

**Transport Mechanisms of Tryptophan in Blood Cells,  
Nerve Cells, and at the Blood-Brain Barrier**

***Journal of Neural Transmission***  
**Supplementum 15**

**Transport Mechanisms of Tryptophan  
in Blood Cells, Nerve Cells,  
and at the Blood-Brain Barrier**

**Proceedings of the International Symposium,  
Prilly/Lausanne, Switzerland, July 6-7, 1978**

**Edited by P. Baumann**

**Springer-Verlag Wien GmbH**



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Originally published by Springer-Verlag/ Wien in 1979

Softcover reprint of the hardcover 1st edition 1979

With 54 Figures

Library of Congress Cataloging in Publication Data. Main entry under title: Transport mechanisms of tryptophan in blood cells, nerve cells, and at the blood-brain barrier. (Journal of neural transmission : Supplementum ; 15) 1. Tryptophan metabolism-Congresses. 2. Biological transport-Congresses. 3. Blood cells-Congresses. 4. Neurons-Congresses. 5. Blood-brain barrier-Congresses. I. Baumann, Pierre, 1944— . II. Series. QP562.T7T72. 612'.398. 79-10471

ISBN 978-3-7091-2245-7

ISBN 978-3-7091-2243-3 (eBook)

DOI 10.1007/978-3-7091-2243-3

## Preface

At the previous meeting of the International Study Group for Tryptophan Research (ISTRY) at Madison, in 1977, two main problems arose in the discussions about the serotonin hypothesis of depression and schizophrenia: first, the enzymatic conversion of tryptophan into serotonin, second and predominantly, its availability to the brain. The latter problem was the topic of the symposium held at the Psychiatric Clinic of the University of Lausanne, of which the proceedings are presented in this volume. Indeed, the results obtained with tryptophan as an antidepressant or hypnotic are conflicting. Also, the hypothesis of impaired transport of tryptophan from blood to brain in mental diseases, remains to be confirmed.

This symposium has given some answers to questions concerning nutritional factors, the influence of competing amino acids and the relevance of the binding of tryptophan to blood albumin—all necessary parameters regulating the uptake of tryptophan into the brain.

For human studies, a peripheral model was considered useful. For this reason, the transport systems in the intestine, in blood cells, at the blood-brain barrier, and in the nervous system were compared.

One of the aims of the symposium was also to fill the gap between applied and basic sciences in that it brought together biological psychiatrists and biochemists, familiar with the very molecular basis of the transport systems. Thanks to the convergence of representatives of these disciplines, the meeting had not only scientific value, but was also an event with a particularly friendly "ambiance".

I am very grateful to Prof. Sourkes, who, in Madison, encouraged me to organize this meeting and to Prof. Wurtman, who from his great experience, gave many helpful suggestions. We owe to him and to Springer-Verlag the publication of these proceedings. I am indebted to Prof. Müller, who, at the head of a clinic, orientated mainly towards psychotherapy, urged me to organize a symposium ranging from pure biochemistry to biological psychiatry.

My thanks are extended especially to Mrs. Jacqueline Bourquin, assisted effectively by Mrs. Battaglia, Mrs. Marin and Miss Perey, whose work for several months was marked by selfless devotion in making the meeting possible.

Prilly/Lausanne, February 1979

**P. Baumann**

## Welcome

Ladies and gentlemen, I would like first of all to welcome you to this hospital. Some of you have covered a long distance to come here and you all wish to discuss the question of tryptophan. I hope this meeting will be profitable and interesting and the discussion between researchers will be fruitful. As a psychiatrist I have always been fascinated by the idea that one day correlations may be established between emotions, or what the ancients called the passions, and cerebral metabolism. Some psychiatrists may be somewhat reluctant to consider this perspective, particularly if they are oriented in the same way as I am, that is, in the direction of psychotherapeutics and psychoanalysis. But if we are to deserve our reputation of men of science, we must be prepared to explore every aspect of the human being and to accept the results of our research, whether or not we may like them, whether or not they may correspond to our individual philosophy. At this university clinic which I have been proud to direct for nearly 20 years, the tradition has always been one of eclecticism as far as research is concerned, one of being open to all hypotheses. My predecessor, Professor Steck, had already been one of the pioneers of biological treatments and had carried out experiments on the application of insulin to psychotics, long before Sackel. We have the privilege of being here at a cross-roads between two cultures, between the French-speaking and the German-speaking countries. I ardently wish that, at this same place, we may be at a cross-roads between a psychobiological research and a psychodynamics research.

I have expressed my conviction that you will have an interesting scientific discussion. But I also hope that you will feel at home along the shores of Lake Lemman, in a country that men such as Rousseau and Voltaire have loved, this country where the good wine and the fondue are much appreciated. Be welcome and please accept my thanks for having answered our call.

**Ch. Müller**

The organisation of this symposium was made possible by the  
generous financial support of:

Fonds National Suisse de la Recherche Scientifique

CIBA-Geigy S.A., Basle

Société Coopérative Migros Vaud, Lausanne

Nestlé S.A., Vevey

Fabriques de Tabac Réunies S.A., Lausanne

Galenica Représentations, Berne

CILAG-CHEMIE S.A., Schaffhouse

Dépt. Janssen Pharmaceutica

Wander S.A., Berne

Banque Cantonale Vaudoise, Lausanne

Crédit Foncier Vaudois, Lausanne

Rhodia-Pharm S.A., Genève

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