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2 Maruta, H. & Isenberg, G. (1983) *J. Biol. Chem.*, in press.
3 Harris, H.E., Bamburg, J.R., Bernstein, B.W. & Weeds, A.G. (1982) *Anal. Biochem.* 119, 102–114.
4 Füchtbauer, A., Jockusch, B.M., Maruta, H., Kilimann, M.W. & Isenberg, G. (1983) *Nature (London)*, in press.
5 Füchtbauer, A. & Jockusch, B.M. (1983) *Cell Motility*, in press.

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W. Kabsch and C. Sander

Toward Peptide Vaccines: Prediction of Antigenic Peptides from Protein Sequences of Influenza Virus and Foot and Mouth Disease Virus

Peptide vaccines, synthesized or genetically engineered, may become a powerful tool against viral infection. They may be more efficient than conventional vaccines against viruses with rapid antigenic drift. Protein structure theory has aided the effort to develop such vaccines by selecting from the amino-acid sequence peptides likely to be antigenic.

We have combined algorithms for the prediction of protein secondary structure and analysis of antigenic determinants of proteins of known three-dimensional structure into a method for the prediction of antigenic peptides. The most likely candidates are peptides which as part of the protein are bent polar regions stabilized by hydrogen-bonded structure. Examples are surface loops between segments of helix/sheet[1] and polar helix faces[2].

Our predictions were tested experimentally in the case of influenza virus hemagglutinin[1] and foot and mouth disease virus coat protein VP1[2]. Two of the synthesized peptides (SKAFSNAYPYDVPDYASL[1] and LRGDLQVLAQKVARTL[2], respectively) were successful in that they induced virus neutralizing antibodies and, in some animal tests, resulted in protection against challenge with the virus. The results on foot and mouth disease virus (FMDV) are particularly encouraging. Predictions on other viruses and bacteria are currently being tested.

In our method, secondary/tertiary structure prediction is a crucial part. Unfortunately, structure prediction methods used so far are relatively inaccurate[3] (not better than 56% average accuracy for three states). We now have a new method for secondary structure prediction with a better than 60% rating. Its use will lead to a corresponding improvement in the prediction of antigenic sites.

1 Mueller, G.M., Shapira, M. & Arnon, A. (1982) *Proc. Natl. Acad. Sci. U.S.A.* 79, 569–573.
2 Pfaff, E., Mussgay, M., Boehm, H.O., Schulz, G.E. & Schaller, H. (1982) *EMBO J.* 1, 869–874.
3 Kabsch, W. & Sander, C. (1983) *FEBS Lett.* 155, 179–182.

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B. Kadenbach and A. Stroh

Influence of Variable Redox States of Glutathione on the Activity of Cytochrome c Oxidase

The activity of isolated pig heart cytochrome *c* oxidase (EC 1.9.3.1) is inhibited with partially oxidized glutathione. The rate of inhibition is proportional to the concentration of glutathione, whereas the extent of inhibition depends on the redox state of glutathione. Up to 10mM GSH or GSSG alone are without effect on the activity of cytochrome *c* oxidase. The steady state activity of cytochrome *c* oxidase is zero at a molar ratio GSH/GSSG of about 2:1. At physiologically occuring redox states of glutathione (95% reduced) the activity of cytochrome *c* oxidase is about 50% of the control. Similar inhibition of cytochrome *c* oxidase activity by glutathione was found with the reconstituted beef heart enzyme in proteoliposomes and with mitochondrial membranes from pig liver.

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V. Kaever and K. Resch

Characterization of Plasma Membrane-Bound Nucleotide Cyclases in Calf Thymocytes

The role of cyclic nucleotides in the regulation of lymphocyte growth and differentiation still remains controversial, despite an overwhelming literature dealing with intracellular levels of cAMP and cGMP under various conditions. One of the major reasons resides in the lack of adequate characterization of the key enzymes, adenylate cyclase (EC 4.6.1.1) and guanylate cyclase (EC 4.6.1.2) in the plasma membrane of lymphocytes.

Calf thymus lymphocytes were disrupted by nitrogen cavitation and plasma membranes isolated by differential centrifugation and subsequent sucrose density ultracentrifugation[1].

As revealed by the chemical composition and the activities of some marker enzymes, the plasma membrane fraction proved to be highly purified. Nucleotide

cyclases were present in
specific activities, basal
being 13.7 pmol/(mg pr
(mg protein × min) for
tively. Adenylate cyclas
effectors added directly
ing NaF, GTP, guanosin
and molybdate. Basal ac
well as activities stimula
imidotriphosphate exhib
kinetics. Activation by
affected K_m values, but
activity of guanylate cyc
hanced by the nonionic
high doses of lysophosph
cyclase indicated to be a
by Hill equation with an
to 2. In contrast Triton
showed regular substrate
but not affecting K_m.
Preliminary experiments
of adenylate cyclase nor
changed in plasma memb
lymphocytes, but rather
tion.

1 Resch, K., Schneider,
Biochem. 117, 282–2

Volkhard Kaever and Kla
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logie, Abt. Molekularpha
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G. Kaiser and U. Heber

*The Role of Vacuoles in
Photosynthetic Products*

In photosynthesis, the tra
acetone phosphate and p
from the chloroplasts to
Sucrose is synthesized in
In kinetic work with mes
vacuoles were rapidly isol
that the rate of transfer o
from the cytosol across th
may approach the rate of
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also significant. Phosphate
from the vacuole.
Sucrose transport has bee
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