and M. CASTELL: Adjuvant Arthritis Pre-treatment with Type II Collagen and <i>Mycobacterium butyricum</i>	351
HANSZ, J. and M. KOZLOWSKA-SKRZYPCZAK: Interferon-Gamma-Mediated Suppression of Erythroid Progenitor Growth by a HLA-DR- and CD4-Positive Subset of T Lymphocytes in Acute Myeloid Leukemia	327
HASLOV, K., A. FOMSGAARD, K. TAKAYAMA, J. S. FOMSGAARD, P. IBSEN, M. B. FAUNTLEROY, P. W. STASHAK, C. E. TAYLOR, and P. J. BAKER: Immunosuppressive Effects Induced by the Polysaccharide Moiety of Some Bacterial Lipopolysaccharides	378
HMAMA, Z., G. NORMIER, E. KOUASSI, M. FLACHER, H. BINZ and J.-P. REVILLARD: Binding of a Membrane Proteoglycan from <i>Klebsiella pneumoniae</i> and Its Derivatives of Human Leukocytes	183
IBRAHIM, M. A. A., J. S. ELLIS, B. M. CHAIN, and D. R. KATZ: Sensitization of Allo-Specific T Lymphocytes <i>in vivo</i> : Role of Antigen-Presenting Cells	362
KOS, F. J. and A. MÜLLBACHER: Enhancement of Antigen-Specific Activation of CD8 ⁺ Memory Cytotoxic T Cells by B Cell-Derived Factors	410
KUPSCH, J., K. M. SAIZAWA, and K. EICHMANN: Expression of Murine Soluble CD4 Protein in Baculovirus Infected Insect Cells	254
LE CONTEL, C., F. PARANT, and M. PARANT: Indirect and Selective Down-Regulation of Serum Tumor Necrosis Factor- α Release by Interleukin-1 β	199
MAAS, R. A., P. A. M. ROEST, M. J. BECKER, I. S. WEIMAR, H. F. J. DULLENS, and W. DEN OTTER: Effector Cells of Low-Dose IL-2 Immunotherapy in Tumor Bearing Mice: Tumor Cell Killing by CD8 ⁺ Cytotoxic T Lymphocytes and Macrophages	214
MERKLE, H., J. CHAK, and U. LÖSCH: The Cytotoxic T Lymphocyte Response in Reticuloendotheliosis Virus-Infected Chickens is Mediated by $\alpha\beta$ and not by $\gamma\delta$ T Cells	292
MITREITER, R. and C. EPPLEN: Self-Reactive and Antigen-Specific T Cell Clones Derived from a HLA-DR4 ⁺ /DR5 ⁺ Donor: T Cell Receptors and MHC-Restriction Patterns	315
MÜLLER-ALOUF, H., J. E. ALOUF, D. GERLACH, C. FITTING, and J.-M. CAVAILLON: Cytokine Production by Murine Cells Activated by Erythrogenic Toxin Type A Superantigen of <i>Streptococcus pyogenes</i>	435
NAGATA, N., T. NAKAGAWA, N. HOSAKA, and S. IKEHARA: Auto-MHC Class II-Reactive T Cell Line Obtained from MRL/+ Mice Suffering from <i>lpr</i> -GVHD. II. Analyses of Functional Characteristics of T Cell Line by <i>in vivo</i> Administration	339
OHGAMA, J. and K. ONOÉ: Quantitative Analysis of MEL-14 Expression on Various Lymphocyte Subpopulations	268
OHNISHI-INOUE, Y., R. YASUMIZU, K. SUGIURA, N. NAGATA, H. FAN, N. OYAIZU, M. INABA, J. TOKI and S. IKEHARA: Functional Analyses of <i>lpr</i> Gene in MRL/Mp- <i>lpr/lpr</i> Mice. Role of Lymph Node Stromal Cells in <i>lpr</i> -Lymphadenopathy	449
OMURA, T., H. ISHIKURA, Y. NAKAJIMA, C. TAKAHASHI, J. KIMURA, J. UCHINO, and T. YOSHIKI: Accelerated Rejection of Allografted Rat Liver Perfused with Anti-ICAM-1 Monoclonal Antibody	241
ROTH, J., S. TEIGELKAMP, M. WILKE, L. GRÜN, B. TUMMLER, and C. SORG: Complex Pattern of the Myelo-Monocytic Differentiation Antigens MRP8 and MRP14 during Chronic Airway Inflammation	304
TAKEUCHI, M., A. IWASAKI, K. NOMOTO, and Y. YOSHIKAI: Rat Thymic Epithelium Positively Selects Mouse T Cells with Specificity for Rat MHC Class II Antigens but Fails to Induce Detectable Tolerance in the Mouse T Cells to the Rat MHC Antigens	421

TOMITA, Y. and K. NOMOTO: Comparison of Tolerance Inducibility to Class I or Class II Antigens between Cyclophosphamide (CP)-Induced Tolerance and Transfusion with Donor Cells: General Effectiveness of CP-Induced Tolerance and Difference of Skin Graft Prolongation in Each Class I Antigen-Disparate Combination	282
TWISK, A. J. T., F. A. J. J. L. RUITEN, K. SCHORNAGEL-HOEBEN, and G. KRAAL: The Influence of Dietary Fat on the Interaction of Lymphocytes with High Endothelial Venules	394
VAN VUGT, E., M. A. M. VERDAASDONK, R. H. J. BEELEN, and E. W. A. KAMPERDIJK: Induction of an Increased Number of Dendritic Cells in the Peritoneal Cavity of Rats by Intraperitoneal Administration of Bacillus Calmette-Guérin	230
Abstracts: XXIII. Tagung der Gesellschaft für Immunologie, Oktober 1992, Mainz .	1-182

