

8 H... 31...

30

# Hoppe-Seyler's Zeitschrift für Physiologische Chemie

**45. Konferenz der Gesellschaft für Biologische Chemie**



Herausgegeben von

**K. Decker, W. Stoffel, H.G. Zachau**

er Mittwirkung von H. Eggerer, J. Engel, H. Fritz, E. Habermann, E. Helmreich, A. Henschen, B. H

ilschmann, H. Hilz, Blut, K. Jungermann, P. Karlson, H. Kleinkauf, H.L. Kornberg, K. K

Oeste ndhoff, R. Schauer, J. Seelig, G. Siebert, H. Sies, H. Simon, E. Trusche

H. Ullrich, E. Wecker, H. Wiegandt, B. Wittmann-Liebold, H. Zahn

edaktion A. Dillmann, G. Peters

E GRUYTER · BERLIN · NEW YORK

BITTE HIER ABZEICHNEN  
wenn das Heft benutzt wird

H	16	11			

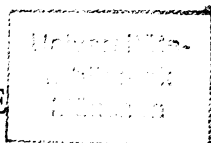
# BIOCHIMIE

Publication mensuelle  
éditée par la SOCIÉTÉ de CHIMIE BIOLOGIQUE  
4, Avenue de l'Observatoire, 75270 Paris Cedex 06

Abonnements: 920 FF - 200 US \$

1983 - TOME 65 - N° 4-5

## SOMMAIRE



### INFORMATIONS

Biologie moléculaire de la région transformante de l'adénovirus humain type 5.

### CHRONIQUE DE LIVRES

### MÉMOIRES ORIGINAUX

A directional process of gene conversion is expected to yield dynamic polymorphism associated with stability of alternative alleles in class I histocompatibility antigens gene family.

*F. Brégère*

Action d'endopeptidases de *Bacillus sphaericus* sur les peptidoglycanes bactériens et sur des fragments peptidoglycaniques.

*C. Valentin, M.-J. Vacheron, C. Martinez, M. Guinand et G. Michel*

Haemoglobins, LX. Primary structure of the major haemoglobin of the sea lamprey *Petromyzon marinus* (var. Garonne, Loire).

*I. Hombrados, K. Rodewald, E. Neuzil and G. Braunitzer*

Isolation and characterization of a gp70+ non producer Friend tumor cell clone.

*F. Moreau-Gachelin, J. Robert-Lezenes, D. Mathieu-Mahul, S. Gisselbrecht and C. J. Larsen*

Computer building and folding of fictitious transfer-RNA sequences.

*P. Marlière*

Cholesterol turnover in swine plasma lipoproteins.

*J. Aigueperse, J. Ferezou and F. Chevallier*

Evidence for the involvement of activated oxygen in fungal degradation of lignocellulose.

*B. Bes, R. Ranjeva and A. M. Boudet*

### BRÈVES COMMUNICATIONS

*In vitro*, non enzymatic labelling of histone H1 with [<sup>14</sup>C] acetyl CoA.

*M. Delpach, F. Levy-Favartier and J. Krub*

Structure des composés d'addition formés par le nicotinamide adénine dinucléotide et les oximes.

*J. Torrelles, M.-C. Guérin, D. Dussossoy, A. Crastes de Paulet*

## Inter- $\alpha$ -Trypsin Inhibitor of Human Serum: An Inhibitor of Polymorphonuclear Granulocyte Elastase

Marianne JOCHUM and Astrid BITTNER

Abteilung für Klinische Chemie und Klinische Biochemie in der Chirurgischen Klinik Innenstadt der Universität München

(Received 25 July/24 October 1983)

**Summary:** Inter- $\alpha$ -trypsin inhibitor (ITI) was separated from human serum in a single step using ion-exchange chromatography via the fast protein liquid chromatographic system. The inhibitor preparation, identified as ITI by specific immunological assays, inhibited human poly-

morphonuclear granulocytic elastase besides bovine trypsin. Hence, ITI is the third candidate of the plasma proteinase inhibitors (in addition to  $\alpha_1$ -proteinase inhibitor and  $\alpha_2$ -macroglobulin) capable of inhibiting lysosomal granulocytic elastase.

---

### *Inter- $\alpha$ -trypsininhibitor aus Humanserum: Ein Hemmstoff der Elastase aus polymorphkernigen Granulozyten*

**Zusammenfassung:** Inter- $\alpha$ -trypsininhibitor (ITI) wurde durch Ionenaustauschchromatographie mittels des „Fast Protein Liquid Chromatography“-Systems in einem Schritt aus Humanserum separiert. Die anhand immunologischer Methoden als ITI identifizierte Inhibitor-

fraktion hemmte außer Trypsin auch Elastase aus menschlichen polymorphkernigen Granulozyten. Demnach ist ITI, neben  $\alpha_1$ -Proteinaseinhibitor und  $\alpha_2$ -Makroglobulin, der dritte Kandidat der Plasmaproteinaseinhibitoren für die Hemmung lysosomaler granulozytärer Elastase.

---

**Key words:** PMN granulocytic elastase, inter- $\alpha$ -trypsin inhibitor, fast protein liquid chromatography system.

---

#### *Enzymes:*

Polymorphonuclear granulocyte elastase (EC 3.4.21.37); trypsin (EC 3.4.21.4).

#### *Abbreviations:*

$\alpha_1$ -PI =  $\alpha_1$ -proteinase inhibitor (formerly  $\alpha_1$ -antitrypsin);  
Bistris = 2-[bis(2-hydroxyethyl)amino]-2-(hydroxymethyl)-1,3-propanediol;  
BzArgNan = benzoyl-L-arginine-4-nitroanilide;  
FPLC = fast protein liquid chromatography;  
Hepes = 4-(2-Hydroxyethyl)-1-piperazineethanesulfonic acid;  
ITI = inter- $\alpha$ -trypsin inhibitor;  
IU = inhibitor units;  
PMN = polymorphonuclear;  
Suc[Ala]<sub>2</sub>ValNan = 3-carboxypropionyl-L-alanyl-L-alanyl-L-valine-4-nitroanilide;  
TosPheCH<sub>2</sub>Cl = (*N*-*p*-toluenesulfonyl-L-phenylalanyl)chloromethane;  
Tricine = *N*-[2-hydroxy-1,1-bis(hydroxymethyl)ethyl]glycine.

Inter- $\alpha$ -trypsin inhibitor (ITI), although only a minor proteinase inhibitor in human plasma or serum<sup>[1]</sup>, has a broad inhibition spectrum<sup>[1,2]</sup>. It reacts mainly with trypsin, curiously showing a higher affinity for bovine than for the human enzyme. The same holds true for bovine and human chymotrypsin<sup>[3]</sup>. In contrast, acrosin, a trypsin-like enzyme from spermatozoa, reacts with ITI with a higher affinity for the human than for the animal (boar) enzyme<sup>[4]</sup>. Whereas a weak inhibition of human plasmin by ITI was also demonstrated<sup>[1,2]</sup>, inhibition of PMN-granulocytic elastase by ITI still remains a matter of controversial discussion<sup>[2,5,6]</sup>. Only recently, Jönsson et al.<sup>[5]</sup> and Bromke and Küppers<sup>[6]</sup> demonstrated inhibition of granulocytic elastase by urinary trypsin inhibitors of lower molecular mass cross-reacting immunologically with ITI from human serum. On the other hand, Hochstrasser's group<sup>[2,7]</sup> has not up to now demonstrated such an elastase specificity either for isolated serum ITI or its cleavage products isolated from urine or obtained artificially by trypsinolysis. As ITI is known to be a very labile protein<sup>[1,6,7]</sup> it is likely that the native, fully active inhibitor molecule can be isolated only with gentle techniques especially avoiding strong acidic conditions. Despite several attempts<sup>[6]</sup> in this respect, a successful rapid separation of ITI from human serum has not been achieved so far. Taking advantage of a newly developed isolation system [fast protein liquid chromatography (FPLC System)], we have now been able to separate ITI from serum proteins in a single, rapid step and to demonstrate its inhibitory activity towards PMN-granulocytic elastase.

## Material and Methods

### a) Ion exchange chromatography

Separation of ITI from 1 or 5 ml human serum was achieved within 20–30 min using the FPLC System (Pharmacia, S-75104 Uppsala) with a pre-packed anion-exchange column, Mono Q HR 5/5. The NaCl gradient was established with Bistris buffer A (20mM, pH 6.2) and B (A + 1.0M NaCl). The procedure followed was that suggested by the manufacturer and will be published in detail elsewhere (Jochum, M., Bittner, A. & Gunzer, G., in preparation). For comparison, pre-purified ITI (~80% purity; research product from Behringwerke, D-3550 Marburg) and  $\alpha_1$ -proteinase

inhibitor [ $\alpha_1$ -PI, immunologically homogenous against antihuman plasma antisera protein (Dako, C.H. Boehringer, D-6507 Ingelheim), research product from E. Merck, D-6100 Darmstadt] were subjected to the chromatographic procedure under identical conditions.

### b) Enzyme activity and inhibition assays

**Granulocytic elastase:** Human PMN-granulocytic elastase was isolated according to the method of Baugh and Travis<sup>[8]</sup>. Elastase amidolytic activity and its inhibition were measured by minor modifications of the method published by Wenzel et al.<sup>[9]</sup> using the chromogenic substrate Suc[Ala]<sub>2</sub>ValNan (Bachem, Bubendorf, Switzerland). Briefly, 30  $\mu$ l enzyme solution (0.5  $\mu$ g elastase dissolved in 0.1M CH<sub>3</sub>CO<sub>2</sub>Na, 0.05% Triton X-100, pH 6.5) was incubated at 25 °C with 870  $\mu$ l ( $-x$   $\mu$ l inhibitor solution) 0.1M Hepes buffer pH 8.3, containing 2M NaCl and 0.05% Triton X-100. The enzyme activity was determined after addition of 100  $\mu$ l substrate solution (10mM in 100% dimethylsulfoxide) at 405 nm.

**Bovine trypsin:** Bovine trypsin (treated with TosPhe-CH<sub>2</sub>Cl, Merck) activity and its inhibition were determined with BzArgNan (Merck) as substrate, according to Fritz et al.<sup>[10]</sup>.

### c) Immunoelectrophoresis

Rocket immunoelectrophoresis was performed according to Laurell<sup>[11]</sup> in 1% agarose on plastic plates from LKB (S-161 25 Bromma) using agarose tablets and Tris/Tricine buffer pH 8.6 (0.08M Tris, 0.024M Tricine, 0.3mM calcium lactate, 0.02% NaN<sub>3</sub>; from Bio-Rad Laboratories, Richmond, CA.). Electrophoresis was carried out at 8–10 V/cm for 4 h. The specific antisera against ITI or  $\alpha_1$ -PI were purchased from Behringwerke and applied in a final concentration of 1% and 1.5%, respectively. 5  $\mu$ l of antigen samples were inserted into the gels and the plates stained with 0.5% Coomassie Brilliant Blue R 250 (Serva, D-6900 Heidelberg) for 45 min.

### d) Dodecyl sulfate polyacrylamide gel electrophoresis

Dodecyl sulfate gel electrophoresis under reducing (with 1% 2-mercaptoethanol) or non-reducing conditions was performed as horizontal flat gel electrophoresis with the LKB 2117 Multiphor apparatus according to the LKB application note 306. The thickness of the 5% and 7.5% gels were 2 mm each, the applied sample volumes 10  $\mu$ l. For molecular mass calibration high (40–250 kDa) and low (10–100 kDa) standard protein mixtures from Bio-Rad Laboratories were used. The gels were subjected to electrophoresis at 8–9 V/cm for 3 h. After protein fixation for 30 min with 20% (w/v) trichloroacetic acid staining was performed with 0.15% Coomassie Brilliant Blue R 250 for 2 h.

**Results and Discussion**

Ion-exchange chromatography is commonly used during purification of ITI from various body fluids (for a review, see ref.<sup>[12]</sup>). The essential advantage of the procedure described here (FPLC System) is the extremely short separation time, thereby probably avoiding degradation and

partial inactivation of the native inhibitor molecule<sup>[1,6,7,12]</sup>.

The primary aim of this work was to show inhibitory activity of ITI towards granulocytic elastase, after complete separation from  $\alpha_1$ -PI present in serum in a 20-fold molar excess over ITI<sup>[1]</sup>. To determine the exact elution volumes

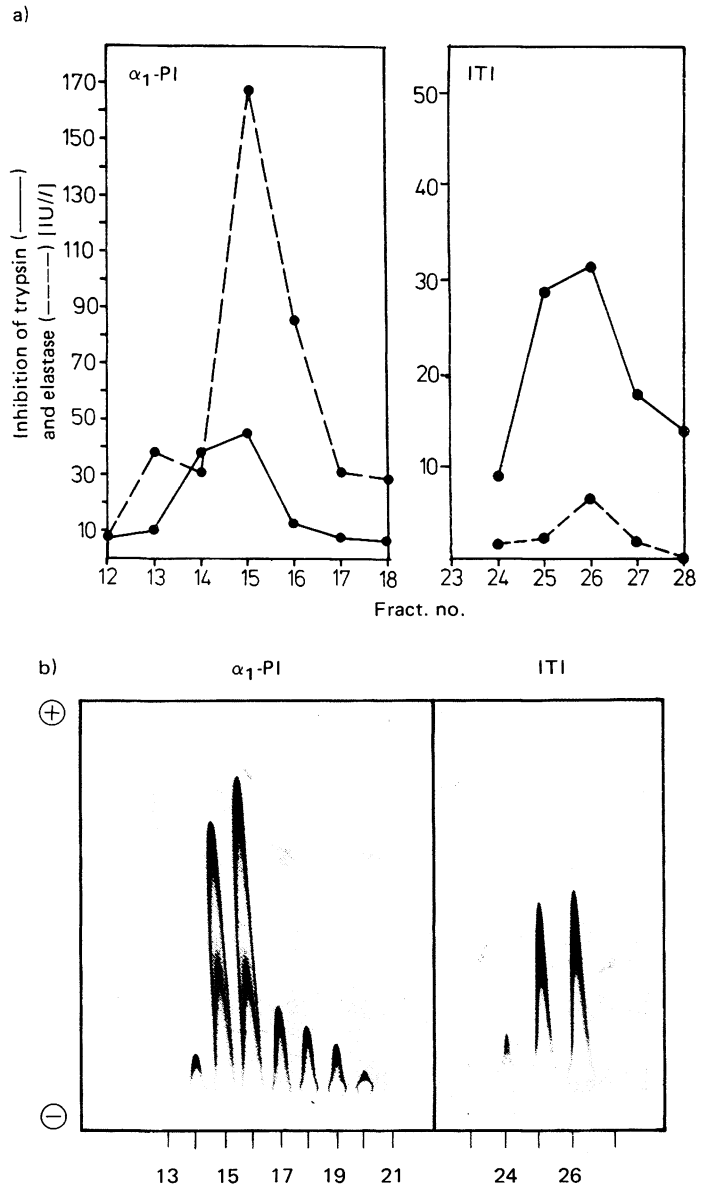


Fig. 1. Separation of the pre-purified inhibitors ITI and  $\alpha_1$ -PI with the FPLC System. a) The elution diagrams representing inhibition of trypsin (●—●) and granulocytic elastase (●---●) by  $\alpha_1$ -PI and ITI were chromatographed separately. A trypsin (IU/l) : elastase (IU/l) inhibitory ratio of 0.3 was calculated for  $\alpha_1$ -PI in fraction 15 and of 5.0 for ITI in fraction 26. b) Rocket immunoelectrophoresis of the indicated fractions. For identification either 1% ITI antiserum or 1.5%  $\alpha_1$ -PI antiserum was used. Precipitin lines were not caused by any other eluted fractions. For experimental details, see Material and Methods.

for ITI and  $\alpha_1$ -PI, respectively, the prepurified substances were chromatographed separately. As shown in the elution diagram (Fig. 1a) established by the inhibitory activities of the fractionated samples against trypsin and granulocytic elastase, ITI\* was eluted in fractions 24 to 28 but  $\alpha_1$ -PI already in fractions 13 to 18. This was also confirmed by rocket immunoelectrophoresis using specific ITI and  $\alpha_1$ -PI antiserum, respectively (Fig. 1b).

In a first approach, fractionation of 1 ml human serum was performed with a step-wise NaCl gradient ranging from 0 to 1.0M. Under these conditions two peak areas each with inhibitory activity towards trypsin and granulocytic elastase could be separated (Fig. 2a). According to the inhibitory elution pattern of the prepurified inhibitors (Fig. 1a) as confirmed by the results of rocket immunoelectrophoresis (Fig. 2b), fractions 24 to 27 contained ITI and fractions 9 to 16  $\alpha_1$ -PI. Molecular mass estimation by dodecyl sulfate gel electrophoresis under reducing conditions showed for the protein(s) in fraction 25 and 26 a mean molecular mass of 178 kDa (Fig. 3). This is in good agreement with the value of 182 kDa found for the protein in comparable fractions after chromatography of prepurified ITI (Fig. 3). The presence of only trace amounts of proteins smaller than ITI in fraction 25 and 26, indicates a high degree of purification of ITI by this single chromatographic step. Proteins present in fractions 10 to 14 after ion-exchange chromatography of human serum have a mean molecular mass of 60 kDa; they probably present albumin and  $\alpha_1$ -PI.

In a second approach higher quantities of ITI could be isolated from 5 ml serum without overloading the ion exchanger. To achieve this, a linear NaCl gradient was started already with 0.3M saturation. Under these conditions,  $\alpha_1$ -PI (identified by the inhibition spectrum and the given immunological assays) was eluted with the bulk of the proteins in the non-retarded fractions. ITI was eluted in several fractions identified by their inhibitory activity towards trypsin and

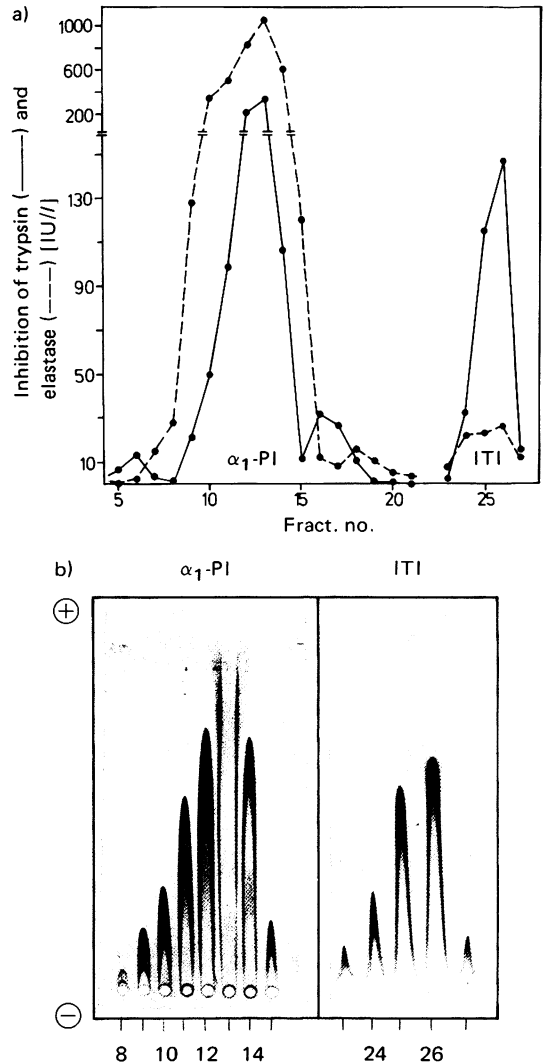


Fig. 2. Separation of 1 ml human serum with the FPLC System.

a) The elution diagram represents the inhibitory activities of each fraction towards trypsin (●—●) and granulocytic elastase (●---●). A step-wise NaCl gradient was applied ranging from 0–0.2M (fractions 3 to 17), 0.2–0.4M (fractions 17 to 24), and 0.4–1.0M (fractions 24 to 28).

A trypsin (IU/l): elastase (IU/l) inhibitory ratio of 0.3 was calculated for  $\alpha_1$ -PI in fraction 13 and of 5.5 for ITI in fraction 26.

b) Rocket immunoelectrophoresis of the indicated fractions. For identification either 1% ITI antiserum or 1.5%  $\alpha_1$ -PI antiserum was used. Precipitin lines were not caused by any other eluted fractions.

\* A detailed description of the separation method for the "prepurified" ITI will be published elsewhere (Karges, H., Angerer, F., Jochum, M., in preparation).

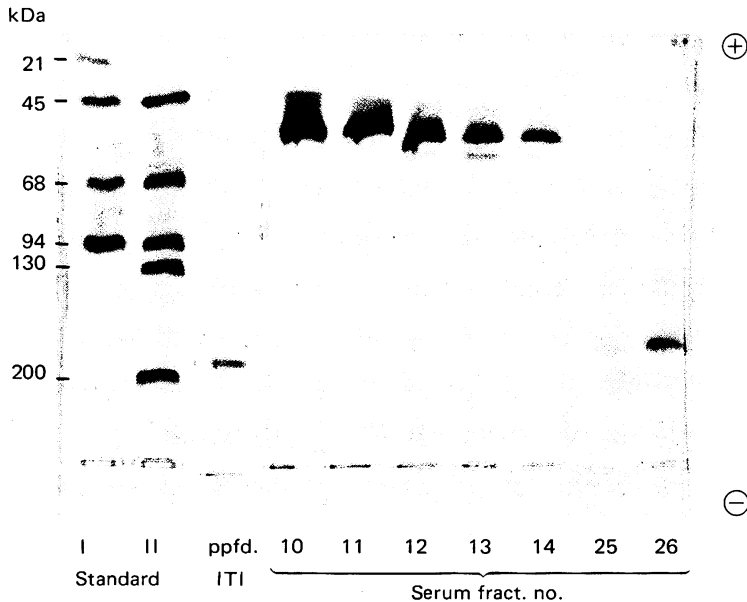


Fig. 3. Dodecyl sulfate polyacrylamide gel (7.5%; 1% 2-mercaptoethanol) electrophoresis of selected fractions after chromatography of prepurified ITI (fraction 26; ppfd. ITI) or serum with the FPLC System.

*Standard I* (from  $\ominus$  to  $\oplus$ ): Phosphorylase B ( $M_r$  94 000), bovine serum albumin ( $M_r$  68 000), ovalbumin ( $M_r$  45 000), soybean trypsin inhibitor ( $M_r$  21 000), lysozyme ( $M_r$  14 300).

*Standard II* (from  $\ominus$  to  $\oplus$ ): Myosin ( $M_r$  200 000),  $\beta$ -galactosidase ( $M_r$  130 000), phosphorylase B ( $M_r$  94 000), bovine serum albumin ( $M_r$  68 000), ovalbumin ( $M_r$  45 000).

For experimental details, see Materials and Methods.

granulocytic elastase (Fig. 4a), as well as the immunological reaction with ITI-specific antibodies (Fig. 4b).

The results given here show clearly that in human serum, in addition to  $\alpha_1$ -PI and  $\alpha_2$ -macroglobulin<sup>[13]</sup>, a further high molecular mass protein is able to inhibit granulocytic elastase. This protein is obviously identical with ITI isolated by Hochstraßer and coworkers, although these authors failed to demonstrate granulocytic elastase inhibition by their various inhibitor preparations up to now<sup>[2,7]\*</sup>. Hence, ion-ex-

change chromatography using the FPLC System can be recommended as a convenient method for rapid isolation of the labile, inhibitorily fully active ITI from human serum.

Discrimination of ITI from  $\alpha_1$ -PI is also possible on the basis of the ratio of their inhibitory activities towards trypsin and elastase. Using appropriate inhibitory activity (IU/l) of the eluted main peak fractions, a trypsin : elastase inhibitory ratio of 0.3 was calculated for  $\alpha_1$ -PI and of about 5 for ITI.

This work was supported by the *Deutsche Forschungsgemeinschaft, Sonderforschungsbereich 0207 (LP8)*. We are very grateful to Mr *Blaicher* and Mr *Häringer*, Deutsche Pharmacia, Freiburg/Br. for supplying us with the FPLC System.

We also wish to thank Dr. H. Karges, Behringwerke Marburg, for ITI and ITI antiserum as well as Dr. Gunzer, E. Merck, Darmstadt, for  $\alpha_1$ -PI.

\* Granulocytic elastase inhibition by ITI and its acid-stable inhibitory derivative, respectively, was recently observed by Albrecht, G. J., Hochstraßer, K. and Salier, J.-P. (1983) *Hoppe-Seyler's Z. Physiol. Chem.* 364, 1703–1708, preceding paper.

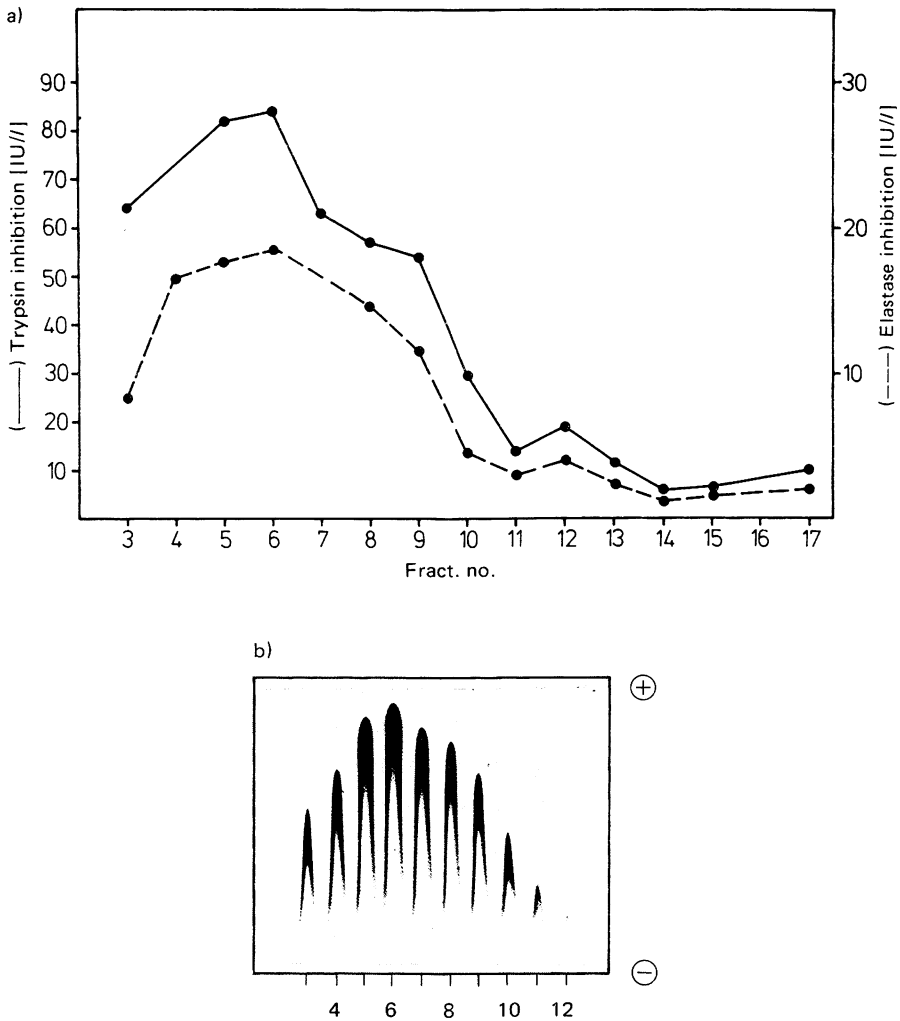


Fig. 4. Separation of 5 ml human serum with the FPLC System.

a) The elution diagram represents the inhibitory activities of each fraction towards trypsin (●—●) and granulocytic elastase (●---●).

A linear NaCl gradient was applied from 0.3M to 1.0M.

A trypsin (IU/l) : elastase (IU/l) inhibitory ratio of 5.0 was calculated for ITI in fraction 6.

b) Rocket immunoelectrophoresis of the indicated fractions. For identification 1% ITI antiserum was used. Precipitin lines were not caused by any other eluted fractions.

For experimental details, see Material and Methods.



## Literature

- 1 Steinbuch, M. (1976) *Methods Enzymol.* **45**, 760–772.
- 2 Dietl, T., Dobrinski, W. & Hochstraßer, K. (1979) *Hoppe-Seyler's Z. Physiol. Chem.* **360**, 1313–1318.
- 3 Bieth, J., Aubry, M. & Travis, J. (1973) in *Proteinase Inhibitors, Proc. 2nd. Int. Res. Conf. (Bayer Symp. V)*, (Fritz, H., Tschesche, H., Greene, L.J. & Truscheit, E., eds.), pp. 53–62, Springer-Verlag, Berlin.
- 4 Fritz, H., Heimburger, N., Meier, M., Arnhold, M., Zaneveld, L. & Schumacher, G. (1972) *Hoppe-Seyler's Z. Physiol. Chem.* **353**, 1953–1956.
- 5 Jönsson, B.M., Löffler, Ch. & Ohlsson, K. (1982) *Hoppe-Seyler's Z. Physiol. Chem.* **363**, 1167–1175.
- 6 Bromke, B.J. & Kueppers, F. (1982) *Biochem. Med.* **27**, 56–67.
- 7 Hochstraßer, K., Bretzel, G., Feuth, H., Hilla, W. & Lempart, K. (1976) *Hoppe-Seyler's Z. Physiol. Chem.* **357**, 153–162.
- 8 Baugh, R.J. & Travis, J. (1976) *Biochemistry* **15**, 836–841.
- 9 Wenzel, H.R., Engelbrecht, S., Reich, H., Mondry, W. & Tschesche, H. (1980) *Hoppe-Seyler's Z. Physiol. Chem.* **361**, 1413–1416.
- 10 Fritz, H., Trautschold, I. & Werle, E. (1970) in *Methoden der Enzymatischen Analyse* (Bergmeyer, H.U., ed.) 2nd edn., pp. 1021–1031, Verlag Chemie, Weinheim/Bergstraße.
- 11 Laurell, C.-B. (1972) *Scand. J. Clin. Lab. Invest.* **29**, Suppl. **124**, 21–37.
- 12 Salier, J.P., Lambin, P., McPhee, H. & Hochstraßer, K. (1980) *Anal. Biochem.* **109**, 273–283.
- 13 Ohlsson, K., Olsson, I. (1974) *Scand. J. Clin. Lab. Invest.* **34**, 349–355.

