# CINP's Historical Record Presentations by Thomas A. Ban

History of the CINP December 19, 2013

Neuropsychopharmacology and

the First Fifty Years

in the History of CINP October 1, 2013

Presidents of CINP August 15, 2013

Fifty years in progress September 12, 2013

Psychopharmacology and the

First 50 Years in the History of CINP September 26, 2013

## **History of the CINP**

"History of the CINP" is the corresponding text to "Neuropsychopharmacology and the history of the CINP," a PowerPoint presentation. It was prepared for a meeting of the Colegio Peruano Neuropsycofarmacologia held in Lima, Peru, from November 23 to November 30, 2005.

## **Historical Background**

Developments which led to neuropsychopharmacology and the CINP began in 1952 with the introduction of chlorpromazine in psychiatry. The therapeutic and commercial success of chlorpromazine generated interest within the pharmaceutical industry in developing drugs

with psychiatric indications. By the end of the 1950s there was a rapidly growing number of new psychotropic drugs and the scope of psychopharmacology, a term coined by Macht in 1920, was extended from the study of psychotomimetics and model psychosis to include the study of psychotherapeutics and their effectiveness in mental illness. The difficulties encountered in showing the efficacy of chlorpromazine in schizophrenia, and of imipramine in depression, focused attention on the heterogeneity of responsiveness to pharmacological treatment in schizophrenia and depression. Yet, instead of developing a methodology for resolving this heterogeneity, sensitive instruments were developed to detect and demonstrate antipsychotic and antidepressant effects. With the employment of the new methodology, "efficacy studies" were to dominate research in psychopharmacology to-date.

Simultaneously with the introduction of the first set of effective drugs in the treatment of mental illness, there was a shift in the understanding of the nature of synaptic transmission from a purely electrical (physical) to a chemically-mediated event and by the end of the 1950s six neurotransmitters had been identified in the central nervous system. Recognition of chemical mediation at the site of the synapse, coupled with the introduction of the spectrophotofluorometer, led to the development of neuropharmacology, the scientific discipline that deals with the detection and the identification of structures responsible for the psychotropic effects of centrally acting drugs. Spectrophotofluorometry provided direct access to the detection of the biochemical changes which might be responsible for the therapeutic effects.

Developments in pharmacotherapy, psychopharmacology and neuropharmacology triggered the development of neuropsychopharmacology, the scientific discipline dedicated to the study and treatment of the pathophysiology of mental syndromes with the employment of centrally acting drugs. Recognition that one of the essential prerequisites of successful neuropsychopharmacological research is a continuous dialogue between clinicians (psychiatrists) and basic scientists (pharmacologists) created a need for the founding of an association which would provide a suitable platform for interaction among the different disciplines of the new field.

## The Founding of CINP (Milan, May 1957 – Zurich, October 1957)

To start the dialogue between clinicians and basic scientists an International Symposium on Psychotropic Drugs was hosted by the University of Milan in May 1957. It was

chaired by Emilio Trabucchi, the professor of pharmacology, and organized by Silvio Garattini, a young pharmacologist in the department of pharmacology of the University. It was during the Milan Symposium that Wolfgang de Boor, the author of the monograph *Pharmacopsychologie und Psychopathologie*, and Corneille Radouco-Thomas, a pharmacologist from the University of Geneva, proposed the founding of an "international association" to provide a forum for interaction between clinicians and basic scientists for the study of psychotropic drugs.

The formal inauguration of the Collegium Internationale Neuro-Psychopharmacologicum (CINP), a name coined by Radouco-Thomas, took place four months after the Milan Symposium on September 2, 1957, during the 2<sup>nd</sup> World Congress of Psychiatry, at a dinner meeting hosted by Ernst Rothlin in the buffet of the Zurich railway station. By the end of the dinner Rothlin, a former director of Sandoz, a major Swiss pharmaceutical company, was elected president; W.A. Stoll, treasurer; Corneille Radouco-Thomas and Herman Denber, secretaries; and Pierre Deniker and Philip Bradley, councilors. The 32 invited guests became the founders of CINP.

## **Interaction between scientists and clinicians (Rome 1958 - Tarragona 1968)**

The primary objective of the Collegium was to organize meetings for its members at consider least once every two years "to and discuss matters related neuropsychopharmacology and through the organization encourage and promote international scientific study, teaching and application of neuropsychopharmacology" (Constitution, Article II). There was disagreement regarding membership between the two main players in the founding, Rothlin and Trabucchi, in which Rothlin prevailed, and membership was restricted to those actively involved in the new field instead of being open to all interested in the new drugs. Nonetheless, it was decided that congresses should alternate between "open" meetings with free attendance for everyone interested in the field and "closed" meetings with attendance restricted to CINP members and their invited guests. The idea was that open meetings with larger audiences would provide a forum to communicate new developments in neuropsychopharmacology, whereas closed meetings would allow interaction among the disciplines and provide feedback from clinicians to basic scientists and vice versa.