Authors' Index

- ABERLE, S. C.31
ADERMANN, R. D.9
ADIBZADEH, M. H.1, H.14
AICHER, W. K. K.1
ALBANI, E. M.3
ALBERT-WOLF, M. J.1
ALBINI, B. K.12
ALLMELING, A.-M. J.7
ALOISI, F. B.17, B.31
ALOUF, J. E. **435**
ALTEVOGT, P. J.6, J.12
AMBACH, A. K.29
AMBROSIUS, H. B.1
ANDERER, F. A. E.11
ANGELONI, V. L. C.4
ANSORGE, S. C.23, F.2,
H.17, H.21, L.4, L.13, L.14
ANSOTTEQUI, I. L.15
ARMBRUST, T. I.1
ARNOLD, B. B.26
ASSENMACHER, M. L.1
AUER, I. O. K.21
AUPHAN, N. B.26
AUSTRUP, F. M.1
AUTENRIETH, I. B. F.1
AUTSCHBACH, F. J.5, L.2,
L.19
AWAD, K. H.19
- BACHER, M. I.2, I.10
BACHMANN, M. B.27, B.28
BADER, A. L.11
BAEHR, R. VON B.6, M.9
BAUERLE, P. A. C.27, I.28
BAIER, W. E.10
BAKER, P. J. **378**
BAKKER, N. G.9
BALDERAS, R. F.14
BALLHAUSEN, W. G. L.15
BAMBERGER, U. B.13, B.25,
C.16
BANAT, G.-A. E.1
BANDT, S. C.18
BANGE, F.-C. C.1, C.2
BANK, U. C.23, F.2, H.17,
L.13
BARBA, G. D.1, D.10
BARTENEVA, N. F.3
- BARTHELMES, S. I.5
BARTLETT, R. R. C.18,
H.25, I.24
BATSFORD, S. B.18
BAUER, J. J.8
BAUSCHER, P. G.26
BAUTSCH, W. D.4, D.5, D.11
BECKER, C. H.2
BECKER, I. F.15
BECKER, J. C. E.2
BECKER, M. J. **214**
BECKER, W.-M. B.22
BEELLEN, R. H. J. **230**
BEER, M. F.1
BEHNCK, S. F.4
BEHRMANN, I. B.29
BEIN, G. A.7
BENDER, A. I.2, I.3
BENDIGS, S. H.6
BEREITER-HAHN, J. J.2
BÉRESS, R. D.12
BERG, P. A. K.8, K.18
BERGER, M. J.8
BESSLER, W. G. C.9, M.5
BEUSCHER, H. U. C.10,
C.22
BEZSON, K. B.7
BIALONSKI, A. L.26
BIALOWONS, A. K.28
BIEBER, T. A.27
BIELINSKY, A. K. I.4
BILZER, T. F.23
BINDER, K. B.25
BINDER, R. D.2
BINZ, H. **183**
BISCH, S. H.3
BISSELS, L. K.10
BISTER, J. H.4
BITTER-SUERMAN, D.
D.11
BLACHERE, N. E.6, E.7
BLAHETA, R. A. F.21, J.2
BLANK, C. F.5
BLAZEK, M. G.24
BLECHSCHMIDT, I. B.1,
G.12, K.22
BLUHM, A. G.12
BLUM, H. F.10
- BOCK, S. I.25
BODENDORFER, B. H.26
BÖHLE, A. E.15
BOEHM, B. O. K.5
BÖHM, M. E.9
BOEHM, T. K.13
BOEHME, M. K.2
BÖHMIG, G. A.34
BÖLDICKE, T. M.11
BÖRGERS, A. J.3
BÖTTGER, E. C. C.1, C.2
BOJARSKI, G. D.3
BOLEN, J. B. L.3
BOLTZ-NITULESCU, G. I.18,
I.19
BONIFAS, U. A.4
BOYD, A. I.20
BRABLETZ, T. L.18
BRADE, H. F.11, F.24, J.9
BRAI, M. D.10
BRAND, J. M. **246**
BRANDT, E. J.9
BRANDT, J. M. I.25
BREDEHORST, R. D.13
BROCK, J. A.17
BROCKHAUS, M. C.8
BRÖCKER, E. B. E.2, K.29
BRÖKER, B. M. L.3
BRÜDERLEIN, S. M.7
BRÜHMANN, A. G.19
BRUSERUD, O. E.10
BUBECK, P. D.4
BUCHWALD, S. G.17
BUDNIK, A. C.8, J.4
BUHLING, F. C.23, H.17,
H.21, L.4, L.13
BÜHRING, H.-J. H.14
BULLASCH, A. K.25
BURCHARDI, H. D.8
BURG, G. E.2
BURKART, V. B.2
- CARSTENS, C. A.18
CASARETTO, M. D.11
CASSANY, S. **351**
CASTELL, M. **351**
CASTELLOTE, C. **351**
CAVAILLON, J.-M. **435**

Letters together with numbers refer to abstract numbers of the abstracts issue of **XXIIIrd Meeting of the Society of Immunology, October 1992**, Vol. 186, No. 1-2. Bold-faced numbers refer to the page numbers of original articles, Vol. 186, No. 3-5.

- CHAIN, B. M. 362
 CHITAEV, N. A. L.3
 CHO, H. B.32
 CHRISTOPH, H. C.8, J.4
 CIHAK, J. 292
 CLASSEN, M. H.11, K.15
 CLAUS, C. L.5
 CONRAD, K. G.11
 CORRALIZA, I. L.21
 CROUT, J. A.8
 CSERNOK, E. G.1, G.4
 CZARNETZKI, B. M. E.9

 DÄUBENER, W. F.6, F.17,
 I.4, I.5, I.30
 DANIEL, P. T. M.2
 DANNECKER, G. H.12
 DANZER, S. K.14
 DAUBENBERGER, C. A.1
 DEMLEITNER, K. A.2, A.28
 DENGLER, T. J. G.26, J.5
 DEN OTTER, W. 214
 DEUSCH, K. H.11, K.15
 DHEIN, J. M.7
 DICK, K. F.17
 DICK, T. G.2, H.23
 DIEHL, M. A.3
 DIENER, C. G.23, H.7
 DIENES, H.-P. A.22, L.2
 DIETERLE, S. K.27
 DIETRICH, H. H.18
 DIPPOLD, W. D.19, D.20,
 E.16, J.13, L.5
 DITTMAYER, M. L.5
 DOBMEYER, J. M. C.3, K.3
 DOBMEYER, T. S. C.3, K.3
 DÖCKE, W. 1.6
 DÖHNER, W. 1.6
 DOHLE, C. B.30
 DONAT, H. K.2
 DRECHSLER, M. D.7
 DREGER, P. A.24
 DRINGS, P. E.3
 DRÖSSLER, K. C.5, G.12,
 K.22, L.6
 DULLENS, H. F. J. 214
 DUMMER, R. E.2, K.29
 DUPKE, R. A.7
 DURINOVIC-BELLO, I. E.12

 EBERLIEN, B. G.3
 EBNER, C. B.9
 ECKERSKORN, C. L.21
 ECKERT, M. J.12
 ECKSTEIN, V. A.5, A.9, I.31
 EFFENBERGER, E. M.9

 EHLERS, M. 1.33
 EHNINGER, G. E.10
 EIBEL, H. B.3, K.1
 EICHELHANN, A. M.7
 EICHLER, W. L.12
 EICHMANN, K. 254
 EIERMANN, T. H. A.7
 EIFERT, Y. B.10
 ELLIOTT, J. D. H.10
 ELLIS, J. S. 362
 EMDE, M. D.4, D.5
 EMMENDÖRFFER, A. B.4,
 B.7, B.19
 EMMRICH, F. G.17, L.3,
 L.10
 EMMRICH, J. G.17, K.4
 ENCKE, A. F.21, J.2
 ENDERS, U. F.7
 ENGELMANN, H. C.30
 ENGELMANN, L. G.12
 ENK, A. H. C.4
 ENSGRABER, M. F.8
 ENZMANN, V. C.5, L.6
 EPPLEN, C. 315
 ERTL, R. H.23
 ESSER, C. H.4
 EUCH, A. VON C.1, C.2
 EULER, H. H. D.12, G.3,
 G.5, G.14, G.20