Dr. Marianne Jochum and Astrid Bittner, Abteilung für Klinische Chemie und Klinische Biochemie in der Chirurgischen Klinik Innenstadt der Universität München, D-8000 München 2, Nußbaumstraße 20.

## Autorenverzeichnis

Die mit \* versehenen Seitenzahlen beziehen sich auf Kurzreferate von Tagungen und Konferenzen

- Abdumakhanova, J. A. s. Sh. I. Salikhov  
Achstetter, T., O. Emter, C. Ehmann and D. H. Wolf,  
The proteolytic system of yeast. New  
developments 1089\*
- Achstetter, T. s. O. Emter
- Adametz, P. and A. Rudolph, Isolation and analysis  
of poly(ADP-Ribose) protein conjugates being formed  
in rat hepatoma AH 7974 cells in response to DNA  
damage 1089\*
- Addison, R. s. J. Ahlers
- Adilbekov, M. T. s. Sh. I. Salikhov
- Adriaen, M. s. P. Rösen
- Afting, E.-G. and J. Frey,  $\alpha_2$ -Macroglobulin-receptor  
from diploid human fibroblasts 1090\*
- Afting, E.-G. s. R. Barth
- Afting, E.-G. s. M. L. Danailov
- Afza, N., A. Malik and W. Voelter, A regioselective  
synthesis of 3-chloro-3-deoxy sugars by bis(benzo-  
mitrile)dichloropalladium (II) 319\*
- Afza, N. s. A. Malik
- Agrawal, B. s. K. Lange
- Ahler, J., G. A. Scarborough and R. Addison, Studies  
on the mechanism of the reaction catalysed by  
the proton translocating ATPase in the plasma  
membrane of *Neurospora* 1090\*
- Ahmad, V. U., W. Winter und W. Voelter, Neuer Struk-  
turvorschlag für Chaksin 319\*
- Ahmed-Hilger, G. s. K. Goretzki
- Albin, A., B. F. Pontz, H. Richter and H. Mensing,  
Transformierte Zellen erkennen dieselbe chemotak-  
tisch aktive Region von Fibronectin bei erhöhter  
chemotaktischer Beweglichkeit 1091\*
- Albrecht, M. s. W. E. Simon
- Albrecht, M. s. M. Younes
- Albrecht, G. J., K. Hochstraßer and J.-P. Salier,  
Elastase inhibition by the inter- $\alpha$ -trypsin inhibitor  
and derived inhibitors 1703
- Albrecht, G. J., K. Hochstraßer and O. L. Schönberger,  
Kunitz-type proteinase inhibitors derived by limited  
proteolysis of the inter- $\alpha$ -trypsin inhibitor, IX.  
Isolation and characterization of the inhibitory  
active parts of inter- $\alpha$ -trypsin inhibitors from several  
mammalian sera 1697
- Albrecht, G. J. s. K. Hochstraßer
- Allen S. J. s. A. J. Garber
- Aller, A. and G. S. Rao, Plasma membrane "carrier"  
is the first molecular target in the mechanism of  
action of steroid hormones 1091\*
- Alonso, A., J. L. Jorcano, E. Beck and E. Spiess,  
Cloning and characterization of the genes coding  
for *Drosophila melanogaster* U2 and U1  
snRNAs 778\*
- Alpermann, H. G. s. R. Geiger
- Alt, J. s. R. G. Herrmann
- Altenburg, A. und W. Voelter, Nebenreaktionen bei der  
Synthese von Enkephalinen 320\*
- Althaus, H. H., P. J. Gebicke-Härter, H. Montz, C. Siepl,  
P. Schwartz and V. Neuhoff, Morphological and  
biochemical characteristics of cultured oligodendro-  
cytes bulk isolated from adult pig brain 1274\*
- Althen, R. s. T. O. Kleine
- Altruda, F. s. M. Melli
- Amberger, I., P. Fürst, H. Godel, T. Graser, P. Stehle  
and P. Pfander, The potential parenteral applica-  
tion of the peptide L-alanyl-L-glutamine as a  
nitrogen source in severe catabolic states 1253\*
- Ambesi-Impiomato, F. S. s. D. Tramontano
- Anderson, B. and K. Jungermann, Conversion of  
heterogeneous liver parenchyma cells into a homo-  
geneous cell population during cell culture with  
respect to phosphoenolpyruvate carboxykinase 480\*
- Andondonskaja-Renz, B. and H.-J. Zeitler, Pteridines  
in normal and pathological blood cells 1092\*
- Andrade, A. F. B. s. R. Schauer
- Angermaier, L. and H. Simon, On the reduction of  
aliphatic and aromatic nitro compounds by  
*Clostridia*. The role of ferredoxin and its  
stabilization 961
- Angermaier, L. and H. Simon, On nitroaryl reductase  
activities in several *Clostridia* 1653
- Anke, T., Höhere Pilze als Quelle neuer Naturstoffe  
mit antimikrobieller oder cytotoxischer  
Wirkung 320\*
- Antoniou, M. s. M. R. Banerjee
- Appel, B., H. Theissen, R. Lührmann and J. Rinke,  
Characterization of a human U6 snRNA gene 778\*
- Appel, B. s. R. Lührmann
- Ardawi, M. S. M. and E. A. Newsholme, Glutamine  
metabolism in lymphocytes of the rat 1251\*
- Arendes, J. s. M. Geisert
- Arnold, B. s. H. G. Burgert
- Arnold, B. s. S. Landolfo
- Arnold, H. H. s. B. Winter
- Asakawa, H. and W. Mori, Possibly unique subunit(s)  
of human ferritins responsible for tissue  
specificity 859
- Aschauer, H., L. Vértesy, G. Neesemann und  
G. Braunitzer, Die Primärstruktur des  $\alpha$ -Amylase-  
inhibitors Hoe 467A aus *Streptomyces tendae*  
4158. Eine neue Klasse von Inhibitoren 1347

- Aschauer, H. s. M. Goodman  
 Aschhoff, H.-J. s. E. Schachner  
 Audran, R. s. L. Péjaudier  
 Augustyniak, W. s. C.C. Cierniewski  
 Auling, G. s. J. Schmid  
 Avola, R., D. Curti, B. Lombardo, P. Ragonese and M. Renis, DNA synthesis in nuclei and mitochondria purified from serum-free or supplemented glial cell cultures 493\*
- Awgulewitsch, A., M. Wlaschek und H. Bünemann, Isolierung Y-spezifischer DNA aus *Drosophila hydei* über heterogene DNA-DNA-Hybridisierung 1092\*
- Azzi, A. s. M. Thelen
- Babinska, A. s. C.C. Cierniewski**  
 Bachmann, C., Brain tryptophan uptake and glutamine synthetase in hyperammonemic rats 1255\*  
 Bachmann, M., R. Messer, F. Trautmann and W.E.G. Müller, Novel endoribonuclease, associated with ribonucleoprotein particles from eukaryotic cells 1093\*  
 Bachmann, M. s. N. Riedel  
 Bachmann, M. s. H.C. Schröder  
 Bachofer, R. and F. Lingens, Degradation of carboxanilide fungicides by a *Nocardia* species 21  
 Bade, E.G., Growth of non-parenchymal rat liver cells in serum-free medium 481\*  
 Bade, E.G. s. C. Boeckh  
 Baer, K., H. Stieve and M. Bruns, Antibodies against proteins of the photosensory membranes of the crayfish interfere with the excitation of the *Limulus* photoreceptor cells 1270\*  
 Bajin, K. s. Z. Kovačević  
 Balks, H.J. and K. Jungermann, Regulation of peripheral insulin/glucagon levels by the liver 1093\*  
 Balmain, A., G. Cole, L. Frew and G.D. Birnie, The existence of specific high molecular mass 30S and 23S RNA complexes containing globin mRNA in the cytoplasm of Friend erythroleukemic cells 784\*  
 Balmain, A., R. Krumlauf, G. Cole and G.D. Birnie, Evolutionary conservation and genomic organisation of 7S RNA sequences in eucaryotic cells 778\*  
 Banerjee, A. s. J. Burg  
 Banerjee, M.R., P.K. Majumder and M. Antoniou, Culture of an isolated whole mammary organ in serum-free medium: An in vitro model for measuring the hormonal modulation of selective gene expression 497\*  
 Banger, M. s. C. Hiemke  
 Bannasch, P. s. D. Mayer  
 Bannister, J.V. s. L. Flohé  
 Bannister, J.V. s. G.-J. Steffens  
 Bannister, W.H. s. L. Flohé  
 Bannister, W.H. s. G.-J. Steffens  
 Barlach, S. s. G.D. Li  
 Baron, D. s. I. Primsch  
 Barrantes, F.J. s. G. Mieskes  
 Barret, A. s. M. Binoux  
 Barrett, A.J., Lysosomal proteinases and their inhibitors 1094\*  
 Barritault, D. s. A. Tixier-Vidal  
 Bartels, H. s. J. Durst  
 Barth, R. and E.-G. Afting, Cathepsin D from pig myometrium 1094\*  
 Bartholmes, P. s. T. Seifert  
 Bartsch, K., J. Hundrieser, G. Link, H. Bliedung and K. Klopstech, Individual kinetics of appearance of the mRNAs for light-induced proteins in pea 1095\*  
 Basset, P., J. Zwiler and G. Ulrich, Guanylate cyclase activators hemin and sodium nitroprusside stimulate cell growth in serum-free medium 493\*  
 Bauer, Ch. s. C. Dobrinski  
 Bauer, H. und W. Voelter, Theoretische Grundlagen und praktische Grenzen der Höchstleistungsflüssigkeitschromatographie in offenen Kapillaren für biochemische Problemstellungen 320\*  
 Bauer, H. s. G. Harsch  
 Bauer, H. s. I. Primsch  
 Bauer, H. s. H. Wollmann  
 Baulieu, E.-E. s. I. Jung-Testas  
 Baumann, H., Structural and functional aspects of the carbohydrate moieties of the nicotinic acetylcholine receptor 1274\*  
 Baumann, R. s. W. Oberthür  
 Baumgartner, E.-P. s. R. Schmidt  
 Baumruker, T. s. M. Schmidt  
 Bauriedel, G., K. Werdan, W. Krawietz and E. Erdmann, Vandate antagonizes detrimental effects of serum deprivation in cultured rat heart muscle cells 486\*  
 Baverel, G., C. Michoudet and G. Martin, CO<sub>2</sub> fixation in glutamine synthesis from alanine by isolated guinea-pig kidney-cortex tubules 1095\*  
 Baverel, G., C. Michoudet and G. Martin, Simultaneous synthesis and degradation of glutamine in isolated rat kidney-cortex tubules 1246\*  
 Baxter, J.D. s. J.F. Savouret  
 Beato, M. s. A.C.B. Cato  
 Becher, H. s. M. Markus  
 Beck, E. s. A. Alonso  
 Beck, K. and R. Peters, Direct visualization of the fluid-solid phase separation in phospholipid monolayers 1095\*  
 Beckh, K., H. Hartmann, R. Scholz and K. Jungermann, Sympathetic liver nerves decrease and circulation catecholamines increase hepatic oxygen consumption in the rat 1096\*  
 Beckh, K. and K. Jungermann, Regulation of liver carbohydrate metabolism in the rat via innervation of the parenchymal cells and signal propagation through electrotonic coupling 1096\*  
 Beckmann, J., B. Stolze and K. Klopstech, The formation of the light-harvesting chlorophyll complex and

- thylakoid pigment composition during the early phase of greening in barley 1097\*
- Beers, G. van s. R. Yasin
- Beinert, W. D. s. H.-D. Franken
- Beischer, W., W. Kerner und M. Maas, Die negative Rückkopplung von Insulin auf seine Sekretion: Untersuchungen in vivo und in vitro 321\*
- Benecke, B. J. s. R. Reichel
- Benes, P. s. E. Bergheim
- Benet, L.-Z. s. U. F. Legler
- Bentgens, J., J. Niefind, P. Micheels, K. Vietor und B. Havsteen, Kinetik und Molekularmassen der Ethanolamin-Kinasen der Leber des Menschen und des Schweines 1257\*
- Benz, R. s. U. I. Flügge
- Béress, L., Caribbean palytoxin – A new tool in membrane research 613\*
- Béress, L. s. S. Stengelin
- Berg, C. s. J. Rinke
- Berger, M. G. und H. P. Fock, Turnover von Glycin, Glutamin und Glutamat während der Photosynthese in Weizenblättern 1097\*
- Bergheim, E., I. Doxiadis, H. Grosse-Wilde, M. Zabel, P. Benes und H. Schriefers, Erythrocytal  $17\beta$ -hydroxysteroid dehydrogenase activity, HLA typing and psoriasis 1098\*
- Berkofsky, J. s. G. Lemieux
- Berl, S. and D. D. Clarke, Cerebral glutamine/glutamate interrelationships and metabolic compartmentation 1244\*
- Berl, S., D. D. Clarke, A. Colon and R. Nunez, [ $^3\text{H}$ ]-acetate incorporation into protein of synaptosomes: Effect of  $\text{Na}^{\oplus}$  channel toxins 1098\*
- Berlet, H. H., H. Ilzenhöfer and A. Meyer, Limited proteolysis of myelin basic protein by neutral protease activities associated with animal brain 1275\*
- Bernadotte Jenny, M. s. H. I. Nielsen
- Bernd, A. s. H. C. Schröder
- Berndt, J. s. M. Boll
- Berndt, J. s. K. Buff
- Berndt, J. s. H.-S. Jenke
- Berndt, J. s. B. Meßner
- Berndt, N. and P. Rösen, Isolation and properties of glycogen phosphorylases from rat heart and their alterations in diabetes 1099\*
- Berndt, N. s. P. Rösen
- Bernhardt, F.-H. s. K. Gersonde
- Bernhardt, J., Ionenflußuntersuchung von Kanal-Gating-Eigenschaften des Acetylcholinrezeptors 1099\*
- Bessler, W. s. K.-H. Wiesmüller
- Betholtz, C., C.-H. Heldin, Å. Wasteson and B. Westermark, Growth factor requirement for proliferation of human fibroblasts depend on cellular density and extracellular  $\text{Ca}^{2\oplus}$  concentration 474\*
- Betz, H., The glycine receptor 1100\*
- Betz, H., D. Graham, F. Pfeiffer and H. A. Rehm,  $\alpha$ -Bungarotoxin and strychnine as probes for central neurotransmitter receptors 624\*
- Betz, H. s. H. A. Rehm
- Betz, J. s. F. Buck
- Bickel, M. s. R. Geiger
- Bickel-Sandkötter, S., Effekt von zweiwertigen Kationen auf die katalytische und regulatorische Bindung von ADP an die membran-gebundene Chloroplasten-ATPase 1100\*
- Bidlingmaier, F., D. Knorr und F. Neumann, Untersuchungen zur Bedeutung humoraler Faktoren für die männliche Geschlechtsdifferenzierung des Foeten 321\*
- Bieber, F. A. und G. Braunitzer, Die Primärstruktur des Hämoglobins vom Bisam (*Ondatra zibethica*, *Rodentia*) 1527
- Biellmann, J.-F., Binding of coenzyme analogs to NAD-dependent dehydrogenases 194\*
- Biermann, J. s. M. Digel
- Binoux, M., P. Hossenlopp, C. Lassarre, A. Barret, A. Faivre-Bauman, C. Loudes and A. Tixier-Vidal, Production of insulin-like growth factors and their binding proteins by the pituitary and the nervous tissue in culture 493\*
- Birke, F. W., Spezifität von Antisera und affinitätschromatographisch gereinigten Antikörpern bei der Immunisierung mit verschiedenen Hapten-Molekülen von Bunitrolol, einem  $\beta$ -adrenergen Blocker 322\*
- Birnie, G. D. s. A. Balmain
- Bisanz, C. s. R. G. Herrmann
- Bisswanger, H. s. F. Horn
- Bittner, A. s. M. Jochum
- Bizzini, B. s. K. Goretzki
- Blaich, G. und A. Wendel, Hepatotoxizität und kovalente Bindung von Paracetamol in Selenmangel-Mäusen 322\*
- Bliedung, H. s. K. Bartsch
- Bliedung, H. s. G. Meyer
- Bobis, G., G. Rempeters and W. Schoner, Demonstration of a  $\text{Mg}^{2\oplus}$ -induced change of the ATP-binding site of  $(\text{Na}^{\oplus} + \text{K}^{\oplus})$ -ATPase by 8-azido-ATP 1101\*
- Bockemühl, S. s. B. Meier
- Bockhorn, H. s. H. Schmid
- Bode, C. s. W. Stoffel
- Bode, J., M. M. Gómez-Lira, E. Burggraf and M. Erard, Relations between the nucleosomal conformations induced by histone hyperacetylation and by HMG 14/17 1101\*
- Bode, W. s. J. Walter
- Bodenmüller, H., Different conformation of the head activator – Different biological effects? 1271\*
- Böcher, M. s. S. Heim
- Boeckh, C., A. Middendorf and E. G. Bade, Expression of early genes of bacteriophage Mu inhibits cell

- division concomitantly with the insertion of protein B into the membrane of *E. coli* K12 1102\*
- Boegner, F., A. Sutter and A. Zimmermann, Production of monoclonal antibodies against a nerve growth-promoting activity in conditioned media from rat brain tumor cell lines 1275\*
- Böhlke, H. s. G. Loschen
- Böhm, J. s. E. Pöschel
- Böhringer, D., Influence of various sera or other additive applications in pokeweed mitogen-stimulated chicken lymphocytes 475\*
- Böning, W. s. M. Emura
- Böttlinger, H. s. P. Hartter
- Bohle, A. s. H. Schmid
- Bohn, A., Immunglobulin E als Vermittler allergischer Reaktionen 323\*
- Bohnenkamp, W., M. Eltze, A. Simon und Ch. Schudt, H<sup>32</sup>P<sup>32</sup>-Adenosintriphosphatase, Funktion und Hemmung 323\*
- Boll, M., E. Brückner and J. Berndt, Effect of polychlorinated biphenyls on the regulation of rat liver lipogenic enzymes 1102\*
- Boller, B. s. E. Hartmann
- Bolt, H.M., R.J. Laib and J.G. Filser, Carcinogenic alkenes and haloalkenes: Quantitative aspects of metabolism and biological effect 324\*
- Bone, E. A. s. R.H. Michell
- Boos, K.-S. and E. Schlimme, Functional aspects of metalloprotein catalysed ADP, ATP transport in mitochondria 1103\*
- Boos, K.-S. s. E. Hagemeier
- Borchart, U. s. W. Machleidt
- Borchart, U. s. H. Schägger
- Borchart, U. s. V. Turk
- Borin, G. s. F. Marchiori
- Bosch, H. van den, Regulation of phospholipid turnover in membranes 1103\*
- Bosch, J. van der, Tissue culture of colon tumors 474\*
- Boss, B. s. A.M. Otto
- Bosserhoff, A. s. R.M. Kamp
- Botes, D.P. s. F.J. Joubert
- Bovermann, G. s. L. Moroder
- Box, R.-J., The uptake of inorganic nitrogen by the green alga *Chara hispida* 1104\*
- Brachet, E.A., Monitoring of <sup>14</sup>CO<sub>2</sub> production from [<sup>14</sup>C]glucose by undisturbed monolayers of human endothelial cells 481\*
- Bracht, A. s. A.J. Schwab
- Bradford, N.M. s. J.D. McGivan
- Bradish, P. s. E.-R. Lochmann
- Branchard, B. s. C.T. Walsh
- Brand, I., G. Mieskes and H.-D. Söling, Purification and properties of a 6-phosphofruktokinase I-activating protein 1104\*
- Brand, I.A. s. G. Mieskes
- Brand, K. s. W. Demmer
- Brand, K. s. S. Hauschildt
- Branlant, C., A. Krol, B. Haendler, E. Lazar and M. Jacob, Why the secondary structure of isolated U-RNA probably corresponds to that of U-RNA in situ 780\*
- Branlant, C. s. B. Haendler
- Branlant, C. s. M. Jacob
- Branlant, C. s. A. Krol
- Braunitzer, G. s. H. Aschauer
- Braunitzer, G. s. F.A. Bieber
- Braunitzer, G. s. J. Godovac-Zimmermann
- Braunitzer, G. s. M. Goodman
- Braunitzer, G. s. T. Kleinschmidt
- Braunitzer, G. s. P. Nedkov
- Braunitzer, G. s. W. Oberthür
- Breer, H., Venoms and toxins in neurochemical research of insects 613\*
- Breer, H., Neurochemical aspects of cholinergic transmission in insects 1105\*
- Breer, H. s. G. Fels
- Brennecke, M. and K. Resch, Phosphatidylcholine and phosphatidylinositol in plasma membranes and in intact thymocytes show different regulation patterns for fatty acid incorporation upon mitogenic stimulation with concanavalin A 1105\*
- Brenner, M.K. s. J. Farrant
- Briand, P., Continuous growth of a human breast cancer cell line (MCF-7) in serum-free medium 475\*
- Brigelius, R., Glutathione oxidation and activation of pentose phosphate cycle during hydroperoxide metabolism. A comparison of livers from fed and fasted rats 989
- Bringmann, P. s. R. Lührmann
- Brkljač, O. s. Z. Kovačević
- Broch, H. s. P.M. Kaiser
- Brok, J. den s. W.J. van Venrooij
- Brosius, B., W. Hillen and D. Riesner, Interaction of lipid membranes with nucleic acids 1106\*
- Brosnan, J.T., E.T. Quarcoo and H. Lanctin, Control of renal glutamine synthesis by hydrogen ion concentration 1248\*
- Brossmer, R. s. V. Eschenfelder
- Bruchelt, G., K.-H. Schmidt and W. Voelter, Anwendungen der analytischen Isotachophorese in der klinischen Chemie 324\*
- Brückner, E. s. M. Boll
- Brümmer, W. s. M. Scharschmidt
- Bründl, A. s. K. Buff
- Brüning, G. and H. Rommelspacher, High affinity binding sites of [<sup>3</sup>H]tryptamine in the rat 1106\*
- Brüning, H. s. W. Bruns
- Brütsch, S. s. U. Weser
- Brune, G. s. M.J. Salzer
- Brunel, C. s. J. Sri-Widada
- Brunet, N. s. A. Tixier-Vidal
- Brunnbauer, H. s. M. Wicklmayr
- Brunner, G. s. K. Lang

- Bruns, M. s. K. Baer  
 Bruns, W., J. Hoppe, H. Brüning, J. Collins and H. Mayer, Penicillin G amidase: Unique maturation system for a prokaryotic enzyme 1107\*
- Brust, R., H. Notbohm and R. Papan, Fractionation of rat liver chromatin due to differing solubility 1107\*
- Brzin, J., M. Kopitar, V. Turk and W. Machleidt, Protein inhibitors of cysteine proteinases. I. Isolation and characterization of stefin, a cytosolic protein inhibitor of cysteine proteinases from human polymorphonuclear granulocytes 1475
- Brzin, J. s. W. Machleidt  
 Brzin, J. s. V. Turk  
 Buchanan, B. s. B. Herzog  
 Buchanan, B. s. M. Stitt  
 Buchner, K. und D. G. Weiss, Anterograder und retrograder axonaler Transport von exogenen Proteinen in C-Fasern 1275\*
- Buchner, K. s. E. Wannenwetsch  
 Buck, F., H. Sasmor, J. Betz, J. R. Sadler, M. Insley and M. Caruthers, Binding of lac repressor to modified lac operators 1108\*
- Büchsel, R., W. Kreisel, R. Heußner, W. Hofmann, W. Reutter und W. Gerok, Enzymatische Aktivität und Turnover der Dipeptidyl-peptidase IV in den Plasmamembrandomänen der Leber 1108\*
- Büllesbach, E. E. s. R. Knorr  
 Büllesbach, E. E. s. H.-J. Wieneke  
 Bünemann, H. s. A. Awgulewitsch  
 Büntert, B. s. P. Honegger  
 Bürk, R. R., Ectopic autostimulation of growth 473\*
- Buff, K., A. Bründl und J. Berndt, Wechselwirkung lipophiler Umweltchemikalien mit Humanzellen: Beispiel 1,1'-(2,2,2-Trichlorethyliden)-bis[4-chlorbenzol] (DDT) 1109\*
- Bukhari, A. R. s. H. Rupp  
 Bunge, R. P., Studies on functional expression of neurons, glial cells and Schwann cells in defined culture medium 492\*
- Burg, J., A. Banerjee, E. Conzelmann and K. Sandhoff, Activating proteins for ganglioside G<sub>M2</sub> degradation by  $\beta$ -hexosaminidase isoenzymes in tissue extracts from different species 821
- Burgardt, A., A. H. Entenmann, T. H. Lippert und W. Voelter, Isolierung von biologisch aktivem Relaxin aus menschlichem Sperma 324\*
- Burgardt, A. s. A. H. Entenmann  
 Burgert, H. G., K. Söderberg, E. Meyer, B. Arnold, G. Hämmerling, S. Kvist und B. Dobberstein, Stabile Expression eines K<sup>d</sup>-Histocompatibilitätsantigens in Maus LTK<sup>-</sup>-Zellen 325\*
- Burggraf, E. s. J. Bode  
 Burghardt, A. s. H. Seegeer  
 Burk, R. F. s. S. Feuerstein  
 Bystrov, V. F., Magnetic resonance evaluation of neurotoxin structure-function relationship 614\*
- Cadenas, E., H. Sies, W. Nastainczyk and V. Ullrich, Singlet oxygen formation detected by low-level chemiluminescence during enzymatic reduction of prostaglandin G<sub>2</sub> to H<sub>2</sub> 519
- Caruthers, M. s. F. Buck  
 Casadevall, N. s. G. Vinci  
 Casey, R. P. s. M. Thelen  
 Castell, J. V., M. J. Gómez-Lechón and J. Coloma, Preservation of the adult functionality of hepatocytes in serum-free cultures 481\*
- Castell, J. V. s. M. J. Gómez-Lechón  
 Cathala, G. s. J. F. Savouret  
 Cato, A. C. B., S. Geisse and M. Beato, Binding of steroid hormone receptors to the uteroglobin gene region 1109\*
- Cavaggion, G. s. F. Marchiori  
 Čechová, D. s. B. Meloun  
 Cerff, R. and K. Klopstech, Light control of nuclear encoded chloroplast proteins. An interspecies comparison 1110\*
- Cerff, R. s. J. Hundrieser  
 Cestelli, A., G. Savettieri, D. Ferraro, A. Chiarini and F. Vitale, Culture of central nervous system rat neurons in a chemically defined medium 494\*
- Chaintreuil, J. s. P. Milhaud  
 Chapman, J. s. G. Vinci  
 Chavaillaz, P.-A. s. H. J. Ziltener  
 Chessa, G. s. F. Marchiori  
 Chessebeuf, M., M. Fischbach and P. Padiou, Tyrosine aminotransferase in rat liver epithelial cell lines grown either in serum-supplemented or in a chemically defined medium 482\*
- Chessebeuf, M. s. P. Padiou  
 Chiarini, A. s. A. Cestilli  
 Chibber, B. A., B. M. Martin and A. Maelicke, The sites of neurotoxicity in a  $\alpha$ -cobratoxin 624\*
- Chrispeels, M. J. s. M. Mäder  
 Cierniewski, C. C., A. Babińska, J. Niewiarowska and W. Augustyniak, Alteration of the antigenic structure of human fibronectin caused by complexing with collagen 515
- Claesson, L. s. D. Larhammar  
 Clark, J. M., Reducing the requirement for serum supplements in high yield microcarrier cell culture 470\*
- Clark, M. G. s. F. L. Crane  
 Clarke, D. D. s. S. Berl  
 Clausbruch, U. C. v. and H. Tschesche, Cathepsin D from human leukocytes. Purification and properties of the enzyme 1110\*
- Clément, B. s. C. Guguen-Guillouzo  
 Cole, G. s. A. Balmain  
 Collins, J. s. W. Bruns  
 Collins, J. s. R. Lammers  
 Colman, D. s. G. Kreibich  
 Coloma, J. s. J. V. Castell  
 Colon, A. s. S. Berl