 FAHLBUSCH, B. B.20
 FALK, C. S. K.5
 FALK, W. C.20, L.23
 FAN, H. 449
 FAUNTLEROY, M. B. 378
 FAUST, D. 1.7
 FEDERWISCH, M. D.5
 FEHSEL, K. B.2
 FEIGE, U. B.5
 FEIST, W. F.11, F.24
 FENNING, S. K.6
 FERENCIK, S. A.15
 FERNIE, B. A. D.21, D.2:
 FERREIRA, F. B.9
 FESQ, H. 1.3
 FEY, G. D.20
 FICKENSCHER, H. L.3
 FIEBIG, H. L.12
 FIEDLER, P. B.3
 FIEHN, W. G.24
 FIERS, W. C.25
 FILSINGER, S. H.20
 FINGERLE, G. I.32
 FISCH, A. A.11, A.21
 FISCHER, D.-C. K.7

 FISCHER, H. G. F.6, F.17,
 I.4, I.5, I.30
 FISCHER, J. R. E.3
 FISCHER, S. C.7
 FISZER, U. K.17
 FITTING, C. 435
 FLACHER, M. 183
 FLAD, H.-D. C.23, E.15,
 F.11, F.24, H.17, J.9
 FLECKENSTEIN, B. L.3, L.16
 FLEISCHER, B. F.20, G.10,
 K.11, K.16, L.16
 FLEISCHHAUER, S. M.9
 FLESCH, B. K. G.4
 FLESCH, I. E. A. F.9
 FLIEGER, D. E.4
 FLOHR, T. C.1, C.2
 FÖRSTER, O. I.13, I.18, I.19
 FOMSGAARD, A. 378
 FOMSGAARD, J. S. 378
 FRANCH, A. 351
 FRANCKI, A. C.21
 FRANK, K. L.14
 FRANK, K.-H. G.11
 FRANKE, L. 1.6
 FRANZ, K. G.2
 FREDRIKSON, S. K.17
 FREIBERG, B. E.11
 FRICKE, H. G.21, H.8
 FRIESE, K. K.26
 FROSCHE, S. A.4
 FUCHS, H. F.5
 FÜTTERER, A. B.12

 GAIS, P. 1.33
 GALLATI, H. F.20
 GAMMEL, A. J. K.8, K.18
 GARN, H. C.5
 GASKA, T. A.5, A.33
 GASSMANN, W. A.5, A.33
 GATELY, M. K. C.7
 GAUS, H. C.6
 GAUSE, A. M.3
 GAWEHN, U. G.11
 GAY, R. E. K.1
 GAY, S. K.1
 GEHRMANN, J. B.14
 GELFAND, E. W. B.24, L.7
 GEMSA, D. 1.2, I.3, I.10
 GENTH, E. G.2, K.23
 GERKEN, G. K.16
 GERLACH, D. 435
 GERMANN, T. C.7
 GERN, L. F.19
 GESSL, A. 1.18
 GESSNER, A. F.10

- GESSNER, J. E. L.8
 GILLITZER, R. F.15
 GLÄSER, R. A.7
 GLÄSER, R. W. M.9
 GLASS, B. A.5, A.33
 GLEICHMANN, E. K.9, K.23
 GLEICHMANN, H. B.30
 GOEBEL, C. K.9, K.23
 GÖTZE, O. D.8, D.14, I.8
 GOLDWICH, A. D.13
 GORELOV, V. F.3
 GORONZY, J. C.28
 GRADEHANDT, G. A.14, H.3
 GRAF, D. L.9
 GRAMMERSTORF, S. G.8
 GREEN, B. S. B.30
 GREWE, M. C.8, J.4
 GRÖTZINGER, J. D.4
 GROND-GINSBACH, C. D.7
 GROSS, W. L. G.1, G.4
 GROSSE-WILDE, H. A.15, K.28
 GRUBER, R. E.4
 GRÜN, L. 304
 GRÜNEWALD, T. E.9
 GRUNWALD, U. F.22
 GRUSSENMEYER, T. L.8
 GÜNTHER, E. A.2
 GUSE, A. H. L.3, L.10
- HAAG, R. B.8
 HAAS, G. M.5
 HAASE, D. A.7
 HACKL, W. K.6
 HADDING, U. F.6, F.17, I.4, I.5, I.30
 HACKER, G. H.5
 HÄMMERLING, G. J. B.26
 HÄNSCH, G. M. D.10, D.18, I.17, I.23
 HÄUSSINGER, K. I.33
 HAHN, H. A.17
 HALA, K. E.5
 HAMANN, A. F.21
 HAMMANN, W. E.10
 HAMMER, M. F.16
 HANSEN, A. B.6, M.10
 HANSZ, J. 327
 HANTSCHMANN, P. F.1
 HARMIS, M. I.31
 HARTEN, P. G.5, G.20
 HARTIG, F. B.8
 HARTMANN, B. B.2
 HARTMANN, H. D.6
 HARTUNG, H.-P. B.32, F.7
- HARTUNG, K. B.4
 HASLØV, K. 378
 HAUBECK, H.-D. K.7
 HAUER, M. E.17
 HAUSCHILDT, S. C.9, G.1
 HAUSER, H. A.21
 HEBELL, T. D.14, I.8
 HECHT, M. B.7
 HECKL-ÖSTREICHER, B. D.7, I.23
 HEEG, K. A.6, C.6, H.5, H.6, H.13
 HEER, A. H. G.14
 HEESEMAN, J. F.1, F.7
 HEIDEBRECHT, H. J. I.9
 HEIDENREICH, F. K.10
 HEIDENREICH, S. A.8
 HEIKE, M. E.6, E.7, E.8
 HEINE, H. F.11
 HEINZ, H.-P. D.9, D.16, J.3
 HEINZE, G. K.21
 HEISER, A. A.9
 HELD, E. H.8
 HELMRICH, P. F.17
 HEMMERICH, P. M.4, M.6, M.8
 HENGEL, H. A.10
 HENKES, W. A.21, A.28
 HENNE, C. M.7
 HENNING, S. W. L.11, L.21
 HENTSCH, B. L.17, L.18
 HEPPEL, G. A.11
 HERKEL, J. B.11, B.15, H.22
 HERM, A. K.26
 HERMANN, E. F.20, G.9, G.10, K.11
 HERR, W. E.8, E.17
 HERRLINGER, J. D. G.3, G.20
 HERRMANN, D. B. J. B.8
 HERWARTZ, C. G.18
 HETZER, R. A.23
 HEUMADER, E. K.12
 HEYDEN-RYNSCH, B. G.23
 HIMMLER, A. C.29
 HIRSCHWEHR, R. B.9
 HMAMA, Z. 183
 HOCKERTZ, S. F.13
 HÖPKEN, U. D.8
 HOFFMAN, M. A.6
 HOFFMANN, A. K.7
 HOFFMANN, J. C. J.5
 HOFFMANN, M. K. H.12
 HOFFMANN, P. M.5
 HOFMANN, P. I.10
 HOFSTETTER, A. E.12
- HOHLBAUM, A. G.13
 HOHLFELD, R. B.17, B.31
 HOHMANN, A. I.25
 HOLST, C. L.26
 HOLTER, W. A.20
 HOLTSMANN, H. C.30
 HOLZINGER, J. A.12
 HONARVAR, N. F.12
 HORAK, F. B.9
 HORSTMANN, R. D.17
 HOSAKA, N. 339
 HOSCHÜTZKY, H. F.12
 HUBBE, M. J.6
 HUBER, C. E.13, E.17
 HUBER, H. B.10
 HÜNIG, T. B.14
 HUMMEL, M. A.23
 HUNDT, M. G.6
 HUTMACHER, J. D.9, J.3
- IBRAHIM, M. A. A. 362
 IBSEN, P. 378
 IHLNFELDT, H.-G. M.5
 IKEHARA, S. 339, 449
 INABA, M. 449
 ISHIKURA, H. 241
 IWASAKI, A. 421
- JACOBI, A. G.11
 JÄGER, L. B.20, G.23, H.7
 JÄGER, S. B.9
 JAHN, S. B.6, B.23, M.10
 JAHNEL, U. H.23
 JAHNS, G. I.11
 JALOWY, A. B.2
 JARCK, P. B.4
 JIMÉNEZ-DIAZ, M. M.5
 JIN, S.-C. C.7
 JONAS, U. J.8
 JONKER, M. G.9
 JOOSS-RÜDIGER, J. K.13
 JORDAN, M. C.10
 JUNG, G. M.5
 JUNG, S. B.32
 JUNG, T. C.11
 JUNKER, U. G.23, H.7
- KABELITZ, D. E.1, H.15, H.24, I.17, K.26
 KADEN, J. A.30
 KADMON, G. J.12
 KAEVER, V. I.20, I.29
 KALLMANN, B. B.2
 KALSKI, G. H.8
 KALTWASSER, J. P. G.22

- KAMPEN, E. C.19, C.24, C.29
 KAMPERDIJK, E. W. A. 230
 KAPP, A. C.8
 KARAMFILOV, D. B.20
 KARCH, H. F.7
 KATO, K. A.13
 KATSCHINSKI, D. C.12
 KATZ, D. R. 362
 KATZ, S. I. C.4
 KAUFMANN, S. H. E. B.13, C.16, F.9
 KAUFMANN, T. D.10
 KAUL, M. I.12
 KELVIN, D. J. C.26
 KEMPER, O. C.30
 KERLIN, M. J.13
 KIDERLEN, A. F. F.4
 KIEKENBECK, M. C.2
 KIMURA, J. 241
 KIND, P. A.27
 KIRCHHOF, G. L.2
 KIRCHNER, H. A.7, C.12, I.25, I.26, K.14, 240
 KIRIKAE, F. F.24
 KIRIKAE, T. F.24
 KIRSCHFINK, M. D.2, D.3, G.22
 KLEBER, N. A.14
 KLEHMANN, E. E.17
 KLEIN, R. K.8, K.18
 KLEINDIENST, R. G.7, G.25
 KLEIN-HÄSSLING, S. L.18
 KLINGEL, S. I.27
 KLINKERT, W. E. F. B.14
 KLOS, A. D.4, D.5, D.11
 KLÜTER, H. C.12, K.14
 KLUGMANN, T. G.8
 KNAPP, W. A.20, J.11
 KNIPPING, E. C.13
 KNOP, J. B.10
 KNUTH, A. E.8, E.17
 KOCH, K. K.4
 KOCH, N. A.25
 KODELJA, V. M.1
 KÖBSEL, N. C.14
 KÖHL, J. D.4, D.5, D.6, D.11
 KÖHLER, G. B.3
 KÖHLER, H. A.31
 KÖLLER, M. I.13, I.18, I.19
 KÖLSCH, E. H.2, M.1
 KOESTER, M. I.26
 KOLANUS, W. I.14
 KOLB, H. B.2
 KORETZ, K. J.10
 KORN, A. I.15
 KORTHÄUER, U. H.9
 KOS, F. J. 410
 KOSTULAS, V. K.17
 KOSZINOWSKI, U. H. A.10
 KOUASSI, E. 183
 KOVACS, E. I.16, I.27
 KOVARIK, J. A.34
 KOWITZ, A. J.6
 KOZLOWSKA-SKRZYPCZAK, M. 327
 KRAAL, G. 394
 KRÄMER, B. C.15
 KRÄMER, K.-L. I.17
 KRAFT, D. B.9
 KRAFT, M. I.17
 KRAMER, A. E.17
 KRAMER, M. D. D.18
 KRAMMER, P. M.7
 KRAMMER, P. H. B.29, C.13, C.20, E.3, L.23, M.2
 KRAUSE, H. C.5
 KRAWINKEL, U. M.4, M.6, M.8
 KRETH, H. W. A.18
 KREYSCH, H.-G. I.15
 KRIEG, T. G.21
 KRIGMEIER, M. E.12
 KROCZEK, R. A. H.9, L.9, L.20
 KRÖNKE, M. B.12, C.15, C.17, C.19, C.24, C.29
 KROMBACH, F. J.7
 KROMER, S. H.5
 KRÜGER, C. F.22
 KRÜGER, K. G.21
 KRUGLUGER, W. I.13, I.18, I.19
 KRUPPA, G. B.12
 KRUSE, A. I.24, 246
 KRUTMANN, J. C.8, J.4, J.8
 KUBENS, B. S. A.15
 KUBICKA-MURANYI, M. K.9
 KÜPPERS, R. M.3
 KUHN, H. L.12
 KUMMER, U. H.10
 KUNER, I. K.15
 KUNZ, D. F.2, L.4, L.13
 KUPSCH, J. 254
 KUSAMA, T. F.11
 KUSUMOTO, S. F.11, F.24
 KÜTTLER, B. A.17
 KYAS, U. L.22
 LACHA, J. A.17
 LACHMANN, P. J. D.21, D.22
 LADEL, C. H. B.13, C.16
 LAHM, H. E.3
 LAMBRACHT, D. A.16
 LANDENBERG, P. VON E.14
 LANG, B. A.1
 LANG, D. A.8
 LANGE, S. F.17
 LANNES-VIEIRA, J. B.14
 LAUE, R. B.23
 LE, D. T. G.22
 LE CONTEL, C. 199
 LEDWON, M. G.15
 LEHMANN, J. B.1, F.13
 LEHMANN, M. A.17
 LEIFELD, L. K.10
 LEITHÄUSER, F. M.7
 LEKER, A. D.12
 LEMKE, H. B.12
 LENDECKEL, U. L.4, L.13, L.14
 LEUNG, D. Y. B.24
 LICHTER, P. B.29
 LIEBE, S. K.4
 LIEV, F. Y. B.32
 LINGNAU, F. H.11
 LINK, H. K.17
 LIPFORD, G. B. A.6, C.6
 LLOYD, A. R. C.26
 LÖFFLER, H. A.24
 LÖHR, H. K.16
 LÖSCH, U. 292
 LÖTSCHER, H. C.8
 LOHMANN, S. E.13
 LOHMANN-MATTHES, M.-L. B.4, B.7, B.19, F.13
 LOHOFF, M. F.14, L.25
 LOHSE, A. W. B.11, B.15, G.9, H.22
 LOLEIT, M. M.5
 LOOS, M. B.16, B.21, D.15, F.8, G.22, I.7, I.12
 LOPPNOW, H. J.9
 LOTTSPEICH, F. L.21
 LUCKENBACH, G. A. I.15
 LÜBBERS, B. D.6
 LUEF, G. G.25
 LÜHRMANN, R. K.6
 LÜTTIG, B. D.19
 LUGER, T. A. C.8
 MAAS, R. A. 214
 MACHLEIDT, T. C.17, C.19, C.24, C.29
 MAEURER, M. J. B.16, B.21