- Colpan, M. and D. Riesner, Analytical and large scale high performance liquid chromatography of high-molecular mass nucleic acids 1110\*
- Conrad, H. s. T. Nawroth
- Conzelmann, E. s. J. Burg
- Cook, J. s. T. Wilusz
- Cornelius, G., B. Donner, A. Schröder-Lorenz and L. Rensing, Circadian rhythmicity in protein turnover and protein synthesis inhibition in *Gonyaulax polyedra* 1111\*
- Corr, R., W. Eichler and H. Schimassek, Isolierung von Makronuclei aus *Tetrahymena pyriformis* 325\*
- Corr, R., W. Eichler and H. Schimassek, Some properties of DNA-dependent RNA-polymerase in isolated macronuclei of *Tetrahymena pyriformis* 1111\*
- Coughlan, S. J. s. M. J. Schramm
- Cramer, F. s. H.-J. Gabius
- Crane, D., D. Häussinger, P. Graf and H. Sies, Decreased flux through pyruvate dehydrogenase by thiol oxidation during *t*-butyl hydroperoxide metabolism in perfused rat liver 977
- Crane, D. s. D. Häussinger
- Crane, F. L., I. L. Sun, H. Löw and M. G. Clark, Redox and control systems in the plasma membrane 1112\*
- Cseke, C. s. B. Herzog
- Cseke, C. s. M. Stitt
- Csiba, L., W. Paschen and K.-A. Hossmann, A Topographic quantitative method for measuring brain tissue pH under physiological and pathophysiological conditions 1112\*
- Csiba, L. s. W. Paschen
- Cullmann, W., W. Dick and A. Dalhoff, "Unspecific" induction of antimicrobial resistance 1113\*
- Curthoys, N. P. s. W. G. Haser
- Curti, D. s. R. Avola
- Czuppon, A. s. J. Dietl
- Dahlmann, B., L. Kühn and H. Reinauer, Isolation and characterization of three high-molecular mass cysteine proteinases from rat skeletal muscle 1113\***
- Dahlmann, B. s. L. Kuehn
- Dalhoff, A. s. W. Cullmann
- Danailov, M. L., J. Frey and E.-G. Afting, Synthesis of  $\alpha_2$ -macroglobulin by human fibroblasts 1113\*
- Danho, W. s. R. Knorr
- Danho, W. s. B. Schartmann
- Danho, W. s. H.-J. Wieneke
- Darmon, Y. M., Control of determination and differentiation by the extracellular environment in an embryonal carcinoma cell line 488\*
- Deaciuc, I. V., H. F. Kühnle and F. H. Schmidt, Relationship between fatty acid oxidation and gluconeogenesis in the guinea-pig liver as studied with a new inhibitor of carnitin palmitoyltransferase 1114\*
- Debuch, H. s. A. Harder
- Debuch, H. s. B. Witter
- Decker, K. s. A. Hinkkanen
- Decker, T. s. M. Kröger
- Deger, A., R. Koch, K.-N. Klotz, H.-M. Jäck, G. Müller, R. Rapp and U. Weber, Comparison of insulin receptors from plasma membranes and microsomes of rat liver 1114\*
- Deger, A. s. R. Koch
- Dembinski, T. C. and C. D. Green, Effect of oestradiol on the growth of human breast cancer cells in culture in serum and serum-free media 475\*
- Demmer, W. and K. Brand, Peptidyl-Dipeptidase B in synaptischen Plasmembranen aus Rattenhirn aktiv in der Freisetzung von Enkephalin aus Vorläuferpeptiden 1115\*
- Demming, B. and K. Winter, Chloroplasts from *Mesembryanthemum crystallinum*, a halophilic plant capable of crassulacean acid metabolism 1115\*
- Dene, H., M. Goodman, D. A. Walz and A. E. Romero-Herrera, The phylogenetic position of Aardvark (*Oryzteropus afer*) as suggested by its myoglobin 1585
- Dénes, L. s. L. Kisfaludy
- Denton, A. s. T. Wilusz
- Deutsch, E. s. A. Henschen
- Deutzmann, R. s. W. Stoffel
- Dibbelt, L. and E. Kuss, Human placental steroid-sulfatase: Kinetics of the in-vitro hydrolysis of dehydroepiandrosterone 3-sulfate and of 16 $\alpha$ -hydroxydehydroepiandrosterone 3-sulfate 187
- Dick, W. s. W. Cullmann
- Dickson, J. G. s. G. Fayet
- Dieckhoff, J., M. Heidemann and H. G. Mannherz, 5'-Nucleotidase isolated from avian muscular sources specifically interacts with polymeric actin 1116\*
- Diehl, T. s. T. Scott-Burden
- Diekmann, H. s. J. Schmid
- Dieter, H. H., G. E. Schwab und E. F. Johnson, Cytochrom P-450 3b aus Kaninchenleber: Allosterische Regulation der Progesteron-16 $\alpha$ -Hydroxylierung durch reduzierte Steroide 326\*
- Dietl, J., A. Czuppon, K. Weichert and L. Mettler, Identification of a sperm receptor-glycoprotein from the porcine zona pellucida 261
- Dietz, K.-J., Is pH a factor controlling photosynthesis in vivo? 1116\*
- Dietze, G. s. M. Wicklmayr
- Digel, M., A. Morel, J. Biermann und W. Voelter, Discarin C und D, neue Peptidalkaloide aus *Discaria febrifuga* 326\*
- Digel, M., A. Morel, H. Layer, J. Biermann und W. Voelter, Peptidalkaloide aus *Discaria febrifuga* Mart. 1641
- Dingermann, T., D. Johnson Burke and D. Söll, 5'-Flanking sequences of *Drosophila* tRNA<sup>ATG</sup> Genes control their in vitro transcription in a *Drosophila* cell extract 1116\*

- Dippold, W. s. G. Leyhausen  
 Dittmann, B. s. Å. Lasson  
 Dittmer, H. s. H. Fritz  
 Dobberstein, B. s. H. G. Burgert  
 Dobberstein, B. s. M. Melli  
 Dobrinski, C., M. Struck und Ch. Bauer, Stoffwechsel der Fucose im perinatalen und adulten Gehirn der Ratte 1117\*
- Doenecke, D., Interaction of duck H5 histones with nucleosomes 1117\*
- Doenges, K.-H. s. B.E. Haley  
 Döring, N. s. I. Oberbäumer  
 Dollenmeier, P., J.C. Perriard and H.M. Eppenberger, Differentiation of primary muscle cells cultured in a serum-free chemically defined medium 487\*
- Domagk, G.F. s. H. Gültekin  
 Don, P. s. H.I. Nielsen  
 Donner, B. s. G. Cornelius  
 Dose, K. s. T. Nawroth  
 Dose, K. s. H.-J. Schäfer  
 Doxiadis, I. s. E. Bergheim  
 Drewes, S.E., H.E.M. Magojo and J. Gliemann, (*N*-Methylpyridinium)insulins. Modification at the A19- and B16-tyrosines 461
- Drews, G. s. H. Reidl  
 Drexel, R. s. H.-J. Schneider  
 Driesch, R. s. R. Keller  
 Dröll, L., K.-D. Entian, E. Eichele und D. Mecke, Isolierung von Mutanten der Hefe *Saccharomyces cerevisiae* mit ausgefallener Kohlenstoffkatabolit-Inaktivierung 327\*
- Duong, N. s. P. Vinay  
 Duplain, M. s. A. Gougoux  
 Durchschlag, H., Partial specific volume changes of proteins. Densimetric and ultracentrifugal studies in multicomponent solutions 1257\*
- Durchschlag, H. and P. Zipper, The X-ray damage of the sulfhydryl enzyme malate synthase. Inactivation and repair experiments 1258\*
- Durchschlag, H. s. P. Zipper  
 Durchschlag, R.P. s. R.J. Smith  
 Durst, J. und H. Bartels, Der gegenwärtige Stand der operativen und chemotherapeutischen Behandlung des Mamma-Karzinoms 327\*
- Duswald, K.-H. s. H. Fritz
- Ebeling, M. s. J. Verdenhalven  
 Ebendal, T. s. G. Norrgren  
 Eberhardt, N. L. s. J.F. Savouret  
 Echner, H. und W. Voelter, Synthesen von Enkephalin-Derivaten 327\*
- Eckel, J. and H. Reinauer, Effects of microtubule disrupting agents on insulin binding and degradation in isolated cardiocytes from adult rat 845
- Eckel, J. s. P. Rösen  
 Eekelen, C.A. van s. W.J. Habets  
 Egert, G. s. H. Götz  
 Egert, G. s. H. Kratzin  
 Eggl, P. s. K. Wirthensohn  
 Ehmann, C. s. T. Achstetter  
 Ehrhardt, V., Intracellular pH regulation in rat liver cells maintained in primary monolayer culture 1118\*
- Eichele, E. s. L. Dröll  
 Eichler, W., Possible errors performing insulin radio-receptor assays with isolated adipocytes and how to detect them 1118\*
- Eichler, W. und H. Schimassek, Stoffwechsel des Arginins in *Tetrahymena pyriformis* 328\*
- Eichler, W. and H. Schimassek, Induction and suppression of ornithine decarboxylase activity in growing cells of *Tetrahymena pyriformis* 1118\*
- Eichler, W. and G. Weitzel, Insulin receptor assays with semisynthetic insulin analogues: Correlation between receptor binding and in vivo activity 1119\*
- Eichler, W. s. R. Corr  
 Eichler, W. s. A. Münch  
 Eichler, W. s. M.J. Salzer  
 Eigenbrodt, E. s. P. Fister  
 Eigenbrodt, E. s. S. Noda  
 Elgin, S.C.R. s. G. Fleischmann  
 Eltze, M. s. W. Bohnenkamp  
 Ember, J. s. L. Kisfaludy  
 Emter, O., T. Achstetter, B. Mechler, H. Müller and D.H. Wolf, Yeast pheromone  $\alpha$ -factor is synthesized as a high molecular mass precursor 1119\*
- Emter, O. s. T. Achstetter  
 Emura, M., W. Böning, H.-B. Richter-Reichelm and U. Mohr, Medium for the growth and differentiation of a fetal syrian hamster lung epithelial cell line 482\*
- Endraß, G. s. M.J. Salzer  
 Engel, J. s. Z. Markovic  
 Engel, J. s. V. Weiss  
 Engel, W.D., H. Schägger and G. von Jagow, Isolation of complex III from various mitochondria. Comparison of the structural and functional properties of the preparations from beef heart, calf liver and *Neurospora crassa* 1753
- Engelhard, M., K. Gerwert, B. Hess, K.D. Kohl, W. Mäntele and F. Siebert, Identification of aspartate and glutamate during the photocycle of the purple membrane from *Halobacterium halobium* 1120\*
- Entenmann, A.H., A. Burgardt und W. Voelter, Menschliches Relaxin aus Placenta: Isolierung, Bestimmung und biologische Aktivität 328\*
- Entenmann, A.H. s. A. Burgardt  
 Entenmann, A.H. s. H. Seeger  
 Entian, K.-D., K.-U. Fröhlich und D. Mecke, Isolierung und Charakterisierung katalytisch aktiver Hexokinase-PII-Mutanten mit ausgefallener Glucose-



- Repression: Ein Modell für ein bifunktionelles Enzym in der Hefe *Saccharomyces cerevisiae* 329\*
- Entian, K.-D. s. L. Dröll
- Entian, K.-D. s. K.-U. Fröhlich
- Entian, K.-D. s. E. Kopetzki
- Entian, K.-D. s. B. Meurer
- Eppenberger, H. M. s. P. Dollenmeier
- Erard, M. s. J. Bode
- Erdmann, E. s. G. Bauriedel
- Erdmann, H. s. S. Heim
- Erlanson-Albertsson, C. s. E. Heymann
- Eropkin, M. s. V. Turk
- Eschenbruch, M., A. M. Otto and L. Jimenez de Asua, Enhancement of initiation of DNA synthesis by retinoic acid in Swiss 3T3 cells stimulated by prostaglandin F<sub>2α</sub> 471\*
- Eschenfelder, V., R. Brossmer and M. Wachter, On the specificity of sialidase. Synthesis and properties of N<sup>5</sup>-acetyl-β-D-neuraminoylpeptides – AcNeu-Gly-OH, AcNeu-Glu-OH, AcNeuPhe-OH – and the corresponding α-ketosides 1411
- Eposito, V. s. M. Melli
- Ewen, J. s. A. Wild
- Eyerle, F. s. W. Schartau
- Faivre-Bauman, A. s. M. Binoux**
- Farrant, J., C. A. Newton, C. Weyman, M. North and M. K. Brenner, Human B cell function in 20-μl hanging-drop microcultures under serum-free conditions 476\*
- Fasold, H. s. N. Riedel
- Faulstich, H. and C. Stournaras, Is the polymerisation of actin energy-dependent? 1120\*
- Faure, T. s. P. Milhaud
- Faustmann, O. s. H. P. Mühlbach
- Fayet, G., S. Hovsepian, J. G. Dickson and S. Lissitzky, Reorganization of porcine thyroid cells into functional follicles in a chemically defined serum- and thyrotropin-free culture medium 497\*
- Fedrowitz, J., H. W. Macartney and H. Tschesche, Human polymorphonuclear leukocyte gelatinase – a metalloproteinase: Characterisation of the active enzyme and the latent form of an enzyme-inhibitor-complex 1121\*
- Feick, P., H. Hauner and G. Löffler, An adipogenic factor in fetal calf serum 1121\*
- Felbier, H.-R. s. H. Rupp
- Feldmaier, G. s. H.-J. Schneider
- Fels, G., H. Breer and A. Maelicke, Immunological similarities between the α-bungarotoxin-binding protein of peripheral and central nervous tissue 625\*
- Fels, G., H. Breer and A. Maelicke, Monoclonal antibodies discover acetylcholine receptors in invertebrate ganglionic tissue 1121\*
- Ferber, E. s. I. Flesch
- Ferraro, D. s. A. Cestelli
- Fersht, A. R. s. F. Grosse
- Feuerstein, J. s. P. Rösen
- Feuerstein, S., A. Wendel und R. F. Burk, Clearance von Ethan und Pentan im Säuger 329\*
- Fiedler, E. and G. Schultz, Localisation of Shikimate pathway enzymes in spinach chloroplasts 1122\*
- Fiedler, I. s. E. Haen
- Figarella, C. s. B. Miszczuk-Jamska
- Figura, K. von s. A. Hasilik
- Figura, K. von s. P. Lemansky
- Figura, K. von s. F. Stockel
- Figura, K. von s. S. Tümmers
- Filser, J. G. s. H. M. Bolt
- Finch, S. A. E., R. Greinert, A. Stier, K. Grünewald, K. Maly, F. Scheidl und H. Grunicke, Alteration of plasma membranes of Ehrlich-ascites tumor cells by N-lost (chloromethine). A study of fluorescence depolarization and fluorescence photo-bleaching recovery 1122\*
- Finch, S. A. E. s. R. Greinert
- Fischbach, M. s. M. Chessebeuf
- Fischer, G., Cultivation and differentiation of immature astrocytes 491\*
- Fischer, W., S. R. Wagle and N. R. Katz, Altered distribution of glycolytic enzymes between parenchymal and nonparenchymal cells of rat liver after methapyrilene intoxication 1123\*
- Fissenwert, M. s. B. Witter
- Fister, P., P. Presek and E. Eigenbrodt, Enolase is phosphorylated in the intact chicken liver cell 1123\*
- Fleischmann, G. und S. C. R. Elgin, Reinigung und Charakterisierung von Proteinen transkriptionell aktiver Loci von *Drosophila* 1124\*
- Flesch, I., U.-P. Ketelsen and E. Ferber, Adipose conversion of murine bone marrow-derived macrophages in serum-free medium 489\*
- Flockerzi, V., P. Ruth and F. Hofmann, Identification and purification of the binding site for the calcium channel blocker nitrendipine in bovine cardiac muscle 1124\*
- Flohé, L., J. V. Bannister, W. H. Bannister, W. A. Günzler, S. M. Kim, F. Ötting und G. J. Steffens, Phylogenetische Einordnung der Cu/Zn-Superoxid-Dismutase aus *Photobacterium leiognathi* durch Sequenzanalyse 330\*
- Flohé, L. s. W. A. Günzler
- Flohé, L. s. G. Loschen
- Flohé, L. s. W. Martin
- Flohé, L. s. G.-J. Steffens
- Flower, R. J., Physiological reactions of arachidonic acid oxygenation products 199\*
- Flügge, U. I. and R. Benz, Pore-forming activity in the outer membrane of the chloroplast envelope 1124\*
- Fock, H. P. s. M. G. Berger

- Fock-Nüzel, R., F. Lottspeich, A. Henschen and W. Müller-Esterl, Structural studies on acrosin, a key enzyme in fertilization 1125\*
- Fooij, M. s. N. Van Tieghem
- Fournel, P. s. G. Lemieux
- Fox, B. s. C. T. Walsh
- Frank, G. s. J. D. Tratschin
- Franke, H. s. R. Keller
- Franken, H.-D., W. D. Beinert, H. Rüterjans und F. Müller, <sup>15</sup>N-NMR von freien und Protein-gebundenen Flavin 1259\*
- Frankus, E. s. G. Loschen
- Fрати, L. s. G. Migliorati
- Freimüller, B., H.-P. Nasheuer und W. H. Müller, Induktion der alkalischen Phosphatase bei Hirnzellen in Kultur durch Retinsäure 1125\*
- Freimuller, B. s. W. H. Müller
- Frenzel-Stötzer, I., K.-E. Stötzer, U. Stropp und H. Probst, Proliferation, zellkinetische Parameter, Energiestatus und Replikon-Initiation von Ehrlich-Asziteszellen unter vermindertem Sauerstoffangebot in der Kultur und im Tumortier 330\*
- Frew, L. s. A. Balmain
- Frey, J., Cytomegalovirus-inducible Fc-receptors in human fibroblasts 1125\*
- Frey, J. s. E.-G. Afting
- Frey, J. s. M. L. Danailov
- Frey, J. s. W. Kördel
- Friedrich, E. s. N. Holl
- Fritz, H., K.-H. Duswald, H. Dittmer, H. Kortmann, W. Müller-Esterl, S. Neumann and M. Jochum, Proteinase/proteinase inhibitor imbalance in vivo causes severe diseases 1126\*
- Fritz, H. s. W. Machleidt
- Fritz, M. M. s. W. Hagmann
- Fröhlich, K.-U., K.-D. Entian und D. Mecke, Klonieren des Hexokinase-PII-Gens der Hefe *Saccharomyces cerevisiae* 331\*
- Fröhlich, K.-U. s. K.-D. Entian
- Fromme, G. H. s. T. Kerényi
- Fromme, H. G. s. T. Kerényi
- Fryksmark, U., K. Ohlsson, M. Rosengren and H. Tegner, Studies on the interaction between leukocyte elastase, antileukoproteinase and the plasma proteinase inhibitors  $\alpha_1$ -proteinase inhibitor and  $\alpha_2$ -macroglobulin 793
- Fuchs, D. s. H. Wachter
- Fuchs, I. s. R. Rudolph
- Fuchs, St. und K. Stocker, Charakterisierung und therapeutische Anwendung von Defibrase (Batroxobin) 331\*
- Fuchs, W. s. N. Afza
- Fuchs, W. s. A. Malik
- Fuchs, W. s. H. Watzlawik
- Füchtbauer, A. s. B. M. Jockusch
- Füglistaller, P., F. Suter and H. Zuber, The complete amino-acid sequence of both subunits of phycoerythrocyanin from the thermophilic cyanobacterium *Mastigocladus laminosus* 691
- Fürst, P. s. I. Amberger
- Fuith, L. s. A. Loidl
- Gabaldon, I. s. K. P. Schäfer**
- Gabius, H.-J., F. von der Haar and F. Cramer, Purification by salting-out chromatography and properties of phenylalanyl-tRNA synthetase from turkey liver 71
- Gäde, G. s. R. Rudolph
- Gärtner, A., M. Leippert und U. Weser, Cuprein (Cu<sub>2</sub>Zn<sub>2</sub>-Superoxid-Dismutase) bindet 90% des erythrozytären Kupfers 331\*
- Galla, H.-J., D. Ruppel, H. G. Kapitza und E. Sackmann, Hydrophile lipid-protein-Wechselwirkung 1126\*
- Galla, H.-J. s. Y. H. Xü
- Gallacher, D. V. s. O. H. Petersen
- Gallinaro, H. s. A. Krol
- Garber, A. J., S. J. Allen, I. Moretti-Rojas and C. M. Maillet, Cyclic nucleotide-mediated hormonal regulation of glutamine metabolism in skeletal muscle 1245\*
- García, M. D. s. M. J. Gómez-Lechón
- Gardemann, A. und H. W. Heldt, Regulatorische Eigenschaften der Fructose-1,6-bisphosphatase aus Spinat-Chlorplasten 1127\*
- Garten, W. und H.-D. Klenk, Die Aktivierung des Hämagglutinins durch proteolytische Spaltung. Eine wichtige Determinante für die Pathogenität des Influenzavirus 332\*
- Gast, F.-U. and A. Pingoud, Identification of a complex consisting of EF-Tu, GDP, Aminoacyl-tRNA and programmed 70S ribosomes 1127\*
- Gattner, H.-G. s. R. Knorr
- Gattner, H.-G. s. B. Schartmann
- Gattner, H.-G. s. H.-J. Wieneke
- Gatz, C. and W. Hillen, Equilibrium and kinetic investigations of the regulatory reactions of the Tn10-encoded tetracycline-resistance operon 1128\*
- Gebb, C. s. G. Norrgren
- Gebhardt, R., E. Kleemann and D. Mecke, Hormonal regulation of glutamine synthetase and glutamine metabolism in cultured hepatocytes 1243\*
- Gebhardt, R. und D. Mecke, Interzelluläre Kompartimentierung des Leberparenchyms 332\*
- Gebhardt, R. and D. Mecke, Glutamate uptake by cultured rat hepatocytes: Identification of hormonally inducible, sodium-dependent transport systems 1128\*
- Gebhardt, R., H. Robenek, W. Jung, U. Klose und D. Mecke, Primäre Hepatocytenkulturen als Modellsystem für Untersuchungen der biliären Sekretion und der intrahepatischen Cholestase 333\*
- Gebhardt, R. s. W. Jung

- Gebhardt, R. s. D. Mecke  
 Gebicke-Härter, P. J. s. H. H. Althaus  
 Geiger, R., M. Bickel, V. Teetz and H. G. Alpermann,  
 Central and peripheral action of enkephalin  
 analogues 1555  
 Geiger, R. s. W. Hofmann  
 Geiger, R. s. U. Lüpke  
 Geisert, H. s. W. Schartau  
 Geisert, M., M. Reitz, J. Arendes und R. K. Zahn, Spezi-  
 fischer Nachweis von Desoxyribonucleasen durch  
 isoelektrische Fokussierung in Polyacrylamid-Gelen  
 mit kovalent gebundener DNA 1129\*  
 Geiss, D. G. s. E. Lohmaier  
 Geisse, S. s. A. C. B. Cato  
 Gekeler, V. und H. Probst, Versuche zur Synchronisa-  
 tion von Replikationseinheiten in Ehrlich-Aszitestu-  
 mormzellen 334\*  
 Gentner, P. R. s. H. Probst  
 Gerbling, K. P. and E. Latzko, Separation of fructose-1,6-  
 bisphosphatases by electrophoresis and isoelectric  
 focusing from *Anacystis nidulans* 1129\*  
 Gerhardt, R., M. Stitt und H. W. Heldt, Subzelluläre  
 Metabolitbestimmung in Spinatblättern durch nicht-  
 wäßrige Fraktionierung 1130\*  
 Gerok, W., Hepatic glutamine metabolism in severe  
 liver disease and its role in the pathogenesis of  
 hepatic coma 1255\*  
 Gerok, W. s. R. Büchsel  
 Gerok, W. s. D. Häussinger  
 Gerok, W. s. A. Holstege  
 Gerok, W. s. J. Pausch  
 Gerok, W. s. J. Rasenack  
 Gersonde, K., Reversible dioxygen binding 197\*  
 Gersonde, K., F.-H. Bernhardt and H. Twilfer, Electron  
 spin resonance investigation of the dioxygen-activat-  
 ing iron center in putidamonooxin 1259\*  
 Gevers, W. s. T. Scott-Burden  
 Gerwert, K. s. M. Engelhard  
 Geyer, R. s. M. Schlüter  
 Ghisla, S. s. V. Massey  
 Ghraf, R. s. C. Hiemke  
 Ghraf, R. s. E. R. Lax  
 Ghraf, R. s. M. Michel  
 Gibb, W. and R. Sammeck, Differences in Axon-Schwann  
 cell-interrelationships of posterior and anterior roots:  
 A correlated morphometric-biochemical study in  
 control and swimming rats 1130\*  
 Gieselmann, V. s. A. Hasilik  
 Gieselmann, V. s. P. Lemansky  
 Giesen, E. M., C. Welsch, M. Schmidt, J. L. Imbs, A. Steffan  
 and J. Schwartz, An attempt to characterize sub-  
 cultures derived from the Madin-Darby canine kidney  
 cell line 483\*  
 Giffhorn, S. and N. R. Katz, Metabolite-dependent  
 induction of lipogenic enzymes in primary cultures  
 of rat hepatocytes 1131\*  
 Girg, R., R. Rudolph and R. Jaenicke, Stable dimers of  
 lactate dehydrogenase from pig skeletal muscle  
 produced by limited proteolysis during reconstitution  
 are enzymatically active in the presence of stabilizing  
 salt 1260\*  
 Glaise, D. s. C. Guguen-Guillouzo  
 Glasenapp, A. s. W. H. Müller  
 Gliemann, J. s. S. E. Drewes  
 Gliemann, J. s. O. Sonne  
 Glögler, K. s. M. Schmidt  
 Gloss, B. s. G. Knedlitschek  
 Godel, H. s. I. Amberger  
 Godovac-Zimmermann, J. and G. Braunitzer, The amino-  
 acid sequence of Northern Mallard (*Anas platyrhyn-  
 chos platyrhynchos*) hemoglobin 665  
 Goedert, M. s. U. Otten  
 Göhring, W. s. L. Moroder  
 Görisch, H. s. B. Keller  
 Götz, H., H. Kratzin, F. P. Thinnies, C.-y. Yang, T. Kruse,  
 E. Pauly, S. Kölbl, G. Egert, P. Wernet and N. Hilsch-  
 mann, Primary structure of human class II histo-  
 compatibility antigens. 3rd Communication: Amino-  
 acid sequence comparison between DR and DC  
 subclass antigens derived from a lymphoblastoid B  
 cell line homozygous at the HLA loci (HLA-A3,3;  
 B7,7; Dw2,2; DR2,2; MT1,1; DC1,1; MB1,1) 749  
 Götz, H. s. H. Kratzin  
 Götz, H. s. F. P. Thinnies  
 Goldammer, E. von s. H. R. Wenzel  
 Goldstein, M. B. s. A. Gougoux  
 Goldstein, M. G. s. M. L. Halperin  
 Golf, S. W. s. S. Ziemendorf  
 Gómez-Lechón, M. J. and J. V. Castell, The role of fetal  
 calf serum during the first stages of hepatocyte  
 cultures 489\*  
 Gómez-Lechón, M. J., M. D. García and J. V. Castell,  
 Effect of glucocorticoids on the expression of  
 $\gamma$ -glutamyl-transferase and tyrosine amino-  
 transferase in serum-free cultured hepatocytes 501  
 Gómez-Lechón, M. J. s. J. V. Castell  
 Gómez-Lira, M. M. s. J. Bode  
 Goodman, M., G. Braunitzer, T. Kleinschmidt and  
 H. Aschauer, The analysis of a protein-polymorphism.  
 Evolution of monomeric and homodimeric haemo-  
 globins (erythrocyruorins) of *Chironomus thummi  
 thummi* (Insecta, Diptera) 205  
 Goodman, M. s. H. Dene  
 Goodman, T. C. s. L. Nagel  
 Goppelt, M. and K. Resch, Lipid composition of  
 functional plasma membrane domains 1131\*  
 Goretzki, K., B. Bizzini, G. Ahnert-Hilger and E.  
 Habermann, Antigenicity of tetanus toxin and  
 tetanus toxoid, as studied with monoclonal anti-  
 bodies 1270\*  
 Gougoux, A., P. Vinay, M. Duplain, M. B. Goldstein and  
 M. L. Halperin, Effect of a glutamine load on the

- regulation of renal ammoniogenesis in the dog with chronic metabolic acidosis 1248\*
- Gougoux, A. s. M. L. Halperin  
 Gougoux, A. s. P. Vinay  
 Gourdj, D. s. A. Tixier-Vidal  
 Gräber, P. s. M. Rögner  
 Graef, V. s. S. Ziemendorf  
 Graf, P. s. D. Crane  
 Graf, G. s. W. Mraz  
 Graf, H. and V. Ullrich, Enzymatic and spectroscopic properties of isolated prostacyclin synthase 1131\*  
 Grafenstein, H. v. and E. Neumann, Regulation of the calcium level by chromaffin cell organelles at exocytosis steps 1132\*  
 Graham, D. s. H. Betz  
 Graser, T. s. I. Amberger  
 Grasmück, I. s. E. Hartmann  
 Graw, J., Biochemische Untersuchungen einer dominant vererbaren Linsentrübung bei der Maus 334\*  
 Green, C. D. s. T. C. Dembinski  
 Greiling, H. s. R. Keller  
 Greinert, R., S. A. E. Finch, H. Taniguchi and A. Stier, The relation between the rotational diffusion of cytochrome P-450 in a reconstituted membrane, its structure and the regulation of drug biotransformation 1132\*  
 Greinert, R. s. S. A. E. Finch  
 Greischel, A. s. R. Prigge  
 Grieshaber, M. K. s. B. Siegmund  
 Grimm, F. s. W. Oberthür  
 Grimelikhuijzen, C. J. P., The primitive nervous system of coelenterates is peptidergic 1276\*  
 Grishin, E. V. s. N. M. Soldatov  
 Gröbner, P. s. P. Loidl  
 Groner, B. s. W. H. Günzburg  
 Groner, B. s. B. Salmons  
 Groner, B. s. G. Knedlitschek  
 Groß, G. s. R. Lammers  
 Groß, T. and B. Schulz-Harder, Heat-shock induction of ribonuclease and protease in yeast 1132\*  
 Gross, V. s. I. Schenck  
 Grosse, F., G. Krauss, J. W. Knill-Jones and A. R. Fersht, Accuracy of DNA polymerase- $\alpha$  in copying natural DNA 1133\*  
 Grosse, F. s. G. Krauss  
 Grosse-Wilde, H. s. E. Bergheim  
 Grossmann, A. und A. Wendel, Reaktivität von Glutathion-Peroxidase mit Fettsäure- und Lipidhydroperoxiden 334\*  
 Grünewald, K. s. S. A. E. Finch  
 Grünhagen, H.-H., Voltage-dependent Na-channels: Comparative studies in *Electrophorus electricus* preparations 625\*  
 Grumbach, K. H., On the role of carotenoids in photosynthesis 1133\*  
 Grunicke, H. s. S. A. E. Finch  
 Grunicke, H. s. A. Loidl  
 Guder, W. G., S. Pürschel and G. Wirthensohn, Renal ketone body metabolism. Distribution of  $\alpha$ -oxoacid transferase and 3-hydroxybutyrate dehydrogenase along the mouse nephron 1727  
 Guder, W. G. and T. Schorn, Metabolic interactions of renal proline and glutamine metabolism 1247\*  
 Guder, W. G. and G. Wirthensohn, Heterogeneity of renal carbohydrate and lipid metabolism 1134\*  
 Guder, W. G. s. G. Wirthensohn  
 Gültekin, H. and G. F. Domagk, Isolation of two soluble  $\gamma$ -carboxyglutamate-containing proteins from bovine kidney 1134\*  
 Güntert, B. s. P. Honegger  
 Günzburg, W. H., L. Vercueil, B. Salmons and B. Groner, The methylation of MMTV proviral DNA is tissue-specific, and induced hypomethylation results in transcriptional activation 1135\*  
 Günzburg, W. H. s. B. Salmons  
 Günzler, W. A., G. J. Steffens, F. Ötting, L. Flohé, H. Heyneker, W. Holmes, M. Rey, H. M. Shepard, P. Seeburg, H. Hayflick, C. Ward, G. Vehar and M. Winkler, Von der Strukturauflklärung von Urokinase zu ihrer Produktion in genetisch transformierten Bakterien 335\*  
 Günzler, W. A. s. L. Flohé  
 Günzler, W. A. s. W. Martin  
 Günzler, W. A. s. G.-J. Steffens  
 Guerrini, D. s. J. Krebs  
 Guguen-Guillouzo, C., G. Lescoat, B. Clément, E. Le Rumeur, D. Glaise and A. Guillouzo, Regulation of specific functions in fetal and adult hepatocytes maintained in a coculture system: Role of cell-cell interactions and glucocorticosteroids 498\*  
 Guillouzo, A. s. C. Guguen-Guillouzo  
 Gulba, D., W. Heller and H.-E. Hoffmeister, Hemmung der Kontaktphasenaktivierung während der Behandlung mit der Herz-Lungen-Maschine durch Aprotinin 1135\*  
 Gunawan, J. s. B. Witter  
 Gundelfinger, E. s. M. Melli  
 Gundlach, G. and R. Voegeli, Conformational changes of 4-carboxyglutamic acid-containing protein from bovine bone by binding of alkaline earth ions 31  
 Gupta, D. s. H. Moeller  
 Gustafsson, K. s. D. Larhammar  
 Guy, O. s. B. Miszczuk-Jamska  
 Haar, F. von der s. H.-J. Gabius  
 Haas, B. s. M. Schnölzer  
 Habermann, E. s. K. Goretzki  
 Habets, W. J., M. H. Salden, C. A. van Eekelen and W. J. van Venrooij, Diversity of snRNP antigens recognized by anti-RNP sera from various autoimmune patients 782\*