- MAGES, H. W. H.9, L.9,
L.20
MAGET, B. K.5
MAHLKNECHT, U. H.12
MAISCH, B. A.23
MAJDIC, O. A.20, J.11
MANN, M. K.16
MARKUS, B. H. F.21, J.2
MAROSI, M. G.25
MARTIN, M. I.20
MARX, S. A.31
MARX, U. B.23
MATTAR, T. C.18
MATTNER, F. C.7
MATYAS, J. J.15
MATZKU, S. J.14
MAY, G. A.30
MAYER, K. L.15
MAYET, W. B.27, B.28
MAYET, W.-J. G.10, K.11
MECHTERSHEIMER, G. J.10
MEDOF, M. E. G.15
MEHLHORN, J. G.11
MEHLIG, M. A.22
MEICHLE, A. C.15
MEINL, E. B.17, B.31
MELCHER, T. D.5
MELCHERS, I. A.1, G.13,
K.1, K.13
MERKLE, H. 292
MESSER, G. A.12, A.27
METZNER, G. G.12
MEUER, S. C. G.26, H.24,
J.1, J.5, L.2, L.11, L.19,
L.21
MEURER, M. G.21
MEWAR, D. D.21, D.22
MEYER-RIENECKER, H.
K.17
MEYER ZUM BÜSCHENFELDE,
K.-H. A.31, B.11, B.15,
B.27, B.28, C.14, E.6, E.7,
E.8, E.17, F.20, G.9, G.10,
H.22, I.1, J.13, J.16, K.11,
K.16, L.5
MICHELS, M. F.7
MIERAU, R. G.2
MIETHKE, T. H.6, H.13
MIKECZ, A. v. M.4, M.6,
M.8
MITREITER, R. 315
MITTRÜCKER, H.-W. L.16
MIX, E. K.17
MODELELL, M. I.21
MÖLLER, P. E.9, J.10,
M.7
MOHR, C. I.10
MOHR, M. D.8
MOLL, H. F.5, F.15
MONNER, D. A. I.22
MONTZ, H. D.8
MORCOS, M. I.23
MORIOKA, T. B.18
MORSCHES, B. C.3, K.3,
K.19
MOSCHEN, I. K.12
MÜHLRADT, P. F. I.11
MÜLLBACHER, A. 410
MÜLLER, C. I.19
MÜLLER, C. A. E.10
MÜLLER, H.-J. H.25, L.26
MÜLLER, J. C.18
MÜLLER, K. I.24
MÜLLER, M. B.4, B.19
MÜLLER, T. H. B.25
MÜLLER, W.-D. B.20
MÜLLER, W. E. G. B.27,
B.28
MÜLLER-ALOUF, H. 435
MÜLLER-DEUBERT, S. L.17
MÜLLER-FLECKENSTEIN, I.
L.3, L.16
MÜLLER-KUNERT, E. G.19
MÜLLER-LADNER, U. K.8,
K.18
MÜLLER-QUERNHEIM, J.
I.34
MÜLLER-RUCHHOLTZ, W.
A.5, A.9, A.24, A.29, A.33,
G.18, I.31
MÜLLER-STEINHARDT, M.
K.14
MÜLSCH, A. C.9
MUNK, M. J.10
NAGATA, N. 339, 449
NAIN, M. I.2, I.3
NAKAGAWA, T. 339
NAKAJIMA, Y. 241
NANAN, R. A.18
NATHAN, C. S. B.32
NAUSCH, M. G.17, K.4
NAWRATH, H. H.23
NEISS, U. A.19
NETTELNBREKER, E. F.16
NEUMANN, F. M.8
NEUSTOCK, P. C.12, I.25,
246
NICKEL, B. A.1
NICKLAS, W. I.26
NIEMANN, B. B.23
NIETHAMMER, D. H.12
NITZGEN, B. F.17, I.4
NIXDORFF, K. I.15, I.24
NIZZE, H. A.17
NOMOTO, K. 282, 421
NORMIER, G. 183
NORTHEMANN, W. K.6
OBERNEDER, R. E.12
OCKENFELS, H. M.
K.19
OESCH, F. H.3
OGILVIE, A. L.10
OHE, J. VON DER C.21
OHGAMA, J. 268
OHNISHI-INOUE, Y. 449
OLBRICH, S. G.19
OLLERT, M. W. D.13
OLSSON, T. K.17
OMURA, T. 241
ONÔÉ, K. 268
OPALKA, B. K.7
OPITZ, H.-G. B.8
OPPENHEIM, J. J. C.26
OPPERMANN, M. D.8, D.14,
D.23, I.8
OPITZ, U. C.28
OROPEZA WEKERLE,
R. L. G.21
OYAIZU, N. 449
PABST, R. J.15
PANTEL, K. E.4
PARANT, F. 199
PARANT, M. 199
PARLOW, F. C.8, J.4, J.8
PARWARESCH, M. R. I.9
PASSLICK, B. I.28, I.32
PAUELS, H.-G. H.2
PAUL, D. B.4
PAWELEC, G. E.10, H.1,
H.14
PECHHOLD, K. E.1, H.15,
K.26
PERSIN, S. J.15
PETER, H. H. G.13, K.1,
K.6, K.13
PETERSEN, A. B.22
PETRY, F. B.16, D.15, G.22
PETTE, M. F.7
PETTER, H. L.6
PETZOLD, K. A.18
PFEFFER, K. H.5
PFEUFFER, I. L.18
PFORTE, A. I.28, I.32, I.33
PICKL, W. J.11
PICKL, W. F. A.20

- PIETZSCH, C. E.2
 PILZ, K. F.6
 PLESTER, D. K.8, K.18
 PLEWIG, G. A.27
 POHANKA, E. A.34
 POHL, T. H.15
 POHLA, H. H.1, H.14
 POMER, S. E.1
 PORALLA, T. G.9
 PORSTMANN, T. B.23, I.6
 POTTHOFF, K. C.17, C.19, C.24
 PRAAST, G. C.20
 PROBST, P. F.20
 PRÜFER, U. H.24