- Habets, W. J. s. W. J. van Venrooij
- Hachtel, W., Biosynthesis and assembly of thylakoid membrane proteins in isolated chloroplasts from *Vicia faba* L.: The light-harvesting chlorophyll *a/b*-protein complex 1136\*
- Hägele, E. O., E. Schaich, E. Rauscher, P. Lehmann und A. W. Wahlefeld,  $\alpha$ -Amylase-Test mit 4-nitrophenylierten Oligosacchariden: Auffinden der optimalen Kettenlänge 335\*
- Hämmerling, G. s. H. G. Burgert
- Haen, E., L. Szinicz, H. Hagenmaier und I. Fiedler, Der Einsatz von Isotachophorese und Hochdruckflüssigkeitschromatographie bei der Bestimmung von Neurohormonen 336\*
- Haendler, B., E. Lazar, M. Jacob, A. Krol and C. Brantlant, The status of U-RNAs in hnRNP 780\*
- Haendler, B. s. C. Brantlant
- Haendler, B. s. M. Jacob
- Haendler, B. s. A. Krol
- Häussinger, D., D. Crane, W. Gerok and H. Sies, Decrease of flux through pyruvate dehydrogenase and branched-chain 2-oxo-acid dehydrogenase by nitrofurantoin in perfused rat liver 1439
- Häussinger, D. and W. Gerok, Hepatocyte heterogeneity in glutamate metabolism in isolated perfused rat liver 1136\*
- Häussinger, D., W. Gerok and H. Sies, Hepatocyte heterogeneity in glutamine and ammonia metabolism and the role of an intercellular glutamine cycle 1242\*
- Häussinger, D. s. D. Crane
- Häussinger, D. s. J. Pausch
- Häussinger, D. s. H. Sies
- Häussinger, D. s. S. Soboll
- Hagemeyer, E., K. Kemper, K.-S. Boos and E. Schlimme, On-line HPLAC-HPLC-analysis of ribonucleosides in biological fluids 1136\*
- Hagenmaier, H. s. E. Haen
- Hagmann, W., M. M. Fritz und D. Keppler, Leukotriene und Endotoxin-Letalität 337\*
- Hajós, G. s. L. Kisfaludy
- Haley, B. E., H. Ponstingl and K.-H. Doenges, Photoaffinity labelling of pure tubulin using 8-azidoguanosine triphosphate at the  $\alpha$ -subunit 1137\*
- Halperin, M. L., C. Pichette, M. G. Goldstein, P. Vinay, A. Gougoux and R. L. Jungas, What controls the  $V_{max}$  of renal ammoniogenesis in dogs with chronic metabolic acidosis? 1247\*
- Halperin, M. L. s. A. Gougoux
- Ham, R. G., Defined media for normal human cells 469\*
- Hamann, A., D. Jablonski-Westrich and H.-G. Thiele, Lymphocytes express specific, antigen-independent contact-interaction sites upon activation 1137\*
- Hamm, U. s. I. Ziegler
- Hammarström, K. s. H.-J. Monstein
- Handschuh, D. und W. Voelter, Synthese der 4-Thio-enoethercarbonsäure-Derivate von Testosteron und Progesteron 337\*
- Handy, S. s. R. H. Michell
- Hanke, E. s. H. Seeger
- Hannappel, E. und W. Leibold, Biosynthese von Thymosin  $\beta_4$  in nicht adhärennten Zellen 1138\*
- Hansen, R. J. and K. Jungermann, Interaction of estrogen and testosterone in the control of glucose-6-phosphate dehydrogenase activity in cultured rat hepatocytes 1138\*
- Hardeland, R. s. H. F. Krug
- Harder, A., K.-H. Hille and H. Debuch, Effect of chloroquine and *O,O'*-Bis(diethylaminoethyl)hexestrol on acidic phospholipid membranes 997
- Harsch, G. and H.-J. Thissen, Dynamics of the glutathione redox system in rat liver after partial hepatectomy 313
- Harlos, P. and H. A. Stadler, Synaptic vesicles contain an ATP-dependent proton pump 1139\*
- Harris, J. B. s. I. Tesseraux
- Harsch, G., Spiele zur Energieverteilung 338\*
- Harsch, G., A. R. Hernanto, H. Bauer und W. Voelter, Mechanismus der Sekundärreaktionen bei der Formose-Reaktion 338\*
- Hartl, F. U., W. W. Just, A. Köster and H. Schimassek, Solubilization of rat liver peroxisomal membrane proteins 1139\*
- Hartl, F. U. s. W. S. Just
- Hartmann, A., Die *Azospirillum*-Wurzelssoziation 339\*
- Hartmann, E., I. Grammück, B. Boller, N. Hoffmann und M. Weber, Function of acetylcholine in plants 1139\*
- Hartmann, H. s. K. Beckh
- Hartmann, H.-J. s. U. Weser
- Hartmann, W. s. Y. H. Xü
- Hartter, P., W. Martin und H. Böttinger, Untersuchungen zur immunologischen und nichtimmunologischen Stimulation von Mastzellen 339\*
- Haser, W. G., R. Shapiro and N. P. Curthoys, Comparison of rat renal and brain glutaminase: Identification of a higher molecular mass form unique to brain 1238\*
- Hasilik, A., K. von Figura, V. Gieselmann, R. Pohlmann, F. Steckel and S. Tümmer, Biosynthesis and transport of lysosomal enzymes 1140\*
- Hasilik, A. s. F. Stockel
- Hasilik, A. s. S. Tümmer
- Hatzfeld, A. s. J. A. Hatzfeld
- Hatzfeld, J. A. and A. Hatzfeld, Analysis of the mitogenic effect of fibrinogen 476\*
- Hauner, H. s. P. Feick
- Hauschildt, S. and K. Brand, Activation of hepatic branched-chain 2-oxoacid dehydrogenase by cytosolic factors from different rat organs 1140\*
- Hausen, A. s. H. Wachter

- Havermann, K. s. H.-G. Klingemann  
Havsteen, B. und H. Lemke, Identifikation eines Signaltransduktors im zellulären Immunsystem: Der Fc-Rezeptor ist Phospholipase A<sub>2</sub> 1141\*
- Havsteen, B., U. Schwab und H. Lemke, Mechanismus der Translationshemmung durch das toxische Protein Gelonin 1260\*
- Havsteen, B. s. J. Bentgens  
Havsteen, B. s. H. Lüddens  
Hawkins, P. T. s. R. H. Michell  
Hawlitschek, G., E. Lohmaier und D. G. Weiss, Nehmen lösliche Proteine am schnellen axonalen Transport teil? 1276\*
- Hawlitschek, G. s. E. Lohmaier  
Hayflick, H. s. W. A. Günzler  
Heath, J. K., Secretion of growth regulatory polypeptides by embryonal carcinoma cells 476\*
- Heber, U. s. D. K. Hincha  
Heber, U. s. G. Kaiser  
Heber, U. s. H. Pfanz  
Heber, U. s. K. Schwab  
Hebisch, S., M. Schwenen und S. Soboll, Distribution and binding of ADP in different functional states of rat skeletal muscle 1141\*
- Heidemann, M. s. J. Dieckhoff  
Heilmann, E. and H.-D. Helb, Proliferation of haematopoietic colonies in serum-free cultures 483\*
- Heilmeyer, Jr., L. M. G. s. M. W. Kilmann  
Heilmeyer, Jr., L. M. G. s. G. W. Mayr  
Heim, S., H. Erdmann, M. Böcher und K. G. Wagner, Protein kinase activity of in vitro growing tobacco cells 1142\*
- Heineke, D. s. D. Schulze  
Heinemeyer, W. s. R. G. Herrmann  
Heinrich, P., H. Ronft, W. Schartau und G.-B. Kresze, Lipamide dehydrogenase from baker's yeast. Improved purification and some molecular, kinetic and immunochemical properties 41
- Heinrich, P. C., A. Villringer, B. Kühn, K. Michels und W. Northemann, Small cytoplasmic RNAs from rat liver mRNP particles as control elements of mRNA translation 784\*
- Heinrich, P. C. s. I. Schenck  
Heinzel, W. und W. Voelter, Thymuspeptide 340\*
- Hekim, N. and P. W. Jungblut, Unspecific interactions of estrogen receptors with immunoglobulins and their absence in the tryptic receptor fragment 607
- Hekim, N., H. H. D. Meyer, P. I. Szendro und P. W. Jungblut, Validation of the common-core-hypothesis of estrogen receptors with precipitating and steroid-releasing antibodies 769
- Helb, H.-D. s. E. Heilmann  
Heldin, C.-H. s. C. Betsholtz  
Heldt, H. W. s. A. Gardemann  
Heldt, H. W. s. R. Gerhardt  
Heldt, H. W. s. B. Herzog  
Heldt, H. W. s. M. Stitt  
Heller, W. s. D. Gulba  
Heller, W. s. A. R. Hernanto  
Helliger, W. s. J. Leiter  
Hendrick, J. P. s. J. Rinke  
Hennig, B. s. H. Köhler  
Henry, P.-E. s. N. Van Tieghem  
Henschen, A., M. Kehl und E. Deutsch, Novel structure elucidation strategy for genetically abnormal fibrinogens with incomplete fibrinopeptide release as applied to fibrinogen Schwarzach 1747
- Henschen, A., M. Kehl und C. Southan, On the coagulation of fibrinogen: Influence of amino acids surrounding the thrombin cleavage site 1142\*
- Henschen, A. s. R. Fock-Nüzel  
Henschen, A. s. H.-J. Schneider  
Henze, K. s. I. Hillmar  
Hernanto, A. R., G. Wollmann, R. Schorer und W. Heller, Identifizierung von gerinnungsaktiven Proteinen in tiefgefrorenem Plasma 340\*
- Hernanto, A. R. s. G. Harsch  
Herrlich, P. s. G. Knedlitschek  
Herrmann, R. G., P. Westhoff, J. Alt, J. Tittgen, J. Morris, C. Bisanz, W. Heinemeyer, B. Olesch und N. Nelson, The photosynthetic apparatus in chloroplasts: Genes and biogenesis 1143\*
- Hertzsch, R. s. U. Rausch  
Herzog, B., M. Stitt, H. W. Heldt, C. Cseke und B. Buchanan, Zur Regulation der photosynthetischen Saccharose-Bildung durch Fructose-2,6-bisphosphat, I. Kopplung von Photosynthese und Saccharosesynthese 1143\*
- Herzog, R. und H. Probst, Gehäuftes Vorkommen von Einstrang-DNA und „non-nascent pieces“ im Bereich der Anheftungspunkte von Ehrlich-Aszites-DNA an die Kernmatrix 340\*
- Hess, B., Non-equilibrium dynamics of biochemical processes (8th Fritz Lipmann Lecture) 1
- Hess, B., Regulation of glycolysis 201\*
- Hess, B. s. M. Engelhard  
Hess, B. s. M. Markus  
Heuck, C. and D. Horn, The role of surface charge in the inhibitory action of antithrombin III on thrombin accelerated by polyanions 1261\*
- Heußner, R. s. R. Büchsel  
Heymann, E., R. Mentlein, C. Erlanson-Albertsson und T. Yoshimoto, Activation of pro-colipase by Di-peptidyl-peptidase IV from porcine pancreas 1144\*
- Heyneker, H. s. W. A. Günzler  
Hiemke, C., M. Banger und R. Ghraf, Interactions of estrogen agonists and antagonists with catecholamine receptor binding 1144\*
- Hilf, G. and W. E. Merz, Influence of cyclic nucleotides on biosynthesis and secretion of choriogonadotropin (hCG) and release of subunits in placental tissue culture 1144\*
- Hill, F. s. H. Watzlawik

- Hille, K.-H. s. A. Harder  
 Hillen, W. s. B. Brosius  
 Hillen, W. s. C. Gatz  
 Hillen, W. s. K. Schollmeier  
 Hillen, H. s. W. Stoffel  
 Hiller, G. und K. Weber, Zur Ausschleusung aus infizierten Zellen werden Pockenviren in modifizierte Golgi-Membranen verpackt 341\*  
 Hillmann, G., B. Voß, C. Sorg, H. Themann and H. Robenek, Electron microscopic identification of macrophages by goldlabelled monoclonal antibodies in conjunction with the surface replication technique 1145\*  
 Hillmar, I., K. Henze and N. Zöllner, Influence of fatty acids on microsomal diacylglycerol acyltransferase activity in primary cultures of hepatocytes 173  
 Hillmar, I. and N. Zöllner, Effect of 1-O-alkyl-2-O-acetyl-sn-glycero-2-phosphocholine derivatives on adenosine 3',5'-monophosphate concentration in hepatocyte suspensions 1145\*  
 Hilschmann, N. s. H. Götz  
 Hilschmann, N. s. H. Kratzin  
 Hilschmann, N. s. W. E. Schmidt  
 Hilschmann, N. s. F. P. Thinnes  
 Hinch, D. K., J. E. Schmidt, U. Heber and J. M. Schmitt, Colligative and non-colligative freezing damage to thylakoid membranes 1146\*  
 Hinkkanen, A. and K. Decker, Enzymatic determination of several D-amino acids using luminol-mediated chemiluminescence 1549  
 Hinkkanen, A., E.-M. Lilius, J. Nowack, R. Maas and K. Decker, Purification of the flavoproteins 6-hydroxy-D- and 6-hydroxy-L-nicotine oxidase using hydrophobic affinity chromatography 801  
 Hinkkanen, A., F.-E. Maly and K. Decker, Quantitation of immunoadsorbed flavoprotein oxidases by luminol-mediated chemiluminescence 407  
 Hinrichs, U. s. G. Weitz  
 Hinterberger, W. s. W. R. Paukovits  
 Hirsch, H. s. K. Wirthensohn  
 Hobom, G. s. M. Kröger  
 Hochstraßer, K., G. J. Albrecht, O. L. Schönberger and E. Wachter, Kunitz-type proteinase inhibitors derived by limited proteolysis of the inter- $\alpha$ -trypsin inhibitor, VIII. Characterization of the bovine inhibitor as double headed trypsin-elastase inhibitor 1689  
 Hochstraßer, K. and E. Wachter, Kunitz-type proteinase inhibitors derived by limited proteolysis of the inter- $\alpha$ -trypsin inhibitor, VII. Determination of the amino-acid sequence of the trypsin-released inhibitor from bovine inter- $\alpha$ -trypsin inhibitor 1679  
 Hochstraßer, K. s. G. J. Albrecht  
 Hock, H. s. W. Müller-Esterl  
 Höckel, M., W. Wagner, H. Renner and J. H. Wissler, Chemotropic morphogenesis of new blood vessel patterns with active hemodynamics in rabbit skin by monocyto-angiotropin: Evidence for resulting tissue hyperfunctions (hair growth) 1146\*  
 Hoefeler, H. s. H.-G. Klingemann  
 Hölzel, F. s. W. E. Simon  
 Höppner, W. s. W. Süßmuth  
 Hörmann, H., V. Jelinić and H. Richter, Generation of fibronectin receptors on macrophages by wheat germ lectin 1011  
 Hörmann, H. s. Z. Markovic  
 Hörmann, H. s. M. Seidl  
 Hoffmann, D. und W. Wesemann, Charakterisierung von 5-HT<sub>2</sub>-Bindungsstellen in Thrombozytenmembranen 1277\*  
 Hoffmann, F. s. G. Sawatzki  
 Hoffmann, N. s. E. Hartmann  
 Hoffmeister, H.-E. s. D. Gulba  
 Hofmann, F. s. M. Zimmer  
 Hofmann, W. and R. Geiger, Human tissue kallikrein, I. Isolation and characterization of human pancreatic kallikrein isolated from duodenal juice 413  
 Hofmann, W., A. Junk and R. Geiger, Human tissue kallikrein, II. Isolation and characterization of human salivary kallikrein 425  
 Hofmann, W. s. R. Büchsel  
 Hofmann, F. s. V. Flockerzi  
 Hofstaetter, T., Immunglobulin-Synthese in vitro: Effekte von Suppressorzellen und Faktoren 341\*  
 Hofstaetter, T. s. H. Probst  
 Holl, N., J. Schlepper-Schäfer, V. Kolb-Bachofen, E. Friedrich and H. Kolb, Recognition of a cell-surface tumor marker in rat by the hepatic asialoglycoprotein receptor 1147\*  
 Holmes, W. s. W. A. Günzler  
 Holst, A. and D. Oesterheld, Retinol does not affect cell growth in fibroblast cell cultures 563  
 Holstege, A., D. Manglitz and W. Gerok, Depletion of blood plasma cytidine in D-galactosamine-treated rats 1147\*  
 Holzer, H., Mechanisms of initiation of intracellular proteolysis 1148\*  
 Honegger, P. and B. Güntert, Cholinergic differentiation in serum-free aggregating fetal brain cells 497\*  
 Hoover, G. A. s. T. Maciag  
 Hoppe, J. s. W. Bruns  
 Horak, I. s. M. Schmidt  
 Horn, D. s. C. Heuck  
 Horn, F. und H. Bisswanger, Kooperativität des Pyruvat-Dehydrogenase-Komplexes aus *Escherichia coli* 342\*  
 Horster, M. F. and P. D. Wilson, Regulation of growth and function of mammalian nephron cells in serum-free, hormone-supplemented medium 483\*  
 Horstmann, H.-J. s. W. Schmitt  
 Hossenlopp, P. s. M. Binoux  
 Hossmann, K.-A. s. L. Csiba  
 Hossmann, K.-A. s. W. Paschen  
 Hovsepian, S. s. G. Fayet

- Huber, C. s. H. Wachter  
 Hucho, F. s. P. Muhn  
 Hucho, F. s. S. Stengelin  
 Huchzermeyer, B. and A. Löhr, Regulation of nucleotide binding to chloroplast coupling factor 1148\*  
 Hue, L., Control of liver carbohydrate metabolism 1149\*  
 Hue, L., Role of futile cycles in metabolic regulation 1241\*  
 Hüther, F.-J. and B. Kadenbach, Reversible and irreversible inactivation of the isolated and reconstituted mitochondrial phosphate carrier by SH-reagents 1149\*  
 Hüther, F.-J. s. B. Kadenbach  
 Huether, G. s. F. Thoemke  
 Hütter, J. F., H. M. Piper and P. G. Spieckermann, Inhibition of fatty acid oxidation in intact working rat heart 1149\*  
 Hütter, J. F., H. M. Piper and P. G. Spieckermann, Kinetics of myocardial fatty acid uptake 1150\*  
 Hütter, J. F. s. H. M. Piper  
 Hundrieser, J. and R. Cerff, Cloning and characterization of cDNA from peas coding for a major "GAPDH-like" stroma protein 1150\*  
 Hundrieser, J. s. K. Bartsch  
 Hunsmann, G. s. M. Schlüter  
 Hunt, S. P. s. U. Otten  
 Husby, G. s. K. Sletten  
 Huth, W. s. L. A. Quandt  
 Hynes, N. s. G. Knedlitschek  
 Hynes, N. s. B. Salmons
- Ilzenhöfer, H.** s. H. H. Berlet  
 Imbs, J. L. s. E. M. Giesen  
 Inada, J. s. M. Kimura  
 Indrayanto, G., W. Voelter und W. Reinhard, Steroide und Triterpene in Zellkulturen 342\*  
 Ingerwersen, S. s. L. Ødum  
 Insley, M. s. F. Buck  
 Iscove, N. N., The growth factor requirements of hemopoietic cells in culture 480\*  
 Isenberg, G., Drei verschieden regulierbare Actinfilament – „Capping-Proteine“ im Vertebraten-Gehirn 1269\*  
 Isenberg, G. s. A. Wegner  
 Ishiguro, I. s. H. Ogawa  
 Ivell, R. and D. Richter, The biosynthesis of somatostatin and Luliberin in the mammalian hypothalamus 1150\*  
 Iwaarden, J. F. van s. A. J. Verhoeven
- Jablonski-Westrich, D.** s. A. Hamann  
 Jacob, M., E. Lazar, B. Haendler, C. Branlant and A. Krol, The secondary structure of U1, U2, U4 and U5 RNAs and its implications 779\*  
 Jacob, M. s. C. Branlant  
 Jacob, M. s. B. Haendler  
 Jacob, M. s. A. Krol  
 Jacob, R. s. H. Rupp  
 Jäck, H.-M. s. A. Deger  
 Jäck, H.-M. s. R. Koch  
 Jaenicke, R., What NAD-dependent dehydrogenases teach us about the folding and association of oligomeric proteins 194\*  
 Jaenicke, R. s. R. Girg  
 Jaenicke, R. s. H. Krebs  
 Jaenicke, R. s. R. Rudolph  
 Jaenicke, R. s. T. Seifert  
 Jaeschke, H. und H. Krell, Permeabilität der „tight junctions“ bei Östrogen-Cholestase 343\*  
 Jagow, G. von s. W. D. Engel  
 Jagow, G. von s. H. Schägger  
 Janecki, A., The viability and hormonal reactivity of Sertoli cells cocultured with myoid cells: Effect of serum deficiency 498\*  
 Janiaud, P., Importance of chemical environment for the culture of human mammary epithelial cells (normal and benign) 484\*  
 Jantzen, E. s. J. Kolberg  
 Jany, K.-D. and E. Nitsche, Limited proteolysis of glucose dehydrogenase from *Bacillus megaterium* by proteinase K 839  
 Jarausach, J. and B. Kadenbach, Crosslinking studies on the association of nuclear coded polypeptides in the cytochrome c oxidase complex 1151\*  
 Jeanteur, Ph. s. J. Sri-Widada  
 Jelinić, V. s. H. Hörmann  
 Jellinek, H. s. T. Kerényi  
 Jenke, H.-S., M. Löwel and J. Berndt, Effect of alterations in vitro and in vivo of the cholesterol content in rat liver microsomes on the activity of 3-hydroxy-3-methylglutaryl-CoA 135  
 Jenke, H.-S. s. H. Probst  
 Jensen, M. s. H. König  
 Jimenez de Asua, L. and A. M. Otto, Different pathways of events regulate the initiation of DNA replication in cultured mouse fibroblastic cells 470\*  
 Jimenez de Asua, L. s. M. Eschenbruch  
 Jimenez de Asua, L. s. A. M. Otto  
 Jochum, M. and A. Bittner, Inter- $\alpha$ -trypsin inhibitor of human serum: An inhibitor of polymorphonuclear granulocyte elastase 1709  
 Jochum, M. s. H. Fritz  
 Jockusch, B. M. and A. Fuchtbauer, Microfilament structure and membrane anchorage 1151\*  
 Jockusch, H. s. I. Stuhlfauth  
 Jörg, A. s. H. J. Ziltener  
 Johnson, E. F. s. H. H. Dieter  
 Johnson Burke, D. s. T. Dingermann  
 Jonáková, V. s. B. Meloun  
 Jorcano, J. L. s. A. Alonso



- Joseph, S.K. s. A.J. Verhoeven
- Joubert, F.J., G.S. Townshend and D.P. Botes, Snake venoms. Purification, some properties of two phospholipases A<sub>2</sub> (CM-I and CM-II) and the amino-acid sequence of CM-II from *Bitis nasicornis* (horned adder) venom 1717
- Julien, T. s. L. Zaki
- Jung, G. s. W. Stock
- Jung, G. s. K.-H. Wiesmüller
- Jung, H.-D. s. W.E. Schmidt
- Jung, W., R. Gebhardt und D. Mecke, Transport von organischen Anionen in Primärkulturen von Rattenhepatozyten 343\*
- Jung, W. s. R. Gebhardt
- Jungas, R.L. s. A. Gougoux
- Jungas, R.L. s. M.L. Halperin
- Jungblut, P.W. s. N. Hekim
- Jungblut, P.W. s. H.H.D. Meyer
- Jungblut, P.W. s. H. Siede
- Jungblut, P.W. s. P.I. Szendro
- Jungermann, K. s. B. Anderson
- Jungermann, K. s. H.J. Balks
- Jungermann, K. s. K. Beckh
- Jungermann, K. s. R.J. Hansen
- Jungermann, K. s. I. Probst
- Jungermann, K. s. D. Wölfle
- Jungermann, K. s. S. Zierz
- Jung-Testas, I. and E.-E. Baulieu, Growth regulation of L-929 mouse fibroblasts by steroid hormones and their corresponding anti-hormones in serum-containing and serum-free media 472\*
- Jungwirth, C. s. B. Zöllner
- Junk, A. s. W. Hofmann
- Just, W.W. and F.-U. Hartl, Rat liver peroxisomes, II. Stimulation of peroxisomal fatty-acid  $\beta$ -oxidation by thyroid hormones 1541
- Just, W.W. s. F.U. Hartl
- Kabsch, W. and C. Sander, Toward peptide vaccines: prediction of antigenic peptides from protein sequences of influenza virus and foot and mouth disease virus 1152\*
- Kadenbach, B. and A. Stroh, Influence of variable redox states of glutathione on the activity of cytochrome c oxidase 1152\*
- Kadenbach, B. s. F.J. Hüther
- Kadenbach, B. s. J. Jarausch
- Kadenbach, B. s. L. Kuhn-Nentwig
- Kadenbach, B. s. M. Ungibauer
- Kaever, V. and K. Resch, Characterization of plasma membrane-bound nucleotide cyclases in calf thymocytes 1152\*
- Kaever, V. s. M. Szamel
- Kahmann, R. s. R. Schmucker
- Kahn, C.R. s. R. Knorr
- Kaighn, M.E., Prostatic carcinoma cells in serum-free media 473\*
- Kaiser, G. and U. Heber, The role of vacuoles in the subcellular partitioning of photosynthetic products in barley mesophyll cells 1153\*
- Kaiser, P.M. und H. Broch, PCILO-Berechnung zur Rigidität/Flexibilität von Nucleosid-Derivaten 1261\*
- Kaiser, W.M., H. Weber and M. Sauer, Ion content and photosynthetic capacity of leaves and chloroplasts from *Spinacia oleracea* grown under salinity 1153\*
- Kalbacher, H., L. Moroder und W. Wünsch, Chemische Aspekte zur Verbesserung von Immunoassays für Peptidhormone 344\*
- Kalikulov, D. s. B.A. Tashmukhamedov
- Kamp, D. s. G.D. Li
- Kamp, D. s. W. Ritthaler
- Kamp, D. s. R. Schmucker
- Kamp, R.M., Z.-J. Yao, A. Bosserhoff and B. Wittmann-Liebold, Purification of *Escherichia coli* 30S ribosomal proteins by high-performance liquid chromatography 1777
- Kamp, R.M., Z.-J. Yao and B. Wittmann-Liebold, Direct microsequence analysis of peptides from *Escherichia coli* ribosomal proteins S11, L9 and L29 after separation by reversed phase chromatography 141
- Kandler, O. s. H. König
- Kapitza, H.G. s. H.-J. Galla
- Kardas, E. s. W. Ritthaler
- Karelin, A.A. s. K.A. Pluzhnikov
- Karlson, P., 8th Adolf Butenandt Lecture. Why are so many hormones steroids? 1067
- Karlsson, B.W. s. B.R. Weström
- Kasche, V. s. L. Riechmann
- Katz, N. and U. Müller-Eberhard, Secretion of hemopexin and transferrin in primary cultures of rat hepatocytes 1154\*
- Katz, N.R. s. S. Giffhorn
- Katz, N.R. s. W. Fischer
- Katz, N.R. s. S. Zierz
- Kaufmann, E. s. K.F. Schnell
- Kaus, R. s. F. Thoenke
- Kayser, H. s. F.P. Thinner
- Kazakov, I. s. B.A. Tashmukhamedov
- Kehl, M. s. A. Henschen
- Kehrer, T. s. R. Keller
- Keim, M. s. S. Soboll
- Keiser, T. and A. Wegner, Preparation of bovine brain tropomyosin under non-denaturing conditions 1154\*
- Keller, B., E. Keller, H. Görisch und F. Lingens, Zur Biosynthese von Phenylalanin und Tyrosin in Streptomyceten 455
- Keller, B. s. S. Waldner-Sander
- Keller, E. s. B. Keller
- Keller, E. s. S. Waldner-Sander
- Keller, K. s. K. Lange

- Keller, R., R. Driesch, T. Stein, M. Momburg, H.W. Stuhlsatz, H. Greiling and H. Franke, Biosynthesis of proteokeratan sulfate in the bovine cornea. 1) Isolation and characterization of a keratan sulfotransferase and the role of sulfation for the chain termination 239
- Keller, R., T. Stein, W. Weber, T. Kehrler, H.W. Stuhlsatz, H. Greiling and D. v. Keyserlingk, Biosynthesis of proteokeratan sulfate in the bovine cornea. 2) Isolation of subcellular membrane fragments from bovine cornea cells with keratan sulfate synthesizing activity 253
- Kellner, S. s. H. Kübler
- Kelm, S. s. R. Koch
- Kemper, K. s. E. Hagemeyer
- Kempfle, M., R. Müller, R. Palluk und K. Zachariasse, „Level-crossing“ als Erklärung für die starke Fluoreszenzzunahme bei 4,6,8(14)-Trien-3-on-Steroiden in polaren Medien 1154\*
- Kennedy, N. s. G. Knedlitschek
- Keppler, D. s. W. Hagmann
- Kerckhoff, W. van den s. W. Paschen
- Kerényi, T., B. Voss, J. Rauterberg, H.G. Fromme and H. Jellinek, Distribution pattern of some connective tissue proteins on the normal and injured endothelium of the rat aorta 1155\*
- Kern, H.F. s. U. Rausch
- Kerner, W. s. W. Beischer
- Kersten, H. s. E. Männlein
- Kersten, H. s. G. Ott
- Kersten, H. s. E. Schachner
- Kersten, W. s. E. Zubrod
- Kessler-Icekson, G., L. Wasserman, E. Yoles and S.R. Sampson, Characterization of cardiomyocytes cultured in serum-free medium 484\*
- Ketelsen, U.-P. s. I. Flesch
- Keyserlingk, D. v. s. R. Keller
- Khan, M. A. s. J. Lücke
- Khodorov, B.I., Batrachotoxin – a tool to study the gating in voltage-sensitive sodium channels 614\*
- Khoury, N. s. P. Vinay
- Kichenin, V. s. L. Péjaudier
- Kido, R. s. M. Kimura
- Kieffer, S. und G. Wegener, Wirkungen von Anoxie auf den Gehirnstoffwechsel der Honigbiene (*Apis mellifica*) und der Schmeißfliege (*Calliphora erythrocephala*) 1156\*
- Kiene, M.-L., V. Neuhoff and T.V. Waehndt, Myelin protein components in the central and peripheral nervous system of the electric ray, *Torpedo marmorata* 1156\*
- Kilimann, M.W., K.D. Schnackerz and L.M.G. Heilmeyer Jr., „Non-activated“ phosphorylase kinase is a phospho-protein 1157\*
- Kim, S.A. s. G. Loschen
- Kim, S.M. s. L. Flohé
- Kim, S.-M.A. s. G.-J. Steffens
- Kimura, M., E. Okuno, J. Inada, H. Ohyama and R. Kido, Purification and characterization of amino-acid *N*-choloyltransferase from human liver 637
- Kindl, H., Biosynthese von Glyoxysomen und peroxisomalen Formen 1157\*
- King, G. L. s. R. Knorr
- Kirch, H.-Ch. s. M. Ungibauer
- Kirchoff, J. s. E.R. Lax
- Kirk, C.J. s. R.H. Michell
- Kisfaludy, L., O. Nyéki, I. Schön, L. Dénes, J. Ember, L. Szporny, G. Hajós and B. Szendc Immunoregulating peptides, I. Synthesis and structure-activity relationships of thymopentin analogs 933
- Klages, U., S. Krauss and F. Lingen, 2-Haloacid dehalogenase from a 4-chlorobenzoate degrading *Pseudomonas spec.* CBS 3 529
- Klaphor, H. s. B. Winter
- Kleemann, E. s. R. Gebhardt
- Klein, J. s. A. Peetz
- Kleine, T.O., Enzyme immunoassay for C-reactive protein sensitive to cerebrospinal fluid 1158\*
- Kleine, T.O., Lactoferrin and lysozyme in cerebrospinal fluid of patients with brain tumors and meningitis 1158\*
- Kleine, T.O. and R. Althen, Agarose gel electrophoresis with native unconcentrated cerebrospinal fluid, an approach to adapt a commercially available system to cerebrospinal fluid 1159\*
- Kleinow, W. s. C. Kohlsdorfer
- Kleinschmidt, T. und G. Braunitzer, Die Primärstruktur des Hämoglobins vom Abessinischen Klippschliefer (*Procapra habessinica*, Hyracoidea): Insertion von Glutamin in den  $\alpha$ -Ketten 1303
- Kleinschmidt, T. s. M. Goodman
- Kleist-Welch Guerra, W. s. E.-R. Lochmann
- Klenk, H.-D. s. W. Garten
- Klimek, F. s. D. Mayer
- Klingemann, H.-G., M. Kosukavak, H. Höfeler and K. Havemann, Fibronectin and factor VIII-related antigen in acute leukaemia 269
- Klingenberg, M., Regulation of ATP production of mitochondria 201\*
- Klink, F. s. L. von Klitzing
- Klitzing, L. von and F. Klink, The in-vivo influence of the phase transition point of lung surfactant membrane by oral application of 1,2-dipalmitoyl-sn-glycero-3-phosphocholine 1159\*
- Kloppstech, K. s. K. Bartsch
- Kloppstech, K. s. J. Beckmann
- Kloppstech, K. s. R. Cerff
- Kloppstech, K. s. G. Meyer
- Klose, U. s. R. Gebhardt
- Klotz, K.-N., R. Koch und U. Weber, Effekte von Insulin und Colchicin auf den Insulinrezeptor in isolierten Rattenhepatozyten 344\*

- Klotz, K.-N. s. A. Deger  
 Klotz, K.-N. s. R. Koch  
 Klotz, U., Effektkinetik von Midazolam, einem neuen hypnotischen Benzodiazepin 344\*  
 Klumpp, S. and J.E. Schultz, Calcium/calmodulin-dependent guanylate cyclase in the excitable ciliary membrane from *Paramecium* and *Tetrahymena* 1160\*  
 Knedel, M. s. W. Mraz  
 Knedlitschek, G., B. Gloss, P. Herrlich and N. Kennedy, Mouse mammary tumour virus: Sequence of an endogenous provirus from the GR mouse 1160\*  
 Knedlitschek, G., B. Groner, N. Hynes, H. Ponta, P. Skroch and N. Kennedy, Mouse mammary tumour virus: Delimitation of the hormone inducibility site by deletion mapping 1160\*  
 Knill-Jones, J.W. s. F. Grosse  
 Knobloch, K. s. W. Schmitt  
 Knobloch, K. s. H.-M. Schwann  
 Knollmann, U. und G. Wegener, Entwicklung von Stoffwechselferten in den Cerebralganglien von Insekten während der Ontogenese 1161\*  
 Knorr, D. s. F. Bidlingmaier  
 Knorr, R., W. Danho, E.E. Büllsbach, H.-G. Gattner, H. Zahn, G.L. King and C.R. Kahn, [B17-D-Leucine]-insulin and [B17-norleucine]insulin: Synthesis and biological properties 1615  
 Knosp, O. s. H. Wachter  
 Knyrim, K. s. W. Stoffel  
 Koch, R., K.-N. Klotz, S. Kelm, A. Deger, H.-M. Jäck und U. Weber, Eigenschaften des Insulinrezeptors aus Rattenlebermembranen 345\*  
 Koch, R. s. A. Deger  
 Koch, R. s. K.-N. Klotz  
 Koch, R. s. G. Müller  
 Köhler, H., B. Hennig and W. Neupert, Transport of cytochrome c into mitochondria: Binding of apocytochrome c to its receptor 1161\*  
 Köhler, J. and A.C. Schwartz, Multiple cytochromes c in the electron transport system of the methylotrophic bacterium *Hyphomicrobium* ZV 580 1162\*  
 Kölbl, S. s. H. Götz  
 Kölbl, S. s. H. Kratzin  
 König, B., T. Schonhardt and H. Sandermann,  $\beta$ -D-Galactoside transport in *Escherichia coli*. Solubilization in organic solvent and reconstitution 1162\*  
 König, H., O. Kandler, M. Jensen and E. Th. Rietschel, The primary structure of the glycan moiety of pseudomurein from *Methanobacterium thermoautotrophicum* 627  
 Kördel, W., J. Frey, H.-G. Löffler, E. Kumpe und Fr. Schneider, Das aktive Zentrum der Aminoacylase aus Nieren 345\*  
 Köster, A. s. F. U. Hartl  
 Kösters, J. s. W. Oberthür  
 Kohl, K.D. s. M. Engelhard  
 Kohlsdorfer, C. und W. Kleinow, Korrelation von Funktionsfähigkeit und Protein-zusammensetzung bei Präparationen mitochondrialer Ribosomen aus *Locusta migratoria* 1163\*  
 Kolb, H. s. N. Holl  
 Kolb-Bachofen, V. s. N. Holl  
 Kolberg, J., T.E. Michaelsen and E. Jantzen, Interactions of purified human ceruloplasmin with *Lathyrus odoratus*, *Lens culinaris* and *Canavalia ensiformis* lectins 111  
 Kolberg, J., T.E. Michaelsen and K. Sletten, Properties of a lectin purified from the seeds of *Cicer arietinum* 655  
 Kolberg, J. s. K. Sletten  
 Konami, Y., K. Yamamoto, T. Tsuji, I. Matsumoto and T. Osawa, Purification and characterization of two types of *Laburnum alpinum* anti-H(O) hemagglutinin by affinity chromatography 397  
 Kopetzki, E., K.-D. Entian und D. Mecke, Untersuchung der Hexokinase-Isoenzymformen der Hefe *Saccharomyces cerevisiae* 346\*  
 Kopitar, M. s. J. Brzin  
 Kornhuber, J. s. M. Schleyer  
 Kortenhaus, S. s. J. Schmid  
 Kortmann, H. s. H. Fritz  
 Kostyuk, P.G., Interaction of toxins and divalent cations at the calcium channels of the neuronal membrane 615\*  
 Kosukavak, M. s. H.-G. Klingemann  
 Kovačević, Z., K. Bajin und O. Brkljač, Swelling of mitochondria and accessibility of glutamine carrier to -SH-blocking and thiol reagents 1246\*  
 Kovalenko, V.A. s. N.M. Soldatov  
 Kratzin, H., C.Y. Yang, H. Götz, F.P. Thinner, T. Kruse, G. Egert, E. Pauly, S. Kölbl, P. Wernet und N. Hilschmann, Structure of human class II histocompatibility antigens 1163\*  
 Kratzin, H. s. H. Götz  
 Krause, E. s. M. Melli  
 Krause, U. s. E. Lang  
 Krauss, C. s. R. Römer  
 Krauss, G. und F. Grosse, The primase activity of DNA-directed DNA polymerase- $\alpha$  1164\*  
 Krauss, G. s. F. Grosse  
 Krauss, S. s. U. Klages  
 Krawietz, W. s. G. Bauriedel  
 Krebs, H., F.X. Schmid und R. Jaenicke, Faltungsmechanismus homologer Ribonucleasen 1262\*  
 Krebs, J., B. Schäfer und D. Guerrini, Calmodulin, ein intrazelluläres Ca<sup>2+</sup>-Modulatorprotein – Struktur und Funktion 346\*  
 Kreibich, G., D. Colman, M.G. Rosenfeld und D.D. Sabatini, Incorporation of proteins into cellular membranes and organelles 1164\*  
 Kreimer, G. und E. Latzko, Properties of L-ascorbate-using peroxidases from *Pisum sativum* L. 1165\*

- Krein, G., W. Voelter und W. Zifreund, Entwicklung und Evaluation eines wissenschaftlichen Lehrfilms zur Vorlesung über optische Rotationsdispersion und Circular dichroismus für Chemiker und Biochemiker 346\*
- Kreisel, W. s. R. Büchsel
- Krell, H. s. H. Jaeschke
- Krell, H. W. and H. Sandermann, Plant biochemistry of xenobiotics. Bis(2-ethylhexyl)phthalate esterase 1165\*
- Kresze, G.-B. s. P. Heinrich
- Kreutzberg, G. W., K. S. Lee, P. Schubert and M. Reddington, Distribution of 5'-nucleotidase and A<sub>1</sub>-adenosine receptors in the mammalian central nervous system 1277\*
- Kreutzberg, G. W. s. M. Reddington
- Kröger, M., T. Decker and G. Hobom, Control mechanism for the expression of bacteriophage  $\lambda$  late control gene Q 1166\*
- Krol, A., C. Branlant, E. Lazar, H. Gallinero, B. Haendler and M. Jacob, The primary structure of U1, U2, U4 and U5 RNAs of chicken, rat and man. Comparison with published DNA sequences complementary to these RNAs 780\*
- Krol, A. s. C. Branlant
- Krol, A. s. B. Haendler
- Krol, A. s. M. Jacob
- Kroll, W. and Fr. Schneider, The effects of exogenous pyruvate and lactate on cell growth, pyruvate dehydrogenase and lactate dehydrogenase activity of in vitro grown Ehrlich Ascites tumor cells 1166\*
- Kronbach, T. und W. Voelter, Isolierte Hepatozyten als Modellsystem für Biotransformationsuntersuchungen – Möglichkeiten und Grenzen eines In-vitro-Modells bei der Untersuchung des Arzneimittelstoffwechsels 347\*
- Kronbach, T. s. W. A. Simon
- Krüger, E. s. W. Stoffel
- Krug, H. F. and R. Hardeland, Diurnal regulation of hepatic protein synthesis 1166\*
- Krumlauf, R. s. A. Balmain
- Kruse, T. s. H. Götz
- Kruse, T. s. H. Kratzin
- Kubaneck, B. s. G. Sawatzki
- Kübler, H. und S. Kellner, Die Wirksamkeit von Neurotransmittern für die Ausbildung einer Geschmacksversion 1167\*
- Kühl, P. W., On the binding and activation mechanism of catecholamines and adrenergic drugs 1167\*
- Kühn, B. s. P. C. Heinrich
- Kühn, K. s. I. Oberbäumler
- Kuehn, L., B. Dahlmann and H. Reinauer, Possible involvement of protein proteinase inhibitors in the regulation of muscle alkaline proteinases 1168\*
- Kühn, L. s. B. Dahlmann
- Kühnle, H. F. s. I. V. Deaciuc
- Kuenzle, C. C., DNA-binding proteins of brain neurons: A search for gene regulatory proteins 1269\*
- Kuhn, C. C. s. K. P. Schäfer
- Kuhn-Nentwig, L. and B. Kadenbach, Different immunological relationship between cytochrome c oxidase polypeptides from various tissues of the rat 1168\*
- Kumpe, E. s. W. Kördel
- Kurowsky, E. s. A. Szewczuk
- Kuss, E. s. L. Dibbelt
- Kvamme, E., Brain and kidney glutaminase 1238\*
- Kvist, S. s. H. G. Burgert
- Labourdette, G. s. B. Pettmann**
- Lacombe, C. s. G. Vinci
- Ladenstein, R., Struktur und Funktion des Selenoenzyms Glutathion-Peroxidase 347\*
- Laerum, O. D. s. W. R. Paukovits
- Läufer, A., Über den Zusammenhang zwischen Thermolumineszenz, photosynthetischer Sauerstoffentwicklung und dem Elektronentransport im Photosystem II 348\*
- Laib, R. J. s. H. M. Bolt
- Lakomek, M., M. Scharnetzky, W. Tillmann, W. Schröter and H. Winkler, On the temperature- and salt-dependent conformation change in human erythrocyte pyruvate kinase 787
- Lammers, E. s. P. Schadewaldt
- Lammers, R., G. Groß, U. Mayr and J. Collins, Isolation of two cDNA-clones from poly(I·C)-induced transcripts hybridizing in the neighbourhood of the interferon- $\beta$  gene 1168\*
- Lancin, H. s. J. T. Broshan
- Landauer, P., K.-P. Rueß and M. Liefländer, Evidence for and separation of globular hydrophobic and non-hydrophobic forms of acetylcholinesterase from bovine caudate nucleus 433
- Landolfo, S. and B. Arnold, Immune ( $\gamma$ ) interferon produced by murine T-cell lymphomas 477\*
- Lang, E., U. Krause and G. Brunner, A new culture technique as a model for the in-vitro reconstitution of endocrine organs (e.g. pituitary) 499\*
- Lang, K. and G. Brunner, Tracing the astroglial cell lineage in vitro by modification of the microenvironmental conditions 494\*
- Lange, K., K. Keller und B. Agrawal, Zum Mechanismus der schnellen endogenen Regulation des Glucose-transportes 1277\*
- LaNoue, K. F. s. A. Schoolwerth
- Larhammar, D., L. Claesson, K. Gustafsson, B. Servenius, L. Rask and P. A. Peterson, Structural and genetic studies of class II histocompatibility antigens 1169\*
- Larsen, T. R. s. O. Sonne
- Larsø, L. s. O. Sonne
- Laskowski, Jr. s. T. Wilusz
- Lassarre, C. s. M. Binoux

- Lasson, A., B. Dittmann and K. Ohlsson, Influence of plasma proteinase inhibitors and aprotinin on trypsin-induced bradykinin release in vitro in man 1315
- Latham, J. s. C. T. Walsh
- Latzko, E. s. K. P. Gerbling
- Latzko, E. s. G. Kreimer
- Latzko, E. s. B. Surek
- Lauffer, L. s. P. Muhn
- Lauffer, L. s. S. Stengelin
- Lax, E. R., J. Kirchhoff, R. Ghraf and H. Schriefers, Effect of fasting on the cytoplasmic-nuclear distribution of estrogen receptors in liver and uterus of female rats 1169\*
- Lax, E. R. s. A. Peetz
- Layer, H. s. M. Digel
- Lazar, E. s. C. Branlant
- Lazar, E. s. B. Haendler
- Lazar, E. s. M. Jacob
- Lazar, E. s. A. Krol
- Leake, R. s. I. Munir
- Lebleu, B. s. P. Milhaud
- Lee, K. S. s. G. W. Kreutzberg
- Lefrank, S. s. G. Wirthensohn
- Legler, U. F. und L. Z. Benet, Veränderungen der Prednisonkinetik in Frauen, die orale Kontrazeptiva einnehmen 348\*
- Legros, F. s. N. Van Tieghem
- Lehar, O. s. I. Primsch
- Lehmann, P. s. E. O. Hägele
- Leibold, W. s. E. Hannappel
- Leippert, M. s. A. Gärtner
- Leiter, J., W. Helliger and B. Puschendorf, Histone acetylation of inducible and non-inducible friend erythroleukemia cells 1170\*
- Lemansky, P., V. Gieselmann and K. von Figura, Effect of 1-deoxynojirimycin on processing and transport of lysosomal enzymes 1170\*
- Lemieux, C. s. G. Lemieux
- Lemieux, G., A. Quenneville, C. Lemieux, P. Fournel and J. Berkofsky, Glutamine and the kidney in various vertebrates 1249\*
- Lemke, H. s. B. Havstene
- Lenger, K., Isolierung und Charakterisierung chromatingebundener Nucleosid-Nucleotid-Phosphotransferasen 349\*
- Lenzen, S., I. Rustenbeck and U. Panten, Transamination of L-glutamine by pancreatic B-cell mitochondria 1251\*
- Leonov, V. N. s. E. A. Yelin
- Le Rumeur, E. s. C. Guguen-Guillouzo
- Lescoat, G. s. C. Guguen-Guillouzo
- Levitt, M., C. Sander and P. Stern, Collective protein dynamics: A film of the low frequency normal modes of trypsin inhibitor 1262\*
- Leyhausen, G., W. Dippold and W. E. G. Müller, Induction of DNA polymerase  $\alpha$  and terminal deoxynucleotidyl transferase in the human lymphoblastoid cell line molt-4 by the immunomodulator bestatin 1171\*
- Li, G. D., S. Barlach, H. Priess und D. Kamp, Kontrolle der DNA-Transposition beim Bakteriophagen Mu 1171\*
- Liautard, J.-P. s. J. Sri-Widada
- Liefländer, M. s. P. Landauer
- Lilius, E.-M. s. A. Hinkkanen
- Lill, R., J. M. Robertson and W. Wintermeyer, tRNA-ribosome complex formation: Equilibrium and kinetic studies 1171\*
- Linde, S. s. O. Sonne
- Linder, K. s. M. Schlüter
- Lindl, T. s. G. Weitz
- Lingens, F. s. R. Bachofer
- Lingens, F. s. B. Keller
- Lingens, F. s. U. Klages
- Lingens, F. s. C. Lübbe
- Lingens, F. s. W. Pflug
- Lingens, F. s. S. Waldner-Sander
- Link, G. s. K. Bartsch
- Linker, W. and Fr. Schneider, Cell kinetics, energy metabolism and macromolecular synthesis of ehrlich ascites tumor cells grown in glucose-deprived medium supplemented with uridine 1172\*
- Linß, M., M. G. Weller und U. Weser, Zur Synthese von Modellen des  $[Cu(SR)_2]_4$ -Zentrums in Hefe-Cu-Thionein 349\*
- Linzen, B. s. W. Schartau
- Linzen, B. s. H.-J. Schneider
- Lippert, T. s. H. Seeger
- Lippert, T. H. s. A. Burgardt
- Lippert, T. H. s. A. H. Entenmann
- Lippert, T. H. s. H. Wollmann
- Lishko, V., Interaction of neurotoxins with soluble proteins of excitable tissues 615\*
- Lissitzky, S. s. G. Fayet
- Lochmann, E.-R., W. Kleist-Welch Guerra and P. Bradish, Investigation of the poly (A) content and translational activity of yeast membrane-associated RNA 1172\*
- Löffler, G. s. P. Feick
- Löffler, H.-G. s. W. Kördel
- Löhr, A. s. B. Huchzermeyer
- Löw, H. s. F. L. Crane
- Löwel, M. s. H.-S. Jenke
- Lohmaier, E., G. Hawlitschek und D. G. Weiss, Charakterisierung der Mikrotubuli aus Fischhirn 1278\*
- Lohmaier, E. s. G. Hawlitschek
- Lohmann, S. M. s. G. Schwoch
- Loidl, A., H. Zwierzina, L. Fuith, H. Grunicke and B. Puschendorf, Alkylating agents suppress histone acetylation in Ehrlich Ascites tumor cell 1173\*
- Loidl, A. s. P. Loidl
- Loidl, P., A. Loidl, P. Gröbner and B. Puschendorf, Cell cycle-dependent acetylation and butyrate-

- induced hyperacetylation of H4 in *Physarum polycephalum* 1173\*
- Lombardo, B. s. R. Avola  
 Longer, M. s. V. Turk
- Loschen, G., U. Seipp, G. Michel, K. Müller, H. Böhlke, S. A. Kim, E. Frankus, W. Vollenberg, K. Wilsmann und L. Flohé, Biochemische Erkenntnisse als Leitlinien im Drug-Design: Die Entwicklung metabolisch stabilerer Prostaglycine 350\*
- Loschen, G. s. W. Martin
- Lottspeich, F. s. R. Fock-Nüzel  
 Lottspeich, F. s. H.-J. Schneider
- Loudes, C. s. M. Binoux
- Lucietto, P. s. L. Moroder
- Lübbe, C., K.-H. van Pée, O. Salcher and F. Lingens, The metabolism of tryptophan and 7-chlorotryptophan in *Pseudomonas pyrocinia* and *Pseudomonas aureofaciens* 447
- Lübben, M., U. Lücken, J. Weber and G. Schäfer, 3'-O-[5-azidonaphthoyl(1)]ADP: Interaction with the nucleotide binding sites of F1-ATPase 1173\*
- Lücke, J., M. A. Khan und W. Voelter, Isolierung und Strukturidentifizierung eines Triterpens aus *Euphorbia lactae* mit einem Cyclopropanring 350\*
- Lücken, U. s. M. Lübben  
 Lücken, U. s. M. Rögner
- Lüddens, H. and B. Havsteen, Characterization of the porcine ACTH-receptor with the aid of a monoclonal antibody 1174\*
- Lührmann, R., B. Appel, P. Bringmann, R. Reuter and J. Rinke, Structure-function relationships of U-snrNPs as studied with snRNA cap-specific antibodies 783\*
- Lührmann, R. s. B. Appel
- Lüpke, U., K. Meyer, R. Geiger and H. Tschesche, Isolation of two kallikreins from human PMN leukocytes 1174\*
- Lüthje, J. and A. Ogilvie, Human platelets release  $P^1, P^3$ -bis(5-adenosyl) triphosphate upon thrombin-induced aggregation 1175\*
- Lund, P., Extracellular active calcium concentration and regulation of glutamine metabolism 1240\*
- Lund, P. s. P. J. Snodgrass
- Lundberg, J. s. L. Moroder
- Lustig, A. s. Z. Markovic
- Maas, M.** s. W. Beischer  
 Maas, R. s. A. Hinkkanen  
 Maass, G. s. R. Römer  
 Macartney, H. W. s. J. Fedrowitz
- Machleidt, W., U. Borchart, H. Fritz, J. Brzin, A. Ritonja and V. Turk, Protein inhibitors of cysteine proteinases. II. Primary structure of stefin, a cytosolic protein inhibitor of cysteine proteinases from human polymorphonuclear granulocytes 1481
- Machleidt, W., J. Brzin, V. Turk and H. Fritz, Amino acid sequences of the cysteine proteinase inhibitors stefin from human leucocytes and cystatin from chicken egg white 1175\*
- Machleidt, W. s. J. Brzin  
 Machleidt, W. s. H. Schägger  
 Machleidt, W. s. V. Turk
- Maciag, T., G. A. Hoover and R. Weinstein, Growth and organization of human endothelial cells 488\*
- Madsen, A. M. s. H. I. Nielsen
- Mäder, M. and M. J. Chrispeels, Biosynthesis of an integral membrane protein of the protein body membrane in *Phaseolus vulgaris* cotyledons 1176\*
- Maelicke, A. and H. Prinz, On the mechanism of cholinergic excitation 1176\*
- Maelicke, A. s. B. A. Chibber  
 Maelicke, A. s. G. Fels  
 Maelicke, A. s. M. D. Walkinshaw
- Männlein, E., R. Praisler, E. Stockhausen and H. Kersten, Two isoacceptors of *E. coli* tRNA<sup>fMet</sup> and their regulatory role in translation of polycistronic mRNA under H<sub>4</sub> folate limitation 1176\*
- Mäntele, W. s. M. Engelhard
- Magojo, H. E. M. s. S. E. Drewes
- Maier, V. s. R. Prigge
- Maillet, C. M. s. A. J. Garber
- Majumder, P. K. s. M. R. Banerjee
- Malik, A., N. Afza, W. Fuchs and W. Voelter, A convenient synthesis for forosamine 351\*
- Malik, A. s. N. Afza
- Mall, A. s. H. Schmid
- Malmström, Bo. G., Cytochrome c oxidase and related enzymes 198\*
- Maly, F.-E. s. A. Hinkkanen
- Maly, K. s. S. A. E. Finch
- Manglitz, D. s. A. Holstege
- Mannherz, H. G. s. J. Dieckhoff
- Mansuy, D., Reactive intermediates derived from cytochrome P-450-dependent monooxygenases 200\*
- Marchiori, F., G. Borin, G. Chessa, G. Cavaggion, L. Michelin and E. Peggion, Synthetic and binding studies on the postulated calcium binding site I of calmodulin 1019
- Marhaug, G. s. K. Sletten
- Markovic, Z., J. Engel, H. Richter and H. Hörmann, Discrimination of different domains in fibronectin on the basis of their stability against urea denaturation 551
- Markovic, Z., A. Lustig and J. Engel, Shape and stability of fibronectin in solutions of different pH and ionic strength 1795
- Markus, M., H. Becher and B. Hess, Coexistence of attractors in a 6-phosphofructokinase-pyruvate kinase oscillator with periodic input, a theoretical study 1177\*
- Martin, B. M. s. B. A. Chibber

- Martin, G. s. G. Baverel  
 Martin, W., G. Loschen, W. A. Günstler und L. Flohé,  
 Enzymologische Testverfahren bei der Suche nach  
 neuartigen Antiphlogistika 351\*
- Martin, W. s. P. Hartter  
 Maruyama, Y. s. O. H. Petersen  
 Mason, H., Oxygenases and oxidases 196\*
- Massey, V. and S. Ghisla, The mechanism of action of  
 flavoprotein-catalysed reactions 195\*
- Masui, H., Culture of human lung carcinoma cells in  
 serum-free medium 473\*
- Matern, H. s. S. Matern  
 Matern, S., H. Matern und B. Schumacher, Biochemie  
 der Entgiftung von Gallensäuren 352\*
- Mathes, B. and W. Schoner, Purification and characteriza-  
 tion of an inhibitor of pyruvate kinase type M<sub>2</sub> from  
 chicken liver 1177\*
- Matsumoto, I. s. Y. Konami  
 Matsumura, T. s. R. G. Thurman  
 Mayer, D., F. Klimek und P. Bannasch, Biochemische  
 Analyse präneoplastischer Leberzellpopulationen  
 352\*
- Mayer, H. s. W. Bruns  
 Mayer, M. s. W. Oertel  
 Mayr, U. s. R. Lammers  
 Mayr, G. W. and L. M. G. Heilmeyer, Jr., Calmodulin  
 interaction with phosphofruktokinase 1177\*
- Martin, G. s. G. Baverel  
 McDonald, T. P. s. S. Raha  
 McGivan, J. D. and N. M. Bradford, Properties of rat  
 liver glutaminase at the sub-mitochondrial level  
 1240\*
- Mebs, D., Myotoxic and neurotoxic phospholipases A  
 616\*
- Mechler, B. s. O. Emter  
 Mecke, D. and R. Gebhardt, Heterogeneity of liver  
 parenchyma: Glutamine synthetase is localized only  
 within a small subpopulation of perivenous hepato-  
 cytes 1243\*
- Mecke, D. s. L. Dröll  
 Mecke, D. s. K.-D. Entian  
 Mecke, D. s. K.-U. Fröhlich  
 Mecke, D. s. R. Gebhardt  
 Mecke, D. s. W. Jung  
 Mecke, D. s. E. Kopetzki  
 Mecke, D. s. B. Meurer  
 Mehnert, H. s. M. Wicklmayr  
 Meier, B., S. Bockemühl, R. Santuci und G. Rotilio,  
 In-vivo-Austausch von Eisen gegen Mangan in einer  
 Superoxid-Dismutase unter Beibehaltung von Akti-  
 vität und Struktur 1262\*
- Meijer, A. J., A. J. Verhoeven, E. Schuurin und J. M.  
 Tager, Glutamine metabolism in isolated hepato-  
 cytes 1240\*
- Meijer, A. J. s. A. J. Verhoeven  
 Meisheri, K. D. s. L. Merkel  
 Meister, A., Enzymology of glutamine 1237\*
- Melli, M., E. Gundelfinger, B. Dobberstein and E. Krause  
 Structural organization of 7SL ribonucleoprotein  
 particles 784\*
- Melli, M., S. Murphy, M. Tripodi, E. Ullu, V. Esposito,  
 L. Silengo and F. Altruda, Genomic organization of  
 K-like sequences in human DNA 778\*
- Meloun, B., D. Čechová and V. Jonáková, Homologies  
 in the structure of bull seminal plasma acrosin  
 inhibitors and comparison with other homologous  
 proteinase inhibitors of the Kazal type 1665
- Mensing, H. a. A. Albin  
 Mentlein, R. s. E. Heymann  
 Merchav, S. and G. Wagemaker, Superior growth of  
 mouse haemopoietic progenitors in serum-free  
 cultures 484\*
- Merkel, L., K. D. Meisheri, G. Pfitzer and J. C. Rüegg,  
 Tropomyosin alters the relationship between myosin  
 phosphorylation and actin-activated ATPase activity  
 in chicken gizzard smooth muscle 1178\*
- Mersmann, G. s. C. Noeske  
 Mersmann, G. s. C. Ziegler  
 Merz, W. E. s. G. Hilf  
 Messer, R. s. M. Bachmann  
 Meßner, B., J. Still and J. Berndt, Induction of lipo-  
 genic enzymes in rat hepatocytes by polychlorin-  
 ated biphenyls 1178\*
- Metspalu, A. s. J. Rinke  
 Mettler, L. s. J. Dietl  
 Metz, H. s. M. Scharschmidt  
 Meurer, B., K.-D. Entian und D. Mecke, Regulation und  
 physiologische Bedeutung der Enolaseisoenzyme in  
 der Hefe *Saccharomyces cerevisiae* 352\*
- Meves, H. and D. D. Watt, Toxins isolated from the  
 venom of the scorpion *Centruroides sculpturatus*:  
 Chemical structure and electrophysiological effects  
 616\*
- Meyer, A. s. H. H. Berlet  
 Meyer, E. s. H. G. Burgert  
 Meyer, G., H. Bliedung and K. Kloppstech, A rapidly  
 light-induced chloroplast protein in wild type and  
 mutant barley 1179\*
- Meyer, G., H. Bliedung and K. Kloppstech, Rapid turn-  
 over of an early light-induced chloroplast protein  
 coded for by pea nuclear DNA 1179\*
- Meyer, G., W. Oettmeier and K. Kloppstech, The 32-kDa  
 herbicide-binding protein becomes integrated into  
 the membranes of intermittent light-grown barley  
 plants 1179\*
- Meyer, H. H. D., Isolierung und Immunologie des Östradiol-  
 receptors 353\*
- Meyer, H. H. D. and P. W. Jungblut, Purification of the  
 steroid-binding core of porcine estrogen receptor 757
- Meyer, H. H. D. s. N. Hekim  
 Meyer, K. s. U. Lüpke  
 Meyer, U. A. s. K. Zech