 QIAO, L. L.2, L.19
 QUERNER, S. A.21

 RADBRUCH, A. A.13, L.1
 RADEKE, H. H. C.21, I.29
 RADZUN, H. J. I.9
 RAEDT, U. D.14
 RAFFEL, B. C.3, H.16, K.3, K.20
 RAGG, S. D.7
 RAGLAND, W. L. H.18
 RAMADORI, G. C.14, I.1, J.16
 RAMMENSEE, H.-G. A.3
 RAPPERSBERGER, K. F.5
 RAUSCH, U.-P. C.10, C.22
 RAUTMANN, A. G.1
 REBMANN, V. A.15
 REHDER, M. C.3, H.16, K.3, K.20
 REICHMANN, G. F.17
 REINHARDT, C. K.5
 REINHERZ, E. L. H.19
 REINHOLD, D. C.23, F.2, H.17, L.4, L.13, L.14
 REINS, H. A. E.11
 REITER, C. E.4
 REITMAIR, A. L.15
 RENSCH, K. J.5
 RENZ, H. B.24
 RENZ, M. G.16
 RESCH, K. C.21, C.30, I.20
 RESKE, K. A.2, A.11, A.19, A.21, A.22, A.28, A.32, B.11
 RESKE-KUNZ, A. B. A.4, H.23, L.24
 REUTER, M. I.26
 REVILLARD, J.-P. 183
 RIEDEL, H. A.17
 RIEGER, C. C.11

 RIEKER, T. H.18
 RIESE, J. I.20
 RIETHMÜLLER, G. E.4, E.12
 RIETSCHEL, E. T. F.11, F.24, J.9
 RILKE, O. L.20
 RING, A. D.16
 RINGDÖRFER, C. E.14
 RINGHOFFER, M. F.20
 RINK, L. I.26
 RISCHKOWSKY, A. I.2
 RITTIG, M. I.21
 RITZNER, C. D.1, D.10
 RODEWALD, H.-R. H.19
 RÖDEL, F. C.10
 RÖLLINGHOFF, M. C.10, C.22, F.5, F.10, F.14, H.26, L.25
 ROEST, P. A. M. 214
 ROGGENBUCK, D. B.23
 ROMEO, C. I.14
 ROSENKRANZ, A. R. A.34, J.11
 ROTH, E. L.10
 ROTH, J. 304
 ROTHE, G. I.16, I.27
 ROUX, M. J.1
 ROYER-POKORA, B. D.7
 ROZNOWSKI, A. B. E.1
 RUDOLPHI, U. G.13
 RÜDE, E. A.4, A.14, C.7, C.18, H.3
 RUEDI, C. F.18
 RÜTHLEIN, J. K.21
 RUPPERT, T. A.10
 RUTTEN, F. A. J. J. L. 394
 RYCHLY, J. A.17

 SACK, K. K.25
 SACK, U. G.12, K.22
 SAEFKOW, M. D.3
 SAIZAWA, K. M. 254
 SALOGA, J. B.24, L.7
 SAMMAR, M. J.12
 SAMSTAG, Y. L.11, L.21
 SAWELJEW, P. E.16
 SACHSNER, M. J.6, J.12
 SCHADE, U. F.24
 SCHADENDORF, D. E.9
 SCHÄDLICH, H. G.12
 SCHAIBLE, U. I.21
 SCHAIBLE, U. E. F.12, F.19
 SCHATTKIRCHNER, M. G.21
 SCHAUER, U. C.11
 SCHEICHER, C. A.22

 SCHEINER, O. B.9
 SCHEPERS, P. C.9
 SCHENDEL, D. J. E.12, K.5
 SCHENK, A. H.1
 SCHERTHAN, H. D.7
 SCHIEBLER, W. C.18
 SCHISSLER, A. I.33
 SCHILLER, D. L.21
 SCHILLING, T. F.22
 SCHINDEL, M. E.3
 SCHIRRMACHER, V. J.6, J.12
 SCHLAAK, J. F.20
 SCHLAAK, M. B.22
 SCHLEDZ, M. G.13
 SCHLESIER, M. K.6
 SCHLIMOK, G. E.4
 SCHLUMBERGER, W. G.19
 SCHMALDIENST, S. A.34
 SCHMID, E. B.25
 SCHMIDT, A. I.3, M.7
 SCHMIDT, B. B.32
 SCHMIDT, H. E.10
 SCHMIDT, R. E. G.6, G.15, L.8
 SCHMIDTKE, M. I.10
 SCHMITT, E. C.7, F.13
 SCHMITT, J. B.8
 SCHMITT, W. L. G.1
 SCHMITT-VERHULST, A.-M. B.26
 SCHMITZ, E. F.16
 SCHMITZ, G. I.16, I.27
 SCHMITZ, J. L.1
 SCHMITZ, N. A.24
 SCHNEGG, G. E.5
 SCHNEIDER, P. M. D.1, D.10
 SCHÖLLHORN, K. K.15
 SCHÖLS, M. H.20, I.17
 SCHÖNBECK, U. J.9
 SCHÖNERMARCK, M. D.18, I.23
 SCHOENHAUT, D. S. C.7
 SCHOENHERR, G. B.23
 SCHÖNIAN, U. A.23
 SCHÖNRICH, G. B.26
 SCHÖPPE, E. C.8, J.4, J.8
 SCHOEPE, W. C.31
 SCHOLZ, M. F.21, J.2
 SCHOPF, R. E. C.3, H.16, K.3, K.19, K.20
 SCHORNAGEL-HOEBEN, K. 394
 SCHRAUT, W. I.32
 SCHRAVEN, B. H.24
 SCHRECK, R. C.27

- SCHROEDER, J. O. D.12, G.3, G.5, G.14, G.20
 SCHUBERT, J. G.6, G.15
 SCHÜRMANN, G. L.2
 SCHÜRMANN, Q. L.19
 SCHÜTT, C. F.22, I.32, I.33
 SCHÜTZE, S. C.17, C.19, C.24, C.29
 SCHULZ, S. H.21
 SCHULZ, U. G.17
 SCHULZE-OSTHOFF, K. C.25
 SCHUPPAN, D. L.24
 SCHUPPE, C. K.9
 SCHUSTER, D. K.26
 SCHWAB, U. M. G.20
 SCHWAEBLE, W. D.19, D.20, E.16, J.13
 SCHWEHN, S. A.24
 SCHWEMMLE, M. B.27, B.28
 SCHWENK, F. A.25
 SCHWERDT, A. B.15
 SCHWINN, A. E.2
 SCHWINZER, R. L.7, L.22
 SCHWÖGLER, S. I.1
 SCRIBA, P. C. G.19
 SEDLAK, J. I.19
 SED, B. I.14
 SEFLIG, H. P. G.16
 SEFLIGER, B. E.17
 SEGHROUCHNI-ZENNATI, S. F.6, I.5
 SEGURADO, O. G. E.12, K.5
 SEIFERT, M. M.9
 SELIGER, B. E.13
 SEMSEL, I. B.27, B.28
 SERFLING, E. L.17, L.18, L.23
 SETTMACHER, U. B.6, M.10
 SEYFARTH, M. G.17, K.4
 SIEGL, P. M.10
 SIEGLS-HÜBENTHAL, P. H.14
 SIMON, M. M. F.12, F.19, I.21
 SKERKA, C. D.17, L.26
 SKLAR, J. K.24
 SOKOLOWSKI, T. D.19
 SOLBACH, W. H.26
 SOLBECK, I. H.8
 SORG, C. 304
 SPÄTH, P. D.10
 SPAHN, T. B.15
 SPAHN, T. W. H.22
 SPEYERER, P. D.20
 SPOHN, R. M.5
 SPRENGER, H. C.26, I.2
 SRIVASTAVA, P. K. E.6, E.7
 STAEGE, M. H.23
 STAERZ, U. D. H.10
 STAHL, R. A. K. C.31
 STASHAK, P. W. 378
 STEGER, B. B.8
 STEIGLEDER, F. I.31
 STEIN, N. E.3
 STEINERT, M. F.14
 STEINHILBER, G. E.11
 STEINLE, A. K.5
 STEINMANN, J. A.5, G.18
 STELTER, F. I.32
 STELZER, B. D.23
 STELZNER, A. I.10
 STERNSDORF, T. C.27, I.28
 STIEHL, P. K.22
 STITZ, L. A.26, F.23
 STÖCKER, W. G.19
 STÖCKL, J. J.11
 STORCKEL, S. B.16
 STOYANOVA-SCHOLZ, M. K.23
 STRASSER, A. I.20
 STRICKER, K. L.23
 STRÖBEL, I. A.27
 STRÖBEL, M. C.27, I.28, I.32, I.33
 STÜHMER, T. D.4, D.5
 STULLE, K. E.14
 SUGIURA, K. 449
 SUZUKI, K. I.6
 SYHA-JEDELHAUSER, J. A.21, A.28
 TAKAHASHI, C. 241
 TAKAYAMA, K. 378
 TAKEUCHI, M. 421
 TANZMANN, H. B.23
 TAYLOR, C. E. 378
 TEDESCO, F. D.10
 TEIGELKAMP, S. 304
 TESKE, E. G.3, G.5, G.14, G.20
 THAISS, F. C.31
 THANHÄUSER, A. E.15
 THEOPHILOPOULOS, A. N. F.14
 THIERFELDER, S. H.10
 TILMANN, G. D.9, D.16
 TILMANN, J. J.3
 TOKI, J. 449
 TOMITA, Y. 282
 TONN, T. K.23
 TORRES-NAGEL, N. B.14
 TOYKA, K. V. B.32, F.7
 TREFZER, U. C.8, J.4, J.8
 TRINDER, P. K. E. B.16, B.21, I.7
 TRÖSTER, H. B.27, B.28
 TSCHOETSCHEL, U. L.24
 TSYGANKOV, A. YU. L.3
 TÜMMLER, B. 304
 TWISK, A. J. T. 394
 UCHINO, J. 241
 UCHIECHOWSKI, P. I.29
 UDEY, M. C. C.4
 UHAREK, L. A.5, A.33
 ULBRECHT, M. A.27
 ULMER, A. J. C.23, E.15, F.11, F.24, H.17
 ULRICH, K. A.9
 UTHOFF, S. M.11
 VALENTA, R. B.9
 VALETT, G. I.27
 VAN VUGT, E. 230
 VEELKEN, H. K.24
 VERDAASDONK, M. A. M. 230
 VÖGELER, U. A.15
 VOGEL, C.-W. D.13
 VOGELSANG, H. G.23, H.7
 VOGT, A. B.18
 VOGT, T. I.8
 VOLK, H.-D. A.17
 VOLLMERS, H. P. E.14
 WACKER, H. H. I.9
 WAGNER, A. C.28
 WAGNER, H. A.6, C.6, H.5, H.6, H.13
 WAGNER, S. A.32
 WAHL, C. H.13
 WAISER, J. L.25
 WALCZAK, H. B.29
 WALDENBERGER, F. R. G.7
 WALLACH, D. C.30
 WALLICH, R. J.1, J.5, L.2, L.19
 WALTER, A. E.16
 WANAGAT, N. F.6
 WANG, Z. B.30
 WEBER, B. J.14
 WEBER, F. B.17, B.31
 WEDEKIND, D. B.19
 WEDEL, A. C.27
 WEGENER, S. A.15
 WEIMAR, J. S. 214
 WEINER, E. G.2

- WEISS, A. L.25
 WEISS, E. H. A.12, A.27
 WEITZ, S. B.29
 WEKERLE, H. B.14, B.17, B.31
 WELZEL, M. H.4
 WEN, J. K.27
 WENDLING, U. A.28
 WENZEL, B. E. F.3, G.8, K.25
 WERLE, E. G.24
 WERNET, P. I.30
 WESCH, D. K.26
 WESSELBORG, S. H.24
 WESTERMANN, J. J.15
 WEX, T. L.13, L.14
 WEYAND, C. C.28
 WICK, G. F.18, G.7, G.25, H.18, K.12
 WIDDERN, E. C. v. I.30
 WIEGMANN, K. C.17, C.29
 WIEMANN, C. G.16
 WIESEL, A. H.11
 WIESER, F. I.13
 WIESER, R. H.3
 WILD, M. H.24
 WILFING, A. I.13
 WILKE, M. 304
 WILLCOX, N. A.1
 WILLEIT, J. G.7
 WINZEN, R. C.30
 WOBST, B. A.29
 WÖLFEL, T. E.8, E.17, H.22
 WÖLLNER, B. B.12
 WOHLFAHRT, L. A.30
 WOITAS, R. B.18
 WOLF, G. C.31
 WOLF, H. F.18, K.12
 WOLFF, G. K.22
 WOLFF-VORBECK, G. K.6
 WOLLENBERG, A. A.27
 WOLLENHAUPT, J. F.16, K.27, K.28
 WOLLENSAK, S. A.2
 WOLLINSKI, K. H. D.3
 WOLLNER, A. D.4, D.5
 WÖNIGT, K. A.16, L.22
 WOOD, G. K.24
 WOTTGE, H.-U. I.31
 WÜRZNER, R. D.21, D.22
 XIE, Q. W. B.32
 XU, Q. G.7, G.25
 YASUMIZU, R. 449
 YOSHIKAI, Y. 421
 YOSHIKI, T. 241
 YU, D. K.27
 YU, D. T. Y. K.11
 ZANKER, B. A.31
 ZAVAZAVA, N. A.24, A.29
 ZECHER, R. A.22, A.32
 ZEIDLER, H. F.16, K.27, K.28
 ZEIS, M. A.33
 ZENTNER, A. K.29
 ZHANG, Y. B.14
 ZIEGLER-HEITBROCK, H. W. L. C.27, I.28, I.32, I.33
 ZIELASEK, J. B.32
 ZIELEN, S. G.26
 ZIELINSKA-SKOWRONEK, M. G.6, G.15
 ZIELINSKI, T. H.25
 ZILLIKENS, D. K.29
 ZILOW, E. P. D.23
 ZILOW, G. D.23
 ZIMMERMANN, S. H.26
 ZIMMERMANN, U. E.14
 ZIPFEL, P. F. D.17, L.26
 ZISSEL, G. I.34
 ZLABINGER, G. J. A.34
 ZOEHRENS, G. J.16
 ZÖLLER, M. J.14
 ZÜGEL, U. E.10
 ZUMMACK, M. L.21