- Michaelsen, T. E. s. J. Kolberg  
 Micheels, P. s. J. Bentgens  
 Michel, G. s. G. Loschen  
 Michel, M. and R. Ghraf, Interference of estrogens with synaptosomal high affinity uptake of (-)-[<sup>3</sup>H]noradrenalin 1180\*  
 Michelin, L. s. F. Marchiori  
 Michell, R. H., C. J. Kirk, E. A. Bone, P. T. Hawkins and S. Handy, Phosphatidylinositol 4,5-bisphosphate breakdown is the most probable coupling reaction at receptors which mobilise Ca<sup>2+</sup> and activate protein kinase C 1180\*  
 Michels, K. s. P. C. Heinrich  
 Michels, W. und E. Schlimme, Abbauverhalten kappen-geschützter (3'-5')- und (2'-5')-Adenylsäuren in Rattenleberzellkernen 1181\*  
 Michoudet, C. s. G. Baverel  
 Middendorf, A. s. C. Boeckh  
 Mies, G. s. W. Paschen  
 Mieskes, G., F. J. Barrantes and T. Wallimann, A distinct enzymatic function (ATP:creatine N-phosphotransferase) associated with the nonreceptor v-proteins in acetylcholine receptor membranes and torpedo electrocytes 1181\*  
 Mieskes, G., I. A. Brand and H.-D. Söling, A new protein phosphatase acting on 6-phosphofruktokinase, fructose-1,6-bisphosphatase and pyruvate kinase 1182\*  
 Mieskes, G. s. I. Brand  
 Migliorati, G., L. Frati and C. Riccardi, In vitro growth of spontaneously cytotoxic cells in cultures supplemented with T-cell growth factor 478\*  
 Milhaud, P., T. Faure, J. Chaintreuil and B. Lebleu, Serum-free cultures of mouse LM fibroblasts as a tool for studies on interferon action and for the isolation of mutants in cellular response to interferon 478\*  
 Miltenburger, H. G., Investigations on the cultivation of insect cell lines in serum-free media 470\*  
 Miszczuk-Jamska, B., O. Guy and C. Figarella,  $\alpha_1$ -Proteinase inhibitor in pure human pancreatic juice 509  
 Miszczuk-Jamska, B., O. Guy and C. Figarella,  $\alpha_1$ -Proteinase inhibitor in pure human pancreatic juice. Characterization of a complexed form in patients with chronic calcifying pancreatitis and its significance 1597  
 Möhler, H., Benzodiazepine receptors: A gain control system of GABAergic synaptic transmission 1272\*  
 Moeller, H. und D. Gupta, Zur Rolle von Hypo- und Ephyphyse bei der Regulation des Androgen-Rezeptors 353\*  
 Mohr, U. s. M. Emura  
 Momburg, M. s. R. Keller  
 Monstein, H.-J., K. Hammarström, G. Westin, J. Zabielski, L. Philipson and U. Pettersson, Loci for human U1-RNA: a structural analysis 777\*  
 Montz, H. s. H. H. Althaus  
 Morel, A. s. M. Digel  
 Moretti-Rojas, I. s. A. J. Garber  
 Mori, W. s. H. Asakawa  
 Moroder, L., W. Göhring, P. Lucietto, J. Musiol, R. Scharf, P. Thamm, G. Bovermann, E. Wünsch, J. Lundberg, K. Tatemoto and V. Mutt, Synthesis of the porcine intestinal peptide PHI and its 24-glutamine analogue 1563  
 Moroder, L., W. Göhring, R. Nyfeler, R. Scharf, P. Thamm and G. Wendlberger, Zur Synthese von Human-Little-Gastrin-I und dessen Leucin-15-, Norleucin-15- und Methoxinin-15-Analoga 157  
 Moroder, L. s. H. Kalbacher  
 Morris, J. s. R. G. Herrmann  
 Morrison, R. S. s. J. de Vellis  
 Moss, D. s. B. Ranscht  
 Mraz, W., M. Knedel and G. Graf, Within-day variation of the concentration of serum lipoprotein constituents in normo- and hyperlipidemic subjects 1182\*  
 Mühlbach, H. P., O. Faustmann and H. L. Sängler, Viroid replication in potato cell suspension cultures infected with potato spindle tuber viroid 1183\*  
 Mühlbach, H.-P. s. E. Spiesmacher  
 Mühlpfordt, H. s. R. Schauer  
 Müller, B. s. A. J. Schwab  
 Müller, E., C. Schröder, R. Schauer and N. Sharon, Binding and phagocytosis of sialidase-treated rat erythrocytes by a mechanism independent of opsonins 1419  
 Müller, F. s. H.-D. Franken  
 Müller, G., R. Koch und U. Weber, Untersuchung des Insulinabbaus in Rattenlebermembranextrakt 354\*  
 Müller, G. s. A. Deger  
 Müller, H. s. O. Emter  
 Müller, J. und W. Voelter, Die 1-(3,5-Di-tert-butylphenyl)-1-methylethoxycarbonyl-Gruppe, eine neue extrem säurelabile Aminoschutzgruppe für Peptidsynthesen 354\*  
 Müller, K. s. G. Loschen  
 Müller, M. J., U. Paschen and J.-J. Seitz, Effect of ketone bodies on glucose production and utilization in the miniature pig 1184\*  
 Müller, P. K. s. E. Pöschel  
 Müller, R., Oxygenation pathways in bacteria 201\*  
 Müller, R. s. M. Kempfle  
 Müller, W. E., The interaction of arfendazam, a novel 1,5-benzodiazepine, with benzodiazepine receptors in vitro and in vivo 1278\*  
 Müller, W. E. s. G. Sauer  
 Müller, W. E. s. S. A. C. Schläfer  
 Müller, W. E. G. s. M. Bachmann  
 Müller, W. E. G. s. G. Leyhausen  
 Müller, W. E. G. s. H. C. Schröder  
 Müller, W. H., A. Glasenapp und B. Freimüller, Induktion von  $\gamma$ -Glutamyltransferase bei Zellen in Kultur 1184\*



- Müller, W. H. s. B. Freimüller  
 Müller-Eberhard, U. s. N. Katz  
 Müller-Esterl, W., G. Rauth and H. Hock, Processing of human kininogens by limited proteolysis with kallikreins 1185\*  
 Müller-Esterl, W. s. R. Fock-Nüzel  
 Müller-Esterl, W. s. H. Fritz  
 Müller-Scholz, D. s. H. Probst  
 Münch, A., W. Eichler and H. Schimassek, Arginine uptake and putrescine formation in *Tetrahymena pyriformis* 1185\*  
 Münsch, U. s. P. Schadewaldt  
 Muhn, P., L. Lauffer and F. Hucho, Characterization of an irreversible ligand of the ion channel regulated by the nicotinic acetylcholine receptor from *Torpedo marmorata* electric tissue 617\*  
 Munir, I. and R. Leake, Presence of growth inhibitory factor in fetal calf serum 472\*  
 Murphy, S. s. M. Melli  
 Murray, E. s. T. Scott-Burden  
 Muscholl, E. s. F. J. Spira  
 Musiol, J. s. L. Moroder  
 Mutt, V. s. L. Moroder
- Nabet, P. s. J. Straczek**  
 Nagamura, Y. s. H. Ogawa  
 Nagel, L., T. C. Goodmann and D. Riesner, Viroid replication: Interaction of potato spindle tuber viroid with the DNA-directed RNA polymerase II from plants 1185\*  
 Naithani, V. K. and E. Schwertner, Human proinsulin VI: Synthesis of protected segment 46-70 of pro-hormone 1603  
 Nakano, K. s. T. Saheki  
 Nasheuer, H.-P. s. B. Freimüller  
 Nasheuer, H.-P. s. A. Pingoud  
 Nastainczyk, W. s. E. Cadenas  
 Naumov, A. P., Modification of sodium channels with scorpion toxins and alkaloids 617\*  
 Nawroth, T., H. Conrad, G. Rathgeber, H.-J. Schäfer and K. Dose, Direct determination of temperature-dependent and inhibitor-induced conformational changes by neutron small angle scattering and thermokinetically controlled dissociation of an ATPase inhibitor of F<sub>1</sub>ATPase from *Micrococcus luteus* 1186\*  
 Nawroth, T., H. Conrad, J. Vienken and K. Dose, Neutron small angle scattering of matched proteoliposomes with incorporated F<sub>0</sub>F<sub>1</sub>ATPase complex from *Rhodospirillum rubrum* FR1. An approach to the structure of membrane proteins in their natural environment 923  
 Nawroth, T., H. Conrad, J. Vienken and K. Dose, Neutron small angle scattering of F<sub>0</sub>F<sub>1</sub>ATPase complex from *Rhodospirillum rubrum* FR1 incorporated in matched proteoliposomes 1187\*  
 Nedkov, P., W. Oberthür and G. Braunitzer, Die Primärstruktur von Subtilisin DY 1537  
 Nelson, N. s. R. G. Herrmann  
 Nelson, W. J. s. P. Traub  
 Neseemann, G. s. H. Aschauer  
 Netuschil, L., Biochemische Vitalitätskriterien bei Bakterien 355\*  
 Neuhoff, V. s. H. H. Althaus  
 Neuhoff, V. s. M.-L. Kiene  
 Neuhoff, V. s. F. Thoenke  
 Neumann, E. and W. Oettmeier, Plastoquinone and inhibitor binding to photosystem II particles from *Chlamydomonas reinhardtii* 1187\*  
 Neumann, E. s. H. v. Grafenstein  
 Neumann, E. s. F. Spillecke  
 Neumann, F. s. F. Bidlingmaier  
 Neumann, S. s. H. Fritz  
 Neumeier, R. s. I. Schenck  
 Neupert, W. s. H. Köhler  
 Neupert, W. s. M. Schleyer  
 Neupert, W. s. B. Schmidt  
 Newsholme, E. A. s. M. S. M. Ardawi  
 Newton, C. A. s. J. Farrant  
 Niefind, J. N. s. J. Bentgens  
 Nielsen, B. s. H. I. Nielsen  
 Nielsen, H. I., P. Don, M. Bernadotte Jenny, A. M. Madsen and B. Nielsen, Isolation and cultivation of normal human melanocytes 485\*  
 Nielsen, J. H., Hormonal regulation of growth and function of insulin-producing cells in culture 480\*  
 Nies, A. E. s. A. Wild  
 Niewiarowska, J. s. C. C. Cierniewski  
 Nilsen-Hamilton, M. s. A. M. Otto  
 Nitsche, E. s. K.-D. Jany  
 Noda, S., E. Eigenbrodt and W. Schoner, Isolation and characterization of the pyruvate kinase isoenzymes type M<sub>1</sub> and M<sub>2</sub> from Hen's egg 1188\*  
 Noeske, C. and G. Mersmann,  $\beta$ -Mannosidase from human placenta: Properties and partial purification 1645  
 Norrgren, G., T. Ebendal, C. Gebb and H. Wikström, The use of cytodex 3 microcarriers and reduced-serum media for the production of nerve growth promoters from chicken heart cells 495\*  
 North, M. s. J. Farrant  
 Northemann, W. s. P. C. Heinrich  
 Norwood, P. s. T. C. Welbourne  
 Notbohm, H. s. R. Brust  
 Nowack, J. s. A. Hinkkanen  
 Numa, S., Molekulare Struktur des Nicotin-Acetylcholin-Rezeptors 1188\*  
 Nunez, R. s. S. Berl  
 Nyćki, O. s. L. Kisfaludy  
 Nyfeler, R. s. L. Moroder

- Oberbäumer, I., N. Döring and K. Kühn, Cloning of basement membrane specific proteins 1189\*
- Oberthür, W., G. Braunitzer, R. Baumann und P.G. Wright, Die Primärstruktur der  $\alpha$ - und  $\beta$ -Ketten der Hauptkomponenten der Hämoglobine des Straußes (*Struthio camelus*) und des Nandus (*Rhea americana*). Aspekte zur Atmungsphysiologie und Systematik 119
- Oberthür, W., G. Braunitzer, F. Grimm und J. Kösters, Hämoglobine des Steinadlers (*Aquila chrysaetos*, Accipitriformes): Die Aminosäure-Sequenz der  $\alpha^A$ - und  $\beta$ -Ketten der Hauptkomponente 851
- Oberthür, W., H. Wiesner und G. Braunitzer, Die Primärstruktur der  $\alpha$ - und  $\beta$ -Ketten der Hauptkomponente der Hämoglobine der Spaltfußgans (*Anseranas semipalmata*, Anatidae) 51
- Oberthür, W. s. P. Nedkov
- O'Donovan, D.J., Elevation in urinary ammonia excretion in the rat in the absence of renal glutaminase adaptation 1250\*
- Ødum, L. and S. Ingwersen, Electrophoretic investigations of acid stable proteinase inhibitory activity in human serum 1671
- Oertel, W. und M. Mayer, Mitotische Stabilität von künstlichen Minichromosomen in Hefe 355\*
- Oesterheld, D. s. A. Holst
- Ötting, F. s. L. Flohé
- Ötting, F. s. W.A. Günzler
- Ötting, F. s. G.-J. Steffens
- Oettmeier, W. s. G. Meyer
- Oettmeier, W. s. E. Neumann
- Ogawa, H., Y. Nagamura and I. Ishiguro, Cinnabarinic acid formation in malpighian tubules of the silkworm, *Bombyx mori*. Participation of catalase in cinnabarinic acid formation in the presence of manganese ion 1059
- Ogawa, H., Y. Nagamura and I. Ishiguro, Cinnabarinic acid formation in malpighian tubules of the silkworm, *Bombyx mori*: Reaction mechanism of cinnabarinic acid formation in the presence of catalase and manganese ions 1507
- Ogawa, H., Y. Nagamura and I. Ishiguro, Xanthommatin formation in rat liver mitochondria and its inhibition by respiratory chain substrates 1519
- Ogilvie, A. s. J. Lühje
- Ohlsson, K. s. U. Frykmark
- Ohlsson, K. s. A. Lasson
- Ohlsson, K. s. M. Ohlsson
- Ohlsson, K. s. B.R. Weström
- Ohlsson, M., M. Rosengren, H. Tegner and K. Ohlsson, Quantification of granulocyte elastase inhibitors in human mixed saliva and in pure parotid secretion 1323
- Ohms, J.P., Anwendung und Bedeutung von Elektrophorese-Techniken in der Qualitätsüberwachung pflanzlicher Erzeugnisse 356\*
- Ohyama, H. s. M. Kimura
- Okuno, E. s. M. Kumura
- Olesch, B. s. R.G. Herrmann
- Osawa, T. s. Y. Konami
- Oster, O. und W. Prellwitz, Die Bedeutung der Spurenelementanalytik im klinisch-chemischen Laboratorium 356\*
- Otlewski, J. s. A. Szewczuk
- Ott, G. and H. Kersten, Increased turnover of tRNAs containing guanosine at position 34 in place of queuosine derivatives 1189\*
- Ott, G. s. E. Zubrod
- Otten, U., M. Goedert and S.P. Hunt, Biochemical and anatomical effects of antibodies against nerve growth factor on developing rat-dorsal root ganglia 1271\*
- Otto, A.M., M. Nilsen-Hamilton, B. Boss and L. Jimenez de Asua, Synergistic interactions of specific prostaglandins in regulating the rate of DNA synthesis in Swiss 3T3 cells 472\*
- Otto, A.M. s. M. Eschenbruch
- Otto, A.M. s. L. Jimenez de Asua
- Oulevey, J., R. Wagner, M. Wrenger and O.W. Thiele, Studies on the bovine J blood-group substance 1189\*
- Ovchinnikov, Yu. A. s. N.M. Soldatov
- Ozand, P.T. s. H.R. Zielke
- Pachmann, K., M. Pech and U. Pachmann, Combining the situ hybridization with immunofluorimetry. Investigation of the expression of IgM on the cell surface and its blocks on the transcriptional and the translational level 1190\*
- Pachmann, U. s. K. Pachmann
- Padieu, P. and M. Chessebeuf, Growth of rat liver epithelial cell lines in a chemically defined medium and expression of major liver metabolic functions 485\*
- Padieu, P. s. M. Chessebeuf
- Palluk, R. s. M. Kempfle
- Palm, W. s. W.E. Schmidt
- Panten, U. s. S. Lenzen
- Papen, R. s. R. Brust
- Paschen, U. s. M.J. Müller
- Paschen, W., W. van den Kerckhoff und K.-A. Hossmann, Erholung des zerebralen Energie-Stoffwechsels nach globaler Ischämie. Regionale biochemische Untersuchungen 356\*
- Paschen, W., G. Mies and L. Csiba, Regional changes of blood flow, biochemical substrates and tissue pH in rat brain cortex during spreading depression 1190\*
- Paschen, W. s. L. Csiba
- Passing, R. and D. Schubert, The binding of deoxycholic acid to band 3 protein from human erythrocyte membranes and to bovine serum albumin 219

- Passing, R. and D. Schubert, The binding of  $\text{Ca}^{2+}$  to solubilized band 3 protein of the human erythrocyte membrane 873
- Paukovits, J. B. s. W. R. Paukovits
- Paukovits, W. R., O. D. Laerum, J. B. Paukovits, W. Hinterberger and A. M. Rogan, Methods for the preparation of purified granulopoiesis-inhibiting factor (Chalone) 383
- Paulsen, H., J. M. Robertson and W. Wintermeyer, Topological arrangement of two tRNAs on the ribosome 1191\*
- Pauly, E. s. H. Götz
- Pauly, E. s. H. Kratzin
- Pausch, J., D. Häussinger, J. Rasenack and W. Gerok, Limiting role of aspartate for hepatic pyrimidine synthesis 1191\*
- Pausch, J., J. Rasenack, D. Häussinger and W. Gerok, Exclusive role of the cytoplasmic carbamoyl phosphate pool for hepatic pyrimidine synthesis 1254\*
- Pausch, J. s. J. Rasenack
- Pech, M. s. K. Pachmann
- Pée, K.-H. van s. C. Lübbecke
- Peez, A., J. Klein und E. R. Lax, Hepatisches atypisches Sexualhormon-bindendes Protein (HASP): Einfluß von Hypophysectomie und Behandlung mit menschlichem Wachstumshormon (hGH) und Schaf-Prolaktin (oPRL) auf die Verteilung der Östradiolbindung zwischen Cytosol und Mikrosomen in männlichen Ratten 1191\*
- Peggion, E. s. F. Marchiori
- Péjaudier, L., V. Kichenin, R. Audran and M. Steinbuch, Some proteins not belonging to the clotting or to the kallikrein-kinin system altered by plasma kallikrein 651
- Pereira, M. E. A. s. R. Schauer
- Perriard, J. C. s. P. Dollenmeier
- Peter, M. G., Tyrosin-Derivate als Sklerotisierungsgenien und Neurotransmitter in Insekten 357\*
- Peters, R., Measurement of membrane transport in single cells by fluorescence microphotolysis 1192\*
- Peters, R., Nuclear envelope permeability measured by fluorescence microphotolysis: Derivation of a functional pore size 1193\*
- Peters, R., Permeability of single erythrocyte ghosts measured by fluorescence microphotolysis 1193\*
- Peters, R. s. K. Beck
- Petersen, O. H., Y. Maruyama and D. V. Gallacher, Calcium-activated ion channels and their role in exocrine secretion 1193\*
- Peterson, A. L. and E. Walum, Growth and morphology of perfused and non-perfused neuronal cell lines, in serum-free medium 495\*
- Peterson, P. A. s. D. Larhammar
- Petrenko, A. G. s. N. M. Soldatov
- Pettersson, U. s. H.-J. Monstein
- Pettmann, B., M. Weibel, G. Labourdette and M. Sensenbrenner, Defined medium for the growth of rat astroblasts in culture and effect of a bovine brain factor 496\*
- Pfaender, P. s. I. Amberger
- Pfanz, H. and U. Heber, Release of peripheral membrane proteins from thylakoids during freezing of chloroplasts and leaves 1194\*
- Pfeiffer, E. F. s. R. Prigge
- Pfeiffer, F. s. H. Betz
- Pfeifle, B. s. R. Prigge
- Pfitzer, G. s. L. Merkel
- Pfleiderer, G. s. M. Scharschmidt
- Pflug, W. und F. Lingens, Vorkommen von Pyridoxaminphosphat-Oxidase und Pyridoxal-Kinase in Gram-negativen und Gram-positiven Bakterien 1627
- Philipson, L. s. H.-J. Monstein
- Pichette, C. s. M. L. Halperin
- Picone, R. s. D. Tramontano
- Pilatus, U. s. R. Schulz
- Pingoud, A., Zur Enzymologie der Endodesoxyribonuclease *EcoRI* 357\*
- Pingoud, A. and H.-P. Nasheuer, The influence of polyamines on the rate and accuracy of the *EcoRI*-catalysed cleavage of DNA 1194\*
- Pingoud, A. s. F.-U. Gast
- Piper, H.-M., I. Probst, R. Spahr, J. F. Hütter and P. G. Spieckermann, Interaction between the pathways of carbohydrate and fatty acid utilization in cultured adult heart cells 1194\*
- Piper, H. M., P. Schwartz, J. F. Hütter and P. G. Spieckermann, Morphological correlates of early energetic changes in anoxic myocardial cells 1195\*
- Piper, H. M. s. J. F. Hütter
- Piper, H. M. s. I. Probst
- Pless, T., G. Schäfer and K. Wielckens, Poly(ADP-ribosyl)-ation: A chromatin modification mechanism involved in DNA repair 1195\*
- Pluzhnikov, K. A., A. A. Karelin and V. I. Tsetlin, Synthesis of photoactivable derivatives of cobra venom neurotoxin II and their interaction with acetylcholine receptor 618\*
- Pluzhnikov, K. A. s. A. Surin
- Pluzhnikov, K. A. s. Yu. N. Utkin
- Pöschel, E., Ch. Sorbas, J. Böhm, B. Zeng and P. K. Müller, Regulation and genomic organization of a connective tissue protein 1196\*
- Pohlmann, R. s. A. Hasilik
- Polanowski, A. s. A. Szewczuk
- Polanowski, A. s. T. Wilusz
- Polster, J., Spektroskopische Analyse von Reaktions- und Titrationsystemen durch Mehrwellenlängenmessungen 358\*
- Ponstingl, H. s. B. E. Haley
- Ponta, H. s. G. Knedlitschek
- Ponta, H. s. B. Salmons

- Pontz, B.F. s. A. Albini  
 Praisler, R. s. E. Männlein  
 Prellwitz, W. s. O. Oster  
 Prengel, M. s. P. Schadewaldt  
 Presek, P. s. P. Fister  
 Preuß, W. s. H. Watzlawik  
 Prévost, J.-M. s. N. Van Tieghem  
 Priess, H. s. G.D. Li  
 Prigge, R., V. Maier, A. Greischel, B. Pfeifle and E.F. Pfeiffer, Comparison of the models of the isolated perfused jejunum and the "everted Sac of intestine" of the rat for endocrine studies 1196\*  
 Primbsch, I., O. Lehar, W. Voelter, H. Bauer und D. Baron, Isolierung und Lymphozytenstimulation von Thymuspeptiden 358\*  
 Prinz, H. s. A. Maelicke  
 Probst, H., H.-S. Jenke, T. Hofstaetter, P.R. Gentner und D. Müller-Scholz, Vollständig diskontinuierliches oder semidiskontinuierliches Kettenwachstum an der eukaryontischen Replikationsgabel? 359\*  
 Probst, H. s. I. Frenzel-Stötzer  
 Probst, H. s. V. Gekeler  
 Probst, H. s. R. Herzog  
 Probst, I. and K. Jungermann, The insulin/glucagon-antagonism under the influence of dexamethasone in the induction of phosphoenolpyruvate carboxykinase in rat hepatocyte culture 1196\*  
 Probst, I. and K. Jungermann, The glucagon-insulin antagonism and glucagon-dexamethasone synergism in the induction of phosphoenolpyruvate carboxykinase in cultured rat hepatocytes 1739  
 Probst, I., H.-M. Piper, P. Schwartz and P.G. Spieckermann, Serum-free culture of adult rat cardiac myocytes 486\*  
 Probst, I. s. H. M. Piper  
 Prosolova, T.K. s. N.M. Soldatov  
 Prusak, E. s. A. Szewczuk  
 Przybylski, M. s. W. Stock  
 Pürschel, S. s. W.G. Guder  
 Puschendorf, B. s. J. Leiter  
 Puschendorf, B. s. A. Loidl  
 Puschendorf, B. s. P. Loidl
- Quandt, L.A.** and W. Huth, Regulation of ketogenesis: Modulation of mitochondrial acetyl-CoA acetyltransferase activity by a reversible chemical modification with coenzyme A 1197\*  
 Quarcoo, E.T. s. J.T. Brosnan  
 Quenneville, A. s. G. Lemieux
- Rack, M.**, Chemical modification of the sea anemone toxin II from *Anemonia sulcata*: Synthesis of a phosphorescent derivative 618\*
- Rack, M., Membrane-bound carboxyl groups have an essential influence on the voltage-sensitivity of the sodium channel of nerve 1197\*  
 Racké, K. s. F.J. Spira  
 Radeck, W. s. P. Schadewaldt  
 Ragonese, P. s. R. Avola  
 Raha, S., W. Wesemann and T.P. McDonald, Study of megakaryocytic fractions isolated from bone marrow by density gradient centrifugation 1198\*  
 Ranscht, B. and D. Moss, Cytoskeleton-associated glycoproteins in differentiating neurons 1279\*  
 Rao, G.S. s. A. Alléra  
 Rapp, R. s. A. Deger  
 Rappold, W. and D. Riesner, Development and application of a fluorescence-detection system for the analytical ultracentrifuge 1263  
 Rasenack, J., J. Pausch and W. Gerok, Cytosolic carbamoyl-phosphate synthetase II and its regulation by UTP in isolated rat hepatocytes 1198\*  
 Rasenack, J. s. J. Pausch  
 Rask, L. s. D. Larhammar  
 Rathgeber, G. s. T. Nawroth  
 Rathgeber, G. s. H.-J. Schäfer  
 Rausch, U., R. Hertzsch, M.F.G. Schmidt and H.F. Kern, Studies on secretory glycoproteins in the rat exocrine pancreas. Acylation of membrane proteins 1199\*  
 Rauscher, E. s. E.O. Hägele  
 Rauterberg, J. s. T. Kerényi  
 Rauth, G. s. W. Müller-Esterl  
 Ravens, U., Neurotoxins as tools in cardiac contraction coupling 619\*  
 Reddington, M. and G.W. Kreutzberg, Interactions of adenine and guanine nucleotides with A<sub>1</sub>-adenosine receptors in rat brain 1279\*  
 Reddington, M. s. G.W. Kreutzberg  
 Rehm, H.A. and H. Betz, Specific cytotoxicity and binding of  $\beta$ -bungarotoxin in the chick central nervous system 625\*  
 Rehm, H.A. s. H. Betz  
 Reiber, H., Die Blut-Liquor-Schrankenfunktion als Grundlage für die klinisch-chemische Diagnostik der Erkrankungen des Zentralnervensystems 359\*  
 Reibnegger, G. s. H. Wachter  
 Reichel, R. and B.J. Benecke, Structure and transcription of snPI RNA genes 779\*  
 Reidl, H. and G. Drews, Photophosphorylation and reaction center bleaching in membranes isolated from cells of *Rhodospseudomonas capsulata* grown phototrophically under high-light or low-light irradiances 1199\*  
 Reiffen, K.A. and Fr. Schneider, Comparison of proliferation, macromolecular synthesis and energy metabolism of in vitro-grown Ehrlich Ascites tumor cells in the presence of glucosone, galactosone and methylglyoxal 1199\*  
 Reinauer, H. s. B. Dahlmann

- Reinauer, H. s. J. Eckel  
 Reinauer, H. s. L. Kuehn  
 Reinauer, H. s. P. Rösen  
 Reinhard, W. s. G. Indrayanto  
 Reisinger, P. s. W. Schartau  
 Reiter, R. und A. Wendel, Selen als Modulator des  
 Fremdstoffwechsels der Mäuseleber 359\*  
 Reitz, M. s. M. Geisert  
 Rempeters, G. s. G. Bobis  
 Renis, M. s. R. Avola  
 Renner, H. s. M. Höckel  
 Renner, R., Diabetes-Therapie mit tragbaren Insulin-  
 Infusions-Systemen 360\*  
 Resing, L. s. G. Cornelius  
 Resch, K. s. M. Brennecke  
 Resch, K. s. M. Goppelt  
 Resch, K. s. V. Kaever  
 Resch, K. s. M. Szamuel  
 Rett, K. s. M. Wicklmayr  
 Reuter, G. s. R. Schauer  
 Reuter, R. s. R. Lührmann  
 Reutter, W. s. R. Büchsel  
 Reutter, W. s. I. Schenck  
 Rey, M. s. W. A. Günzler  
 Rhode, U. s. G. Schwoch  
 Riccardi, C. s. G. Migliorati  
 Richter, D. s. R. Ivell  
 Richter, D. s. H. Schmale  
 Richter, H. s. A. Albini  
 Richter, H. s. H. Hörmann  
 Richter, H. s. Z. Markovic  
 Richter-Reichelm, H.-B. s. M. Emura  
 Riechmann, L. und V. Kasche, Sequence specificity in  
 proteinase-catalysed peptide semisynthesis – Does it  
 reflect the substrate specificity? 1200\*  
 Riedel, N., M. Bachmann und H. Fasold, Effect of  
 various nucleic acids on an ATPase on the inside of  
 rat liver nuclear membranes 1200\*  
 Riesner, D. s. B. Brosius  
 Riesner, D. s. M. Colpan  
 Riesner, D. s. L. Nagel  
 Riesner, D. s. W. Rappold  
 Riesner, D. s. J. Schumacher  
 Rietschel, E. Th. s. H. König  
 Rinke, J., J.P. Hendrick, C. Berg, A. Metspalu und  
 J.A. Steitz, Mammalian 5S RNA biogenesis studied  
 with antibodies from patients with autoimmune  
 disorders 784\*  
 Rinke, J. s. B. Appel  
 Rinke, J. s. R. Lührmann  
 Ritonja, A. s. W. Machleidt  
 Ritonja, A. s. V. Turk  
 Ritthaler, W., R. Sandulache, E. Kardas und D. Kamp,  
 Wirtsbereichskontrolle im Bakteriophagen P1 durch  
 invertierbare DNA 1201\*  
 Ritthaler, W. s. R. Schmucker  
 Robenek, H. s. R. Gebhardt  
 Robenek, H. s. G. Hillmann  
 Robenek, H. s. S. Tümmers  
 Robertson, J. M. s. R. Lill  
 Robertson, J. M. s. H. Paulsen  
 Rögner, M., P. Gräber, H. Tiedge, U. Lücken und J. Weber,  
 Substrate binding and subunit interactions at the  
 ATPase of the thermophilic bacterium PS3 1201\*  
 Röhm, K.-H., Enzymregulation durch Chlorid 360\*  
 Römer, R., C. Krauss, U. Schomburg und G. Maass,  
 Mobility of *E. coli* ssB protein on poly(dT). NMR  
 investigation of the interactions with oligo- and  
 polynucleotides 1263\*  
 Rösen, P., M. Adrian, B. Topütt, J. Feuerstein und N.  
 Berndt, Insulin-regulation of glycogen synthesis  
 studied in the isolated-perfused rat heart 1201\*  
 Rösen, P., J. Eckel und H. Reinauer, Influence of  
 bradykinin on glucose uptake and metabolism  
 studied in isolated cardiac myocytes and isolated  
 perfused rat hearts 1431  
 Rösen, P. s. N. Berndt  
 Rogan, A. M. s. W. R. Paukovits  
 Romero-Herrera, A. E., s. H. Dene  
 Rommelspacher, H. s. G. Brüning  
 Ronft, H. s. P. Heinrich  
 Rosenfeld, M. G. s. G. Kreibich  
 Rosengren, M. s. U. Fryksmark  
 Rosengren, M. s. M. Ohlsson  
 Rossmann, M. G., Structure-function relationships of  
 NAD-dependent dehydrogenases 193\*  
 Rotilio, G. s. B. Meier  
 Rotsch, M. s. W. Wesemann  
 Rudolph, A. s. P. Adamietz  
 Rudolph, R. und I. Fuchs, Influence of glutathione on  
 the reactivation of enzymes containing cysteine or  
 cystine 813  
 Rudolph, R., I. Fuchs und R. Jeanicke, Reassociation of  
 dimeric cytoplasmic malate dehydrogenase is deter-  
 mined by slow and very slow folding reactions  
 1264\*  
 Rudolph, R., G. Zettlmeißl, W. Teschner, G. Gäde und  
 R. Jaenicke, Folding of monomeric octopine dehydro-  
 genase from *Pecten jacobaeus* 1264\*  
 Rudolph, R. s. R. Girk  
 Rüegg, J. C. s. L. Merkel  
 Rühle, W., A. Schlimpen und A. Wild, The induction  
 kinetics of cytochrome f oxidation in intact leaves  
 on simultaneous excitation of photosystem I and  
 photosystem II 1202\*  
 Rüppel, D. s. H.-J. Galla  
 Rüppel, D. s. Y. H. Xü  
 Rueß, K.-P. s. P. Landauer  
 Rüterjans, H. s. H.-D. Franken  
 Ruh, C. s. M. G. Weller  
 Rupp, H., A. R. Bukhari, H.-R. Felbier und R. Jacob,  
 Einfluß von Training und Streß auf Blutdruck,

- kardiales Myosin-Isoenzymprofil und Catecholamin-umsetzende Enzyme der Ratte 361\*
- Rustenbeck, I. s. S. Lenzen  
Ruth, P. s. V. Flockerzi
- Sabatini, D.D.** s. G. Kreibich  
Sackmann, E. s. H.-J. Galla  
Sadikov, A.S. s. Sh. I. Salikhov  
Sadler, J.R. s. F. Buck  
Sänger, H.L. s. H.P. Mühlbach  
Sänger, H.L. s. M. Schnölzer  
Sänger, H.L. s. E. Spiesmacher  
Sänger, H.L. s. J. Schumacher  
Saenger, W. s. M.D. Walkinshaw  
Saheki, T., M. Sase and K. Nakano, Deviation of arginine metabolism in citrullinemia depending on the type of the enzyme abnormalities 1252\*
- Salcher, O. s. C. Lübbe  
Salden, M.H. s. W.J. Habets  
Salier, J.-P. s. G.J. Albrecht  
Salikhov, Sh. I., M.T. Adilbekov, T.L. Slavnova, M.S. Tashmukhamedov, J.A. Abdurakhmanova and A.S. Sadikov, Structural peculiarities and mechanism of action of presynaptic neurotoxins from venoms of *Latrodectus* and *Litefantus* spiders 619\*
- Salmons, B., B. Groner, N. Hynes, W.H. Günzburg and H. Ponta, A chimeric MMTV provirus containing the human activated c-Ha<sup>ras</sup> gene 1202\*
- Salmons, B. s. W.H. Günzburg  
Salvesen, G.S. s. G.D. Virca  
Salzer, M.J., G. Brune and H. Schimassek, Estimation of the topographic arrangement of peptide hormone receptors by application of resonance energy transfer technique with newly synthesized fluorescent growth hormone analogs 1203\*
- Salzer, M.J., G. Endraß, W. Eichler und H. Schimassek, Biologisch aktive, fluoreszierende Peptidhormonanaloga als Meßsonden zur topographischen Analyse von Zellmembran-Rezeptoren 361\*
- Sammeck, R. s. W. Gibb  
Sampson, S.R. s. G. Kessler-Ickson  
Sander, C. s. W. Kabsch  
Sander, C. s. M. Levitt  
Sandermann, H. s. B. König  
Sandermann, H. s. H.W. Krell  
Sandhoff, K. s. J. Burg  
Sandhoff, K. s. G. Weitz  
Sandulache, R. s. W. Ritthaler  
Saneto, R.P. s. J. de Vellis  
Santuci, R. s. B. Meier  
Sarem, F. s. J. Straczek  
Sase, M. s. T. Saheki  
Sasmor, H. s. F. Buck  
Sato, G.H., The role of serum in cell culture 469\*
- Sauer, G., W. Wille and W.E. Müller, Binding studies using the BZ<sub>1</sub> selective ligand propyl  $\beta$ -carboline-3-carboxylate in the brain of the lurcher mutant mouse suggest an uneven distribution of benzodiazepine receptor subclasses in the mouse cerebellum 1280\*
- Sauer, M. s. W.M. Kaiser  
Savettieri, G. s. A. Cestelli  
Savouret, J.F., N.L. Eberhardt, J.D. Baxter and G. Cathala, snRNAs of CV1 cells interact with the SV40 minichromosome 781\*
- Sawatzki, G., F. Hoffmann und B. Kubanek, Pathobiochemie des bakteriellen Infektes: Eisenstoffwechsel als Teil des unspezifischen Immunsystems 362\*
- Scarborough, G.A. s. J. Ahlers  
Schachner, E., H.-J. Aschhoff and H. Kersten, Queuine-deficiency and related alterations of lactate, lactate dehydrogenases and cytochrome b<sub>559</sub> in *Dictyostelin discoideum* 1204\*
- Schachner, M., Zellinteraktionen während der Entwicklung des Nervensystems – ein immunologischer Ansatz 362\*
- Schadewaldt, P., E. Lammers und W. Staib, The role of insulin and glucose in rat skeletal muscle pyruvate dehydrogenase activity 1204\*
- Schadewaldt, P., U. Münch, M. Prengel und W. Staib, Dichloroacetate induced changes of pyruvate flux in perfused rat skeletal muscle 1205\*
- Schadewaldt, P., W. Radeck und W. Staib, Branched chain amino acid metabolism in perfused rat hindlimbs 1205\*
- Schäfer, B. s. J. Krebs  
Schäfer, G., A new and extremely rapid inducer of a cytochrome P-450-dependent monooxygenase species in rat liver microsomes 303  
Schäfer, G. s. M. Lübben  
Schäfer, G. s. T. Pless  
Schäfer, H.-J., G. Rathgeber and K. Dose, Photoaffinity labeling of different nucleotide binding sites on F<sub>1</sub>ATPases 1206\*
- Schäfer, H.-J. s. T. Nawroth  
Schäfer, K.P., I. Gabaldon de Koch, H.-E. Wilk and C.C. Kuhn, Ribonucleoprotein complexes in resting and growing mammalian cells 781\*
- Schägger, H., G. von Jagow, U. Borchart and W. Machleidt, Amino-acid sequence of the smallest protein of the cytochrome c<sub>1</sub> subcomplex from beef heart mitochondria 307  
Schägger, H. s. W.D. Engel  
Schaich, E. s. E.O. Hägele  
Schaller, H.Ch., Structure and function of a new neuro-peptide, the head activator from hydra and mammals 1206\*
- Schapiro, R. s. W.G. Haser  
Scharf, H. s. D. Schulze  
Scharf, R. s. L. Moroder

- Scharnetzky, M. s. M. Lakomek
- Scharschmidt, M., G. Pfleiderer, H. Metz und W. Brümmer, Isolierung und Charakterisierung von Glycerin-Dehydrogenase aus *Bacillus megaterium* 911
- Schartau, W., F. Eyerle, P. Reisinger, H. Geisert, H. Storz and B. Linzen, Hemocyanins in spiders, XIX. Complete amino-acid sequence of subunit *d* from *Eurypelma californicum* hemocyanin, and comparison to chain *e* 1383
- Schartau, W. s. P. Heinrich
- Schartmann, B., H.-G. Gattner, W. Danho und H. Zahn, Erhöhte Insulinausbeuten durch „Recycling“ der nichtkombinierten Ketten 179
- Schatzmann, H. J., The role of the plasma membrane in maintaining low intracellular  $Ca^{2+}$  concentration 1207\*
- Schauer, R., Die Neuraminsäure, eine biologische Maske 362\*
- Schauer, R., G. Reuter, H. Mühlpfordt, A. F. B. Andrade and M. E. A. Pereira, The occurrence of *N*-acetyl- and *N*-glycolylneuraminic acid in *Trypanosoma cruzi* 1053
- Schauer, R. s. E. Müller
- Scheibe, R., Light modulation of NADP-dependent malate dehydrogenase is regulated by NADP 1207\*
- Scheidl, F. s. S. A. E. Finch
- Scheit, K. H. s. R. Theil
- Schenck, I., R. Tauber, V. Gross, R. Neumeier, P. C. Heinrich and W. Reutter, Biosynthesis of a 80-k-Da glycoprotein from rat liver plasma membrane 1208\*
- Schimassek, H. s. R. Corr
- Schimassek, H. s. W. Eichler
- Schimassek, H. s. F. U. Hartl
- Schimassek, H. s. A. Münch
- Schimassek, H. s. M. J. Salzer
- Schindler, H. s. F. Spillecke
- Schindler, J. s. H. Watzlawik
- Schirmer, R. H. and G. E. Schulz, Flavoproteins of known three-dimensional structure 195\*
- Schirrmacher, V., C. A. Waller and I. Vlodaysky, Interaction of metastatic and non-metastatic tumor lines with aortic endothelial cell monolayer and their underlying basal lamina 496\*
- Schläfer, S. A. C. and W. E. Müller, Drug binding to lysine-modified bovine serum albumin 1208\*
- Schlegel, W., Prostaglandine als chemische Wirkstoffe in der Reproduktionsphysiologie 363\*
- Schleifer, G. s. W. Schmitt
- Schlepper-Schäfer, J. s. N. Holl
- Schleyer, M. and W. Neupert, Import of ADP/ATP carrier into mitochondria analysis of individual steps of the import pathway in vitro 1208\*
- Schleyer, M., T. J. Trah, J. Kornhuber and K.-H. Voigt, The importance of the intramolecular disulfide bridges in porcine somatotropin for its biological activity 291
- Schlimme, E. s. K.-S. Boos
- Schlimme, E. s. E. Hagemeyer
- Schlimme, E. s. W. Michels
- Schlimpen, A. s. W. Rühle
- Schloßhauer, B., Wie entstehen Nervensysteme? Das optische System als Modell 363\*
- Schloßhauer, B. und U. Schwarz, Entwicklungsabhängige Proteinzusammensetzung von Nervenfasern 364\*
- Schlüter, M., K. Linder, R. Geyer, G. Hunsmann, J. Schneider and S. Stirm, Structure analysis of two C-terminal glycopeptides containing sequon 7 and 8 in glycoprotein 71 (gp71) of the Friend leukemia virus complex 1209\*
- Schmale, H. and D. Richter, Structural organization of the rat gene for the arginine vasopressin-neurophysin precursor 1209\*
- Schmid, F. X., The mechanism of folding of ribonuclease A. Slow refolding is a sequential reaction via structural intermediates 1265\*
- Schmid, F. X. s. H. Krebs
- Schmid, H., A. Mall and H. Bockhorn, Brush border membrane deterioration in proximal tubules – An indicator of impaired function of human allo-transplanted kidneys? 1210\*
- Schmid, H., A. Mall, H. Bockhorn und A. Bohle, Zelluläre Veränderung bei akuter Insuffizienz frisch transplan- tierter menschlicher Nieren 365\*
- Schmid, J., S. Kortenhaus, H. Diekmann und G. Auling, Veränderung der Membran von *Brevibacterium am- moniagenes* in Abhängigkeit von der Manganver- sorgung 1210\*
- Schmid, R. s. H. Watzlawik
- Schmid-Siegmann, E. und W. Voelter, Synthesepanung in der Peptidchemie durch elektronische Daten- Verarbeitung 365\*
- Schmidt, B. and W. Neupert, Biogenesis of mitochon- drial ATPase subunit in *Neurospora crassa* 1211\*
- Schmidt, F. H. s. I. V. Deaciuc
- Schmidt, H. s. D. Wöflle
- Schmidt, J. E. s. D. K. Hincha
- Schmidt, K.-H. s. G. Bruchelt
- Schmidt, M., T. Wirth, K. Glöggler, T. Baumruker und I. Horak, Isolierung und Charakterisierung einer neuen Familie mittelrepetitiver DNA der Maus mit strukturellen Eigenschaften retroviraler Long Terminal- Repeats 1211\*
- Schmidt, M. s. E. M. Giesen
- Schmidt, M. F. G. s. U. Rausch
- Schmidt, R. and E.-P. Baumgartner, Regional and sub- cellular localization of glycoproteins involved in behavioural plasticity in the brain of goldfish, toad and rat brain hippocampus and changes induced by learning 1280\*
- Schmidt, W. E., H.-D. Jung, W. Palm und N. Hilschmann, Beitrag zur dreidimensionalen Strukturaufklärung

- der Antikörper. Die Primärstruktur des kristallisierbaren monoklonalen Immunglobulins IgG1 Kol, I 713
- Schmidtmayer, J., Combined action on sodium inactivation of *Anemonia sulcata* toxin II and internal iodate or external glutaraldehyde 619\*
- Schmitt, J. M. s. D. K. Hincha
- Schmitt, J. M. s. M. J. Schramm
- Schmitt, W., G. Schleifer, H.-J. Horstmann and K. Knobloch, Characteristics and amino-acid composition of a *c*-type cytochrome in electron acceptor function during thiosulfate-linked photoautotrophic growth of *Rhodospseudomonas palustris* 647
- Schmucker, R., B. Stern, W. Ritthaler, R. Kahmann and D. Kamp, Untersuchungen zur Biochemie sequenzspezifischer Rekombinationsmechanismen 1211\*
- Schnackerz, K. D. s. M. W. Kilimann
- Schneider, Fr. s. W. Kördel
- Schneider, Fr. s. W. Kroll
- Schneider, Fr. s. W. Linker
- Schneider, Fr. s. K. A. Reiffen
- Schneider, H.-J., R. Drexel, G. Feldmaier, B. Linzen, F. Lottspeich and A. Henschen, Hemocyanins in spiders, XVIII. Complete amino-acid sequence of subunit *e* from *Eurypelma californicum* hemocyanin 1357
- Schneider, J. s. M. Schlüter
- Schnell, K. F. and E. Kaufmann, Characterization of the outward-facing anion-binding site of the anion transport system of human red cells 1212\*
- Schnölzer, M., B. Haas and H. L. Sängner, Correlation between structure and pathogenicity of various potato spindle tuber viroid isolates 1212\*
- Schnölzer, M. s. E. Spiesmacher
- Schollmeier, K. and W. Hillen, Control of expression of the TN10 encoded tetracycline resistance operon: Interaction of TET operon regulatory region 1213\*
- Scholz, R. s. K. Beckh
- Scholz, R. s. A. J. Schwab
- Schomburg, U. s. R. Römer
- Schön, I. s. L. Kisfaludy
- Schönberger, O. L. s. G. J. Albrecht
- Schönberger, O. L. s. K. Hochstraßer
- Schoner, W. s. G. Bobis
- Schoner, W. s. B. Mathes
- Schoner, W. s. S. Noda
- Schonhardt, T. s. B. König
- Schoolwerth, A. C. and K. F. LaNoue, Effects of 2-oxo-glutarate and glutamate on glutamine metabolism by rat kidney mitochondria 1246\*
- Schorer, R. s. A. R. Hernanto
- Schorn, T. s. W. G. Guder
- Schramm, M. J., F. P. Wolter, S. J. Coughlan and J. M. Schmitt, Fragmentation and aggregation of chloroplast coupling factor-ATPase CF<sub>1</sub> during freezing 1213\*
- Schriefers, H. s. E. Bergheim
- Schriefers, H. s. E. R. Lax
- Schröder, C. s. E. Müller
- Schröder, H. C., M. Bachmann, A. Bernd and W. E. G. Müller, A new model of nucleoside triphosphatase-mediated nucleocytoplasmic poly(A) (+)mRNA transport 1214\*
- Schröder, W. s. W. Stoffel
- Schröder-Lorenz, A. s. G. Cornelius
- Schröter, W. s. M. Lakomek
- Schubert, D. s. R. Passing
- Schubert, P. s. G. W. Kreutzberg
- Schudt, Ch. s. W. Bohnenkamp
- Schultz, G. s. E. Fiedler
- Schultz, G. s. D. Schulze
- Schultz, J. E. s. S. Klumpp
- Schulz, E. s. W. Wesemann
- Schulz, G. E. s. R. H. Schirmer
- Schulz, R. and U. Pilatus, <sup>31</sup>P-NMR studies of wild-type and circadian clock mutants of *Neurospora crassa* 1214\*
- Schulze, D., D. Heineke, H. Scharf and G. Schultz, Formation and regulation of pyruvate-derived amino acids in spinach chloroplasts 1215\*
- Schulz-Harder, B. s. T. Groß
- Schulz-Harder, B. s. E. Thüroff
- Schumacher, B. s. S. Matern
- Schumacher, J., H. L. Sängner and D. Riesner, Subcellular localization of viroids in highly purified plant nuclei 1215\*
- Schumann, J., Nucleotide binding to the membrane-bound chloroplast coupling factor (CF<sub>1</sub>) 1216\*
- Schuuring, E. s. A. J. Meijer
- Schwab, A. J., A. Bracht, F. M. Zwiebel, B. Müller und R. Scholz, Untersuchung der Gleichgewichtseinstellung cytosolischer Dehydrogenasen in der perfundierten Rattenleber durch Pulsmarkierung 1216\*
- Schwab, G. E. s. H. H. Dieter
- Schwab, K. and U. Heber, Drought tolerance and membrane stability of resurrection plants 1216\*
- Schwab, U. s. B. Havsteen
- Schwarm, H.-M., H. Vigneschow and K. Knobloch, Preparation of an enriched pyrophosphatase from *Rhodospseudomonas palustris* 1217\*
- Schwartz, A. C. s. J. Köhler
- Schwartz, J. s. E. M. Giesen
- Schwartz, P. s. H. H. Althaus
- Schwartz, P. s. H. M. Piper
- Schwartz, P. s. I. Probst
- Schwarz, U. s. B. Schloßhauer
- Schwenen, M. s. S. Hebisch
- Schwenk, M., Isolierte Darmmucosazellen vom Meerschweinchen: Vitalität, Transport, Fremdstoff-metabolismus 366\*



- Schwertner, E. s. V.K. Naithani
- Schwoch, G., S.M. Lohmann, U. Walter und U. Rhode, Immunchemische Bestimmung cAMP-abhängiger Proteinkinasen vom Typ I und Typ II in der Rattenparotis: Zelluläre Verteilung und unterschiedliche Regulation katalytischer und regulatorischer Untereinheiten beim Isoproterenol-induzierten Wachstum der Drüse 1217\*
- Scott-Burden, T., E. Murray, T. Diehl and W. Gevers, Glycosaminoglycan synthesis by smooth muscle cells cultured in the absence and presence of ascorbic acid 61
- Sebald, W., Biosynthesis of mitochondrial membrane proteins 1218\*
- Seeburg, P. s. W.A. Günzler
- Seeger, H., E. Hanke, A.H. Entenmann, A. Burghardt, T. Lippert und W. Voelter, Bestimmung des Relaxin-gehaltes von Milch, Placenta, Sperma und Schweineovarien durch Radioimmunoassay 366\*
- Seidl, M. and H. Hörmann, Affinity chromatography on immobilized fibrin monomer, IV. Two fibrin-binding peptides of a chymotryptic digest of human plasma fibronectin 83
- Seifert, T., P. Bartholmes und R. Jaenicke, Einfluß des Coenzyms Pyridoxal-5'-phosphat auf die reversible Druckdenaturierung der  $\beta_2$ -Untereinheit von Tryptophan-Synthase 1265\*
- Seipp, U. s. G. Loschen
- Seitz, H.-J. s. M.J. Müller
- Seitz, H.J. s. W. Sibrowski
- Seitz, H.J. s. W. Süßmuth
- Sensenbrenner, M. s. B. Pettmann
- Serrero-Davé, G., Study of a teratoma-derived adipogenic cell line 1246 and isolation of an insulin-independent variant in serum-free medium 488\*
- Servenius, B. s. D. Larhammar
- Shapiro, R. s. W.G. Haser
- Sharon, N. s. E. Müller
- Shepard, H.M. s. W.A. Günzler
- Sibrowski, W. and H.J. Seitz, Hormonal control of glucokinase synthesis in rat liver 1219\*
- Siebert, F. s. M. Engelhard
- Siede, H. and P.W. Jungblut, Unspecific alignment of the estradiol receptor with the Fc Fragment of goat and ovine immunoglobulins G 1219\*
- Siegers, C.-P. s. M. Younes
- Siegmund, B. and M.K. Grieshaber, Determination of *méso*-alanopine and D-strombine by high pressure liquid chromatography in extracts from marine invertebrates 807
- Siemion, I. Z. s. A. Szewczuk
- Siepl, C. s. H.H. Althaus
- Sierralta, W.D. and P.I. Szendro, Characterization of microsomal subfractions from porcine endometrium cells 1329
- Sierralta, W.D. and P.I. Szendro, Origin and quantification of cytoplasmic estradiol receptor in resting target cells 1497
- Sierralta, W.D. s. P.I. Szendro
- Sies, H., Oxygen radicals and hydrogen peroxide in mammalian organs 202\*
- Sies, H. and D. Häussinger, Simultaneous flux through glutaminase and glutamine synthetase in liver 1239\*
- Sies, H. s. E. Cadenas
- Sies, H. s. D. Crane
- Sies, H. s. D. Häussinger
- Siess, E.A., Influence of isolation media on the preservation of mitochondrial functions 279
- Siess, E.A., Different actions of mono- and disaccharides on rat liver mitochondria 835
- Silengo, L. s. M. Melli
- Simon, A. s. W. Bohnenkamp
- Simon, H. s. L. Angermaier
- Simon, W.A., T. Kronbach und W. Voelter, Einsatz isolierter Hepatozyten in der Arzneimittelentwicklung als Modellsystem für die In-vivo-Biotransformation am Beispiel *N*-akylsubstituierter 4,4-Diphenylpiperidine 367\*
- Simon, W.A. s. K. Zech
- Simon, W.E., F. Hölzel und M. Albrecht, Hormonal requirements of in vitro growth in human mammary and ovarian carcinoma cell cultures 477\*
- Skroch, P. s. G. Knedlitschek
- Slappendel, S. s. J.F.G. Vliegenthart
- Slavnova, T.L. s. Sh. I. Salikhov
- Sletten, K. and J. Kolberg, The primary structure of the  $\alpha$  chain of a mitogenic lectin from the seeds of *Lathyrus sativus* 1047
- Sletten, K., G. Marhaug und G. Husby, The covalent structure of amyloid-related serum protein SAA from two patients with inflammatory disease 1039
- Sletten, K. s. J. Kolberg
- Smith, E.M. s. M. Watford
- Smith, R.J. and R.P. Durchschlag, Control of glutamine metabolism in a cultured skeletal muscle cell line 1244\*
- Snodgrass, P.J. and P. Lund, The kinetics of phosphate-activated glutaminase of human liver mitochondria 1253\*
- Sobczyk, K. s. A. Szewczuk
- Soboll, S., M. Keim und D. Häussinger, Subcellular destruction of glutamine in liver 1242\*
- Soboll, S. s. S. Hebisch
- Söderberg, K. s. H.G. Burgert
- Söling, H.-D. s. I. Brand
- Söling, H.-D. s. G. Mieskes
- Söll, D. s. T. Dingermann
- Soldatov, N.M., T.K. Prosoлова, V.A. Kovalenko, A.G. Petrenko, E.V. Grishin und Yu. A. Ovchinnikov,

- Identification of sodium channel components interacting with neurotoxins 620\*
- Sonne, O., S. Linde, T. R. Larsen, J. Gliemann and L. Larsø, Monoiodoinsulin labelled in tyrosine residue 16 or 26 of the B-chain or 19 of the A-chain. II. Characterization of the kinetic binding constants and determination of the biological potency 101
- Sorbas, Ch. s. E. Pöschel
- Sorg, C. s. G. Hillmann
- Southan, C. s. A. Henschen
- Spahr, R. s. H. M. Piper
- Spieckermann, P. G. s. J. F. Hütter
- Spieckermann, P. G. s. H. M. Piper
- Spieckermann, P. G. s. I. Probst
- Spillecke, F., H. Schindler and E. Neumann, The acetylcholine receptor: Double-channel noncovalent interactions and a possible role for the  $\delta$ - $\delta$ -disulfide bridge 1220\*
- Spira, F. J., K. Racké and E. Muscholl, Blockade by gadolinium ions of exocytotic release of intravesicular components during tissue homogenization 1272\*
- Spira, T. J. s. H. Wachter
- Spiesmacher, E., H.-P. Mühlbach, M. Schnölzer and H. L. Sänger, Intermediates of viroid replication are present in nuclei isolated from PSTV-infected potato cells 1219\*
- Spieß, E. s. A. Alonso
- Sri-Widada, J., C. Brunel, J.-P. Liautard and Ph. Jeanteur, Interaction of snRNAs with rapidly sedimenting subnuclear structures (hnRNP) 782\*
- Stadler, H. s. P. Harlos
- Staib, W. s. P. Schadewaldt
- Stammel, W., H. Thomas and J. Vesper, Trennung von Dopamin und Tetrahydroisochinolininen durch Reversed-Phase- und Kationenaustausch-Chromatographie 1220\*
- Steckel, F., A. Hasilik and K. von Figura, Stabilization of arylsulfatase A in juvenile and adult metachromatic leukodystrophy fibroblasts 1221\*
- Steckel, F. s. A. Hasilik
- Steffan, A. s. E. M. Giesen
- Steffens, G.-J., J. V. Bannister, W. H. Bannister, L. Flohé, W. A. Günzler, S.-M. A. Kim and F. Ötting, The primary structure of Cu-Zn superoxide dismutase from *Photobacterium leiognathi*: Evidence for a separate evolution of Cu-Zn superoxide dismutase in bacteria 675
- Steffens, G. J. s. L. Flohé
- Steffens, G. J. s. W. A. Günzler
- Stehle, P. s. I. Amberger
- Stein, T. s. R. Keller
- Steinbuch, M. s. L. Péjaudier
- Steitz, J. A. s. J. Rinke
- Stengelin, S., L. Béress, L. Lauffer and F. Hucho, Palytoxin, a cation-ionophor? 620\*
- Stephani, U., A. Sutter and A. Zimmermann,  $\beta$  Nerve growth factor determination in serum 1281\*
- Stern, B. s. R. Schmucker
- Stern, P. s. M. Levitt
- St. Fuchs und K. Stocker, Charakterisierung und therapeutische Anwendung von Defibrase (Batroxobin) 331\*
- Stier, A. s. S. A. E. Finch
- Stier, A. s. S. Greinert
- Stieve, H. s. K. Baer
- Still, J. s. B. Meßner
- Stirm, S. s. M. Schlüter
- Stitt, M., H. W. Heldt, C. Cseke und B. Buchanan, Zur Regulation der photosynthetischen Saccharose-Bildung durch Fructose-2,6-bisphosphat, II. Koordination von Angebot und Nachfrage 1221\*
- Stitt, M. s. R. Gerhardt
- Stitt, M. s. B. Herzog
- Stock, W., K. P. Voges, G. Jung, M. Przybylski und W. Voelter, Neue Kernresonanz- und Massenspektroskopie-Techniken zur Strukturuntersuchung von Flavonoiden 367\*
- Stocker, K. s. St. Fuchs
- Stockhausen, E. s. E. Männlein
- Stötzer, K. E. s. I. Frenzel-Stötzer
- Stoffel, W., C. Bode and K. Knyrim, Serum apolipoprotein A1 synthesis in rat hepatocytes and its secretion as proform 439
- Stoffel, W., H. Hillen, W. Schröder and R. Deutzmann, The primary structure of bovine brain myelin lipophilin (proteolipid apoprotein) 1455
- Stoffel, W., K. Knyrim and C. Bode, A serum proteinase converts proapolipoprotein A I secreted by rat hepatocytes to the mature apolipoprotein 1631
- Stoffel, W., E. Krüger and R. Deutzmann, Cell-free translation of human liver apolipoprotein A1 and AII mRNA. Processing of primary translation products 227
- Stolze, B. s. J. Beckmann
- Storz, H. s. W. Schartau
- Stournaras, C. s. H. Faulstich
- Straczek, J., F. Sarem and P. Nabet, Effect of partially purified preparations of human somatomedin A in three cultured cell systems 478\*
- Stroh, A. s. B. Kadenbach
- Stropp, U. s. I. Frenzel-Stötzer
- Struck, M. s. C. Dobrinski
- Stuhlfauth, I. and H. Jockusch, A mutation in the mouse that causes a reduction of parvalbumin content in muscle 1221\*
- Stuhlsatz, H. W. s. R. Keller
- Sturm, G. s. W. Wesemann
- Süßmuth, W., W. Höppner and H. J. Seitz, Interaction of adrenalin and thyroid hormones in the induction of hepatic phosphoenolpyruvate carboxykinase 1222\*