Subject Index

- Acute myeloid leukemia 327
- Adjuvant arthritis, type II collagen 351
- Allo-specific T lymphocytes, antigen-presenting cells 362
- $\alpha\beta$ T cells, reticuloendotheliosis virus 292
- Anti-ICAM-1 monoclonal antibody, allografted rat liver 241
- Antigen-presenting cells, allo-specific T lymphocytes 362
- Antigen-specific activation, memory cytotoxic T cells 410
- Auto-MHC class II-reactive T cell line, lpr-GVHD 339
- B cell-derived factors, CD8⁺ memory cytotoxic T cells 410
- Bacillus Calmette-Guérin, dendritic cells 230
- Bacterial lipopolysaccharides, polysaccharide moiety 378
- Baculovirus infected insect cells, soluble CD4 protein 254
- CD4 protein, baculovirus infected insect cells 254
- CD8⁺ cytotoxic T lymphocytes, tumor cell killing 214
- CD8⁺ memory cytotoxic T cells 410
- Chronic airway inflammation, MRP8 and MRP14 304
- Cyclophosphamide-induced tolerance 282
- Cytokine production, erythrotoxic type A 435
- Cytokine production, *Streptococcus pyogenes* 435
- Cytokines, *Mycoplasma arthritidis* 246
- Cytokines, staphylococcal enterotoxin B 246
- Cytotoxic T lymphocyte response, reticuloendotheliosis virus 292
- Dendritic cells, Bacillus Calmette-Guérin 230
- Dendritic cells, peritoneal cavity 230
- Dietary fat, interactions of lymphocytes with high endothelial venules 394
- Effector cells, tumor bearing mice 214
- Erythrotoxic type A, cytokine production 435
- Erythroid progenitor growth, interferon-gamma-mediated suppression 327
- $\gamma\delta$ T cells, reticuloendotheliosis virus 292
- High endothelial venules, dietary fat 394
- HLA-DR4⁺/DR5⁺ donors, MHC-restriction patterns 315
- Immunosuppressive effects, bacterial lipopolysaccharides 378
- Interferon-gamma-mediated suppression, erythroid progenitor growth 327
- Interleukin-1 β , down-regulation of tumor necrosis factor- α 199
- Klebsiella pneumoniae*, proteoglycan 183
- Leukocytes, binding of proteoglycan 183
- Lipopolysaccharides, immunosuppressive effects 378
- lpr gene, lymph node stromal cells 449
- lpr-GVHD, auto-MHC class II-reactive T cell 339
- lpr-lymphadenopathy, stromal cells 449
- Lymphocyte subpopulations, MEL-14 expression 268
- Lymphocytes, dietary fat 394
- Macrophages, tumor cell killing 214
- MEL-14 expression, lymphocyte subpopulations 268
- Memory cytotoxic T cells, antigen-specific activation 410
- Memory cytotoxic T cells, B cell-derived factors 410
- MHC antigens, thymic epithelium 421
- MHC-restriction patterns, HLA-DR4⁺/DR5⁺ donors 315
- MRL/+ mice, lpr-GVHD 339
- MRL/Mp-lpr/lpr mice, lymph node stromal cells 449
- MRP14, chronic airway inflammation 304
- MRP8, chronic airway inflammation 304
- Mycobacterium butyricum*, adjuvant arthritis 351
- Mycoplasma arthritidis*, induction of cytokines 246
- Myelo-monocytic differentiation, chronic airway inflammation 304
- Peritoneal cavity, dendritic cells 230
- Polysaccharide moiety, bacterial lipopolysaccharides 378
- Proteoglycan, *Klebsiella pneumoniae* 183
- Rat liver, allografted 241

- Rejection, allografted rat liver 241
- Reticuloendotheliosis virus-infected
chickens 292
- Self-reactive T cell clones, HLA-DR4⁺/
DR5⁺ donor 315
- Serum tumor necrosis factor- α 199
- Skin allograft prolongation, antigen-
disparate combination 282
- Soluble CD4 protein 254
- Staphylococcal enterotoxin B, induction
of cytokines 246
- Streptococcus pyogenes*, cytokine pro-
duction 435
- Stromal cells, *lpr* gene 449
- Superantigen, erythrotoxic type A
and *Streptococcus pyogenes* 435
- Suppression, interferon-gamma-
mediated 327
- T cell receptors, HLA-DR4⁺/DR5⁺
donor 315
- Thymic epithelium, T cell selection 421
- Tolerance, cyclophosphamide-induced . . . 282
- Tolerance, thymic epithelium 421
- Transfusion, cyclophosphamide-induced
tolerance 282
- Tumor bearing mice, effector cells 214
- Tumor cell killing 214
- Tumor necrosis factor- α , regulation by
interleukin-1 β 199
- Type II collagen, adjuvant arthritis 351

Euroimmun, 2400 Lübeck; ¹ Dept. of Medicine, University, 8000 München, Germany

G.19 Autoantibodies to granulocytes in chronic inflammatory bowel disease are not correlated with antibodies to intestinal goblet cells in ulcerative colitis and to pancreatic juice in Crohn's disease

W. STÖCKER, S. OLBRICH, W. SCHLUMBERGER, A. BRÜHMANN, E. MÜLLER-KUNERT, and P. C. SCRIBA¹

Autoantibodies to the cytoplasm of granulocytes were observed in sera of patients with ulcerative colitis (UC) and, with a lower prevalence, of patients with Crohn's disease (CD); the immunofluorescence pattern was perinuclear (pANCA; 1). On the other hand, disease specific autoantibodies are directed against intestinal goblet cells in CU (GAb; 2, 3) and against pancreatic juice in CD (PAb; 3). We analyzed if pANCA were correlated with GAb or PAb.

Sera were tested by indirect immunofluorescence, using frozen sections of human fetal intestine and adult pancreas as well as granulocyte preparations as antigenic substrates. Fluorescein labelled antihuman IgA + IgG + IgM was the second antibody. Only patients with agreeing clinical, endoscopic and histological diagnoses of UC or CD were regarded.

UC patients exhibited pANCA in 66.7% of 21 GAb+ve and in 52.7% of 55 GAb-ve cases. CD patients exhibited pANCA in 6.7% of 15 PAb+ve and in 7.4% of 54 PAb-ve cases. Thus, a close correlation of GAb or PAb with pANCA can be excluded. GAb in UC were preponderant in males (prevalence ratio male/female 3.3). For PAb in CD the ratio was 1.1, for pANCA in UC 0.9. All five pANCA+ve of 69 CD patients were women. The additional testing of pANCA enhanced the predictive value of the serological diagnosis in UC from 28% (GAb; 3) to 66% (GAb plus pANCA) and in CD from 39% (PAb; 3) to 46% (PAb plus pANCA). However, pANCA are not restricted to one of the two diseases, whereas GAb show a close association with UC and PAb with CD.

1. SAXON, A. et al.: *J. Allergy. Clin. Immunol.* **86**, 202 (1990),
2. BROBERGER, O. and B. PERLMANN: *J. exp. Med.* **115**, 13 (1962),
3. STÖCKER, W. et al.: *Scand. J. Gastroent.* **22**, Suppl. 139, 41 (1987)