- Sumbilla, C.M. s. H.R. Zielke
- Sun, I.L. s. F.L. Crane
- Surek, B. and E. Latzko, Chloroplast rebusose 5-phosphate kinase: Immunological studies on membrane association 1222\*
- Surin, A., Yu. N. Utkin, K. A. Pluzhnikov and V. I. Tsetlin, Fluorescence and circular dichroism studies on snake venom neurotoxins and their derivatives 621\*
- Suter, F. s. P. Füglistaller
- Suter, F. s. R. Theiler
- Suter, F. s. B. Wirz
- Sutter, A. and A. Zimmermann, Identification of subclasses of sensory ganglia cells by monoclonal antibodies 1271\*
- Sutter, A. s. F. Boegner
- Sutter, A. s. U. Stephani
- Sutter, A. s. A. Zimmermann
- Szamel, M., V. Kaefer and K. Resch, Characterization of the polypeptide pattern of lymphocyte plasma membrane domains 1223\*
- Szende, B. s. L. Kisfaludy
- Szendro, P.I., W.D. Sierralta and P.W. Jungblut, Structural assignment and extractability of microsomal estradiol receptors 1337
- Szendro, P.I. s. N. Hekim
- Szendro, P.I. s. W.D. Sierralta
- Szewczuk, A., E. Kurowska, E. Prusak, T. Wilusz, A. Polanowski, J. Otlewski, K. Sobczyk and I. Z. Siemion, Structural differences between trypsin inhibitors isolated from Cucurbitaceae family seeds: immunological, NMR and CD studies 941
- Szinicz, L. s. E. Haen
- Szponry, L. s. L. Kisfaludy
- Tager, J.M.** s. A.J. Meijer
- Taniguchi, H. s. R. Greinert
- Tashmukhamedov, B. A., P. B. Usmanov, I. Kazakov and D. Kalikulov, Effects of different spider venoms on artificial and biological membranes 621\*
- Tashmukhamedov, M.S. s. Sh. I. Salikhov
- Tatemoto, K. s. L. Moroder
- Tauber, R. s. I. Schenck
- Teetz, V. s. R. Geiger
- Tegner, H. s. U. Fryksmark
- Tegner, H. s. M. Ohlsson
- Teschner, W. s. R. Rudolph
- Tesseraux, I., J. B. Harris and S. C. Watkins, Physiological and morphological effects of palytoxin (*Palythoa caribaeorum*) on skeletal muscle 621\*
- Thamm, P. s. L. Moroder
- Theil, R. and K. H. Scheit, Purification and spectral characterization of seminalplasmin, an antimicrobial protein from bull semen 1003
- Theiler, R., F. Suter and H. Zuber, N-Terminal sequences of subunits L and M of the photosynthetic reaction centre from *Rhodospirillum rubrum* G-9<sup>+</sup>. Separation of the subunits by gel filtration on hydroxypropylated Sephadex G-100 in organic solvents 1765
- Theissen, H. s. B. Appel
- Theissen, H.-J. s. G. Harisch
- Thelen, M., R. P. Casey und A. Azzi, Vergleichende Studie über die Funktion der Cytochrom-c-Bindungsstellen an der Cytochrom-c-Oxidase 367\*
- Themann, H. s. G. Hillmann
- Thiele, H.-G. s. A. Hamann
- Thiele, O. W. s. J. Oulevey
- Thinnes, F. P., N. Hilschmann, H. Kayser and H. Götz, Ist das HLA-DR-assoziierte Glycoprotein p31 ein ubiquitäres Molekül? 1805
- Thinnes, F. P. s. H. Götz
- Thinnes, F. P. s. H. Kratzin
- Thoenke, F., G. Huether, R. Kaus and V. Neuhoff, Altered concentrations of serotonin and dopamine in the forebrain of rats bred for three successive generations on a tryptophan-enriched diet 1282\*
- Thoenke, F., G. Huether, R. Kaus and V. Neuhoff, Breeding rats on different amino acid-imbalanced diets for three successive generations alters the concentrations of amino acid neurotransmitters in brain stem 1282\*
- Thomas, H. s. W. Stammel
- Thomas, H. s. J. Vesper
- Thomas, J. O., Chromatin structure and superstructure 1266
- Thüroff, E. and B. Schulz-Harder, Inhibition of nuclear ribonuclease activity during in vitro transcription by cadmium 1223\*
- Thurman, R. G. and T. Matsumura, New methods to measure rates of metabolic processes in different regions of the liver lobule 1224\*
- Thuy, M. and G. Wegener, Anoxieffekte im Energiestoffwechsel des Grasfrosches 1224\*
- Tiedge, H. s. M. Rögner
- Tikhomirova, O. B. s. E. A. Yelin
- Tildon, J. T. s. H. R. Zielke
- Tillmann, W. s. M. Lakomek
- Tittgen, J. s. R. G. Herrmann
- Tixier-Vidal, A., N. Brunet, D. Barritault and D. Gourdj, Role of cell-substrate interactions on the hormonal control of rat prolactin cells 491\*
- Tixier-Vidal, A. s. M. Binoux
- Topf, B. s. P. Rösen
- Townshend, G. S. s. F. J. Joubert
- Torgov, I. V. s. E. A. Yelin
- Trah, T. J. s. M. Schleyer
- Tramontano, D., R. Picone and F. S. Ambesi-Impimbato, Control of thyroid differentiated functions and of the normal karyotype in the epithelial cell strain FRTL 471\*

- Tratschin, J.D., B. Wirz, G. Frank and H. Zuber, Structure and function of L-lactate dehydrogenases from thermophilic and mesophilic bacteria. II. The primary structure of thermophilic lactate dehydrogenase from *Bacillus stearothermophilus*. Cyanogen bromide fragments and partial sequence 879
- Traub, P. and W.J. Nelson, The interaction in vitro of the intermediate filament protein vimentin with synthetic polyribo- and poly-deoxyribonucleotides 575
- Trautmann, F. s. M. Bachmann
- Travis, J. s. G.D. Virca
- Tripodi, M. s. M. Mellì
- Tropschug, M. and G. Vogel, Plasma membrane analysis of phagocytosis mutants of *Dictyostelium discoideum* 1225\*
- Tschank, G., Butyrate-induced growth arrest of GH<sub>3</sub>-cells is not linked to a distinct morphological phenotype 473\*
- Tschesche, H. s. U.C. v. Clausbruch
- Tschesche, H. s. J. Fedrowitz
- Tschesche, H. s. U. Lüpke
- Tschesche, H. s. H.R. Wenzel
- Tsetlin, V.I. s. K. A. Pluzhnikov
- Tsetlin, V.I. s. A. Surin
- Tsetlin, V.I. s. Yu. N. Utkin
- Tsuji, T. s. Y. Konami
- Tümmers, S., M. Zühlendorf, H. Robenek, A. Hasilik and K. von Figura, Molecular forms of cathepsin D in coated vesicle preparations 1287
- Tümmers, S. s. A. Hasilik
- Turk, V., J. Brzin, M. Longer, A. Ritonja, M. Eropkin, U. Borchart and W. Machleidt, Protein inhibitors of cysteine proteinases. III. Amino-acid sequence of cystatin from chicken egg white 1487
- Turk, V. s. J. Brzin
- Turk, V. s. W. Machleidt
- Twilfer, H. s. K. Gersonde
- Ulbricht, W.**, Kinetics of neurotoxin action at the nodal membrane 622\*
- Ullrich, V. s. E. Cadenas
- Ullrich, V. s. H. Graf
- Ullu, E. s. M. Mellì
- Ulrich, G. s. P. Basset
- Ungibauer, M., H.-Ch. Kirch and B. Kadenbach, N-terminal amino acid sequence and amino acid composition of cytochrome c oxidase polypeptides from different pig tissues 1225\*
- Usmanov, P. B. s. B. A. Tashmukhamedov
- Utkin, Yu.N., K. A. Pluzhnikov and V.I. Tsetlin, Selective chemical labelling of postsynaptic neurotoxins from cobra venom 622\*
- Utkin, Yu.N. s. A. Surin
- Vainchenker, W. s. G. Vinci**
- Van Tieghem, N., J.-M. Prévost, M. Fooij, P.-E. Henry and F. Legros, Do cultured human melanoma cells secrete  $\alpha$ -melanotropin-like molecules? 479\*
- Vehar, G. s. W. A. Günzler
- Veldink, G. A. s. J. F. G. Vliegthart
- Vellis, de J., R. S. Morrison and R. P. Saneto, Proliferation and differentiation of astrocytes and oligodendrocytes in chemically defined media 492\*
- Venrooij, van W. J., J. den Brok and W. J. Habets, The cellular localization of the SS-B antigen 783\*
- Venrooij, W. J. van s. W. J. Habets
- Vercueil, L. s. W. H. Günzburg
- Verdenhalven, J. and M. Ebeling, Effects of kinases and phosphatases on acetylcholine receptor from torpedo electric tissue 1283\*
- Vergin, H., Enzyminhibitoren als Chemotherapeutika 368\*
- Verhoeven, A. J., J. F. van Iwaarden, S. K. Joseph and A. J. Meijer, Control of rat-liver glutaminase by ammonia and pH 1239\*
- Verhoeven, A. J. s. A. J. Meijer
- Vertesy, L. s. H. Aschauer
- Veser, J. and H. Thomas, Isolation of the smaller form of two catechol-O-methylating activities from rat liver 1225\*
- Veser, J. s. W. Stammel
- Vienken, J. s. T. Nawroth
- Vietor, K. s. J. Bentgens
- Vigenschow, H. s. H.-M. Schwarm
- Villringer, A. s. P. C. Heinrich
- Vinay, P., N. Khoury, N. Duong and A. Gougoux, In vivo study of renal mitochondrial permeability to glutamine in the rat 1248\*
- Vinay, P. s. A. Gougoux
- Vinay, P. s. M. L. Halperin
- Vinci, G., N. Casadevall, C. Lacombe, W. Vainchenker and J. Chapman, Replacement of serum in culture of human erythroid and megakaryocytic progenitors 486\*
- Virca, G. D., G. S. Salvesen and J. Travis, Human neutrophil elastase and cathepsin G cleavage sites in the bait region of  $\alpha_2$ -macroglobulin. Proposed structural limits of the bait region 1297
- Vitale, F. s. A. Cestelli
- Vliegthart, J. F. G., G. A. Veldink and S. Slappendel, Lipoxygenases 199\*
- Vlodavsky, I. s. V. Schirmmacher
- Voegeli, R. s. G. Gundlach
- Voelter, W. s. N. Afza
- Voelter, W. s. V. U. Ahmad
- Voelter, W. s. A. Altenburg
- Voelter, W. s. H. Bauer
- Voelter, W. s. G. Bruchelt
- Voelter, W. s. A. Burgardt
- Voelter, W. s. M. Digel

- Voelter, W. s. H. Echner  
 Voelter, W. s. A.H. Entenmann  
 Voelter, W. s. D. Handschuh  
 Voelter, W. s. G. Harsch  
 Voelter, W. s. W. Heinzel  
 Voelter, W. s. G. Indrayanto  
 Voelter, W. s. G. Krein  
 Voelter, W. s. T. Kronbach  
 Voelter, W. s. J. Lücke  
 Voelter, W. s. A. Malik  
 Voelter, W. s. J. Müller  
 Voelter, W. s. I. Primsch  
 Voelter, W. s. E. Schmid-Siegmann  
 Voelter, W. s. H. Seeger  
 Voelter, W. s. W.A. Simon  
 Voelter, W. s. W. Stock  
 Voelter, W. s. H. Watzlawik  
 Voelter, W. s. H. Wollmann  
 Vogel, G. s. M. Tropschug  
 Voges, K.P. s. W. Stock  
 Voigt, K.-H. s. M. Schleyer  
 Vollenberg, W. s. G. Loschen  
 Vollmer, G., Entwicklung, Aussortierung und Differenzierung in Aggregaten aus Einzelzellen embryonaler Hühnerretina 368\*
- Voß, B. s. G. Hillmann  
 Voss, B. s. T. Kerényi
- Walsh, C.T., B. Branchard, B. Fox and J. Latham, Mechanistic studies on flavoenzymes: Pharmacological and toxicological aspects 196\*
- Walter, J. and W. Bode, The X-ray crystal structure analysis of the refined complex formed by bovine trypsin and *p*-amininophenylpyruvate at 1.4 Å resolution 949
- Walter, U. s. G. Schwoch  
 Walum, E. s. A. L. Peterson  
 Walz, D.A. s. H. Dene  
 Wanger, M. und A. Wegner, Gleichgewicht des Austausches von ADP und ATP an G-Aktin unter physiologischen Salzbedingungen 1226\*
- Wannenwetsch, E., K. Buchner und D.G. Weiss, Anterograder und retrograder Transport von freiem [<sup>3</sup>H]-Leucin entlang des Nervus olfactorius 1283\*
- Ward, C. s. W.A. Günzler  
 Wasserman, L. s. G. Kessler-Icekson  
 Wasteson, Å. s. C. Betsholtz  
 Watford, M. and E.M. Smith, Glutamine metabolism in the streptozotocin-diabetic rat 1252\*
- Watkins, S.C. s. I. Tesseraux  
 Watt, D.D. s. H. Meves  
 Watzlawik, H., F. Hill, J. Schindler, R. Schmid, R. Wagner, W. Preuß, W. Fuchs und W. Voelter, Mikrobielle bzw. chemische Partialsynthese von Prednisolonon über 20-Carboxy-1,4-pregnen-3-on 368\*
- Weber, G., Molecular targets of anti-glutamine treatment with acvicin in cancer cells 1254\*
- Weber, H. s. W.M. Kaiser  
 Weber, J. s. M. Lübben  
 Weber, J. s. M. Rögner  
 Weber, K. s. G. Hiller  
 Weber, M. s. E. Hartmann  
 Weber, U. s. A. Deger  
 Weber, U. s. K.-N. Klotz  
 Weber, U. s. R. Koch  
 Weber, U. s. G. Müller  
 Weber, W. s. R. Keller  
 Wegner, A. and G. Isenberg, Twelve-fold difference between the critical monomer concentrations of the two ends of actin filaments in physiological salt conditions 1227\*
- Wegner, A. s. T. Keiser  
 Wegner, A. s. M. Wanger  
 Wegener, G. s. S. Kieffer  
 Wegener, G. s. U. Knollmann  
 Wegener, G. s. M. Thuy  
 Weibel, M. s. B. Pettmann  
 Weichert, K. s. J. Dietl  
 Weinstein, R. s. T. Maciag  
 Weiss, D.G. s. K. Buchner  
 Weiss, D.G. s. G. Hawlitschek  
 Weiss, D.G. s. E. Lohmaier  
 Weiss, D.G. s. E. Wannenwetsch
- Wachter, E. s. K. Hochstraßer  
 Wachter, H., D. Fuchs, A. Hausen, C. Huber, O. Knosp, G. Reibnegger and T.J. Spira, Elevated urinary neopterin levels in patients with the Acquired Immuno-deficiency Syndrome (AIDS) – A preliminary report 1345
- Wachter, M. s. V. Eschenfelder  
 Waehndt, T.V. s. M.-L. Kiene  
 Wagemaker, G. s. S. Merchav  
 Wägle, S.R. s. W. Fischer  
 Wagner, G., Influence of aflatoxin B<sub>1</sub> on rat liver GSH transferase activity 1226\*
- Wagner, G.C., Bacterial cytochrome P-450 monooxygenases 200\*
- Wagner, K.G. s. S. Heim  
 Wagner, R. s. J. Oulevey  
 Wagner, R. s. H. Watzlawik  
 Wagner, W. s. M. Höckel  
 Wahlefeld, A.W. s. E.H. Hägele  
 Waldner-Sander, S., B. Keller, E. Keller und F. Lingens, Zur Biosynthese von Phenylalanin und Tyrosin bei Flavobakterien 1467
- Walkinshaw, M.D., W. Saenger and A. Maelicke, Snake neurotoxins: Three-dimensional structure suggests functional mechanism 623\*
- Waller, C.A. s. V. Schirmmacher  
 Wallmann, T. s. G. Mieskes

- Weiss, V. and J. Engel, Heparin-stimulated modification of CI-inhibitor by subcomponent CIs of human complement 295
- Weitz, G., T. Lindl, U. Hinrichs and K. Sandhoff, Release of sphingomyelin phosphodiesterase (acid sphingomyelinase) by ammonium chloride from CL 1D mouse L-cells and human fibroblasts. Partial purification and characterization of the exported enzymes 863
- Weitzel, G. s. W. Eichler
- Welbourne, T.C., Renal glutamine metabolism and hydrogen carbonate generation 1249\*
- Welbourne, T.C. and P. Norwood, Renal mitochondrial enlargement in metabolic acidosis 1227\*
- Weller, M.G., U. Weser und C. Ruh, Modellkomplexe für das aktive Zentrum in Nicht-Häm-Eisen-Dioxygenasen 369\*
- Weller, M.G. s. M. Linß
- Welsch, C. s. E.M. Giesen
- Wendel, A., Radikalintermediate als Ursache akut toxischer Leberzell-Läsionen 369\*
- Wendel, A. s. G. Blaich
- Wendel, A. s. S. Feuerstein
- Wendel, A. s. A. Grossmann
- Wendel, A. s. R. Reiter
- Wendlberger, G. s. L. Moroder
- Wenzel, H.R., E. von Goldammer and H. Tschesche, Spin-labelling as a tool to study regulation of proteolytic activities 1228\*
- Werdan, K. s. G. Bauriedel
- Wernet, P. s. H. Götz
- Wernet, P. s. H. Kratzin
- Wesemann, W., M. Rotsch, E. Schulz and G. Sturm, Factors modulating serotonin binding in the central nervous system 1273\*
- Wesemann, W. s. D. Hoffmann
- Wesemann, W. s. S. Raha
- Weser, U., S. Brütsch and H.-J. Hartmann, Cu-Thionein: Molekulare Aspekte des Cu-Einbaus in Apo-Plastocyanin 370\*
- Weser, U. s. M. Linß
- Weser, U. s. M.G. Weller
- Weser, U. s. A. Gärtner
- Westermark, B. s. C. Betsholtz
- Westhoff, P. s. R.G. Herrmann
- Westin, G. s. H.-J. Monstein
- Weström, B.R., B.W. Karlsson and K. Ohlsson, Immuno-cross-reactivity between  $\alpha$ -macroglobulins from pig, dog, rat and man including human pregnancy associated  $\alpha_2$ -glycoprotein 375
- Wettern, M., Abbau von Proteinen aus Thylakoidmembranen von *Chlamydomonas reinhardi Y-1* in vivo und in vitro 1228\*
- Weyman, C. s. J. Farrant
- Wicklmayr, M., G. Dietze, H. Brunnbauer, K. Rett and H. Mehnert, Dose-dependent effect of bradykinin on muscular blood flow and glucose uptake in man 831
- Wieczorek, A.J., Serum RNA-proteoglycolipid particles in neoplasia, a celltransforming agent 1229\*
- Wieczorek, M. s. T. Wilusz
- Wielckens, K. s. T. Pless
- Wieneke, H.-J., W. Danho, E.E. Bülesbach, H.-G. Gattner and H. Zahn, The synthesis of [A19-3-iodotyrosine]- and [A19-3,5-diodotyrosine]insulin (porcine) 537
- Wieser, R., Growth regulation by imitating the contact environment 490\*
- Wiesmüller, K.-H., W. Bessler and G. Jung, Synthesis of the mitogenic S-[2,3-bis(palmitoyloxy)propyl]-N-palmitoylpentapeptide from *Escherichia coli* lipoprotein 593
- Wiesner, H. s. W. Oberthür
- Wikström, H. s. G. Norrgren
- Wild, A., A.E. Nies and J. Ewen, Correlative analysis of the photosynthetic capacity and different components of the photosynthetic apparatus 1229\*
- Wild, A. and R. Zerbe, Comparison of the effects of indole-3-acetic acid (IAA) and kinetin on the photosynthetic apparatus and on the cell metabolism 1230\*
- Wild, A. s. W. Rühle
- Wild, A. s. C. Wilhelm
- Wildenauer, D.B., Synthesis of neuroleptics with reactive groups for studies of binding sites by covalent labelling 1273\*
- Wilhelm, C. and A. Wild, The regulation of the photosynthetic unit size by different environmental factors during growth in *Chlorella fusca* 1230\*
- Wilk, H.-E. s. K.P. Schäfer
- Wille, W. s. G. Sauer
- Wilsmann, K. s. G. Loschen
- Wilson, P.D. s. M.F. Horster
- Wilusz, T., M. Wieczorek, A. Polanowski, A. Denton, J. Cook and M. Laskowski, Jr., Amino acid sequence of two trypsin isoinhibitors, ITD I and ITD III from squash seeds (*Cucurbita maxima*) 93
- Wilusz, T. s. A. Szwczuk
- Windmueller, H.G., Metabolism of vascular and luminal glutamine by intestinal mucosal cells in vivo 1245\*
- Winkler, H. s. M. Lakomek
- Winkler, M. s. W.A. Günzler
- Winter, B., H. Klaphthor and H.H. Arnold, Organization and expression of the gene coding for the cardiac myosin light chain MLC-2A in chicken 1231\*
- Winter, K. s. B. Demming
- Winter, W. s. V.U. Ahmad
- Wintermeyer, W. s. R. Lill
- Wintermeyer, W. s. H. Paulsen
- Wirth, T. s. M. Schmidt
- Wirthensohn, G., S. Lefrank and W.G. Guder, Effect of hormones on renal phospholipid metabolism in vitro 1231\*

- Wirthensohn, G. s. W.G. Guder  
 Wirthensohn, K., H. Hirsch and P. Eggl, Catecholamine action on phospholipid metabolism of human fibroblasts 1232\*
- Wirz, B., F. Suter and H. Zuber, Structure and function of L-lactate dehydrogenases from thermophilic and mesophilic bacteria. III. The primary structure of thermophilic lactate dehydrogenase from *Bacillus stearothermophilus*. Hydroxylamine-, *o*-iodosobenzoic acid- and tryptic fragments. The complete amino-acid sequence 893
- Wirz, B. s. J.D. Tratschin  
 Wissler, J.H. s. M. Höckel  
 Witter, B., M. Fissenwert, J. Gunawan und H. Debuch, Lipiduntersuchungen an Gliazell-Primärkulturen 1284\*
- Wittmann-Liebold, B. s. R.M. Kamp  
 Wlaschek, M. s. A. Awgulewitsch  
 Wölfle, D., H. Schmidt and K. Jungermann, Short-term modulation of glycogenolysis, glycolysis and gluconeogenesis in cultured hepatocytes by arterial and venous oxygen 487\*
- Wolf, D.H. s. T. Achstetter  
 Wolf, D.H. s. O. Emter  
 Wollmann, G. s. A.R. Hernanto  
 Wollmann, H., H. Bauer, W. Voelter und T.H. Lippert, Der Einfluß von Insektiziden auf den Hormonstoffwechsel 370\*
- Wolter, F.P. s. M.J. Schramm  
 Wrenger, M. s. J. Oulevey  
 Wright, P.G. s. W. Oberthür  
 Wünsch, E. s. L. Moroder  
 Wünsch, W. s. H. Kalbacher
- Xü, Y.H., D. Rüppel, W. Hartmann and H.-J. Galla, Protein-katalysierter Phospholipidaustausch zwischen Lipidvesikeln 1232\*
- Yamamoto, K. s. Y. Konami  
 Yang, C.Y. s. H. Götz  
 Yang, C.Y. s. H. Kratzin  
 Yao, Z.-J. s. R.M. Kamp  
 Yasin, R. and G. van Beers, Growth and differentiation of human adult and fetal muscle cells in serum-free medium 490\*
- Yelin, E.A., V.N. Leonov, O.B. Tikhomirova and I.V. Torgov, Synthesis of steroid alkaloids active to sodium channel 623\*
- Yoles, E. s. G. Kessler-Ickeson  
 Yoshimoto, T. s. E. Heymann  
 Younes, M., M. Albrecht und C.-P. Siegers, Zusammenhang zwischen Lipidperoxidation, Freisetzung lysosomaler Enzyme, Verlust mikrosomaler Ca<sup>2+</sup>-Transportaktivität und Leberzellschädigung 370\*
- Zabel, M. s. E. Bergheim  
 Zabielski, J. s. H.-J. Monstein  
 Zachariasse, K. s. M. Kempfle  
 Zahn, H. s. R. Knorr  
 Zahn, H. s. B. Scharfmann  
 Zahn, H. s. H.-J. Wieneke  
 Zahn, R.K. s. M. Geisert  
 Zaki, L. and T. Julien, Inactivation of the anion transport system in the red blood cell membrane by  $\alpha$ -dicarbonyl reagents 1233\*
- Zech, K., W.A. Simon und U.A. Meyer, Biotransformation von Urapidil bei Mensch und Tier: Korrelation von Befunden in vivo/in vitro 371\*
- Zechel, K., Purification and partial characterization of a protein from HeLa-cells that inhibits C-actin polymerization and depolymerizes F-actin 1233\*
- Zeitler, H.-J. s. B. Andondonskaja-Renz  
 Zeng, B. s. E. Pöschel  
 Zerbe, R. s. A. Wild  
 Zettlmeißl, G. s. R. Rudolph  
 Ziegler, C. and G. Mersmann, The carbohydrate-protein-binding region in proteokeratan sulfate from bovine cornea is not sulfated 97  
 Ziegler, I. and U. Hamm, Participation of pterins in the control of lymphocyte transformation and blast proliferation 479\*
- Zielke, C.L. s. H.R. Zielke  
 Zielke, H.R., C.M. Sumbilla, C.L. Zielke, J.T. Tildon and P.T. Ozand, The role of glutamine as an energy source for cultured mammalian cells 1250\*
- Ziemendorf, S., S.W. Golf and V. Graef, The activity of steroid reductase in rat liver cell cultures 1234\*
- Zierz, S. and K. Jungermann, Distribution of the glucagon-, fluoride- and forskolin-stimulated adenylate cycles in microdissected periportal and perivenous rat liver 1234\*
- Zierz, S. and K. Jungermann, Distribution of pyruvate kinase type L and M2 in microdissected periportal and perivenous rat liver tissue 1235\*
- Zierz, S., N. Katz and K. Jungermann, Distribution of pyruvate kinase type L and M2 in microdissected periportal and perivenous rat liver tissue with different dietary states 1447
- Ziffreund, W. s. G. Krein  
 Ziltener, H.J., P.-A. Chavaillaz and A. Jörg, Leukotriene formation by eosinophil leukocytes. Analysis with ion-pair high pressure liquid chromatography and effect of the respiratory burst 1029
- Zimmer, M. and F. Hofmann, Calmodulin activates bovine cardiac myosin light chain kinase by decreasing  $K_m$  for its substrate 1235\*
- Zimmermann, A. and A. Sutter, Receptors for  $\beta$  nerve growth factor on primary cells and cell lines of the central nervous system 1284\*
- Zimmermann, A. s. U. Stephani  
 Zimmermann, A. s. A. Sutter

- Zipper, P. and H. Durchschlag, The X-ray damage of the sulfhydryl enzyme malate synthase. I. Protection experiments 1266\*
- Zipper, P. s. H. Durchschlag
- Zöller, B. and C. Jungwirth, Identification of immediate early vaccinia virus specific gene products 1235\*
- Zöllner, N. s. I. Hillmar
- Zuber, H. s. P. Füglistaller
- Zuber, H. s. R. Theiler
- Zuber, H. s. J. D. Tratschin
- Zuber, H. s. B. Wirz
- Zubrod, E., G. Ott and W. Kersten, A sensitive method for the analysis of queine in cell extracts 1236\*
- Zühlsdorf, M. s. S. Tümmers
- Zwiebel, F. M. s. A. J. Schwab
- Zwierzina, H. s. A. Loidl
- Zwiller, J. s. P. Basset