The  $1^{st}$  CINP Congress was an open meeting in 1958 in Rome with about 500 participants and the  $2^{nd}$  a closed meeting in 1960 in Basel. It was at the Basel meeting that

Arvid Carlsson, a Swedish pharmacologist who was to receive the Nobel Prize, presented his findings on selective changes in brain monoamines and especially of catecholamines with psychotropic drugs, providing the theoretical framework which was to dominate neuropsychopharmacology for well over two decades. It was also at the Basel meeting that Fritz Freyhan, one of the American pioneers of psychopharmacology, called for a "critical examination" of the commonly held belief that there is a linear relationship between neuroleptic potency and therapeutic effects. Listening to Freyhan's "clinical feedback" that "compounds showing higher frequencies of hyperkinetic syndromes have higher failure rates" in treatment could have prevented the detour in the pharmacotherapy of schizophrenia that led to a high prevalence of tardive dyskinesia in neuroleptic treated patients.

In keeping with recommendations, the 3<sup>rd</sup> Congress in 1962 in Munich was open, and the 4<sup>th</sup> in 1964 in Birmingham, England, closed. The Birmingham meeting was devoted to one topic, "The Mode of Action of Psychotropic Drugs and Its Implications for the Pathophysiology of Psychotic Disturbances." It was uniquely structured in that the first day was dedicated to a plenary session in which speakers with different backgrounds, such as Eysenck, a psychologist, Brucke, a pharmacologist, Schleidt, an ethologist, and Selbach, a psychiatrist, introduced the problem from their own point of view; the second and third days were given to discussion in working groups; and the fourth and final day to a second plenary session at which deliberations of the working groups were summarized in reports.

Many of those who attended the Birmingham Congress felt that the format of the meeting was optimal for interaction and should have been adopted at future meetings. But this did not happen and by the end of the 1960s -- after another open meeting in 1966 in Washington, DC, and another closed one in 1968 in Tarragona, Spain -- the difference between closed and open meetings started to wither away.

## **Communication of Findings (Prague 1970 – Florence 1984)**

During the 1970s pharmacotherapy with psychotropic drugs became the primary form of treatment in mental illness; psychiatrists involved in psychopharmacology were becoming an integral part of the psychiatric establishment; and CINP congresses were transformed into meetings with less and less emphasis on feedback, and with more and more sessions dedicated to presentations in newly emerging areas of research with little, if any, time left for interaction. Thus, the 7<sup>th</sup> CINP Congress in 1970 in Prague included symposia on lithium with special

attention on the prophylactic treatment of bipolar disorder and on the evaluation of anxiolytic drugs; the 8<sup>th</sup> in 1972 in Copenhagen on the pharmacotherapy of sexual disorders and on the long-term effects of psychotropic drugs; the 9<sup>th</sup> in 1974 in Paris on the effect of neurotropic drugs on cyclic AMP in the brain and on genetics in psychopharmacology; the 10<sup>th</sup> in 1976 in Quebec City on geriatric neuropsychopharmacology and on the interrelationship among neurotransmitter systems; and the 11<sup>th</sup> in 1978 in Vienna on endorphins and narcotic antagonists in the treatment of schizophrenia and on the role of GABAergic mechanisms in the action of benzodiazepines.

By the end of the 1970s it was recognized that pharmacotherapy based on hypotheses derived from studies on the mode of action of psychotropic drugs, such as the catecholamine hypothesis of depression, or the dopamine hypothesis of schizophrenia, did not work. In spite of this, CINP congresses have become increasingly dominated by neuropharmacology, driven by technological progress, such as the development of receptor binding assays, which opened the path for the determination of the norepinephrine and serotonin blocking potencies of drugs, and the identification of receptor subtypes, which led to the delineation of the receptor profiles of neuroleptics and antidepressants.

By the early 1980s basic research in neuropharmacology was extended from cerebral monoamines to include neuropeptides and prostaglandins. The 12<sup>th</sup> CINP Congress in 1980 in Goteborg, Sweden, reflected "the shift from neurotransmitter biochemistry at the synaptic cleft to receptor research"; the 13<sup>th</sup> CINP Congress in 1982 in Jerusalem "documented the effort to understand mental disease in terms of molecular processes"; the 14<sub>th</sub> CINP Congress in 1984 in Florence, Italy, reinforced the belief that employment of molecular neurobiology "could lead to research that will transcend the existing boundaries of neuropsychopharmacology"; and at the 15<sup>th</sup> Congress in 1986, in San Juan, Puerto Rico, Floyd Bloom in his plenary lecture described a Brave New World that will be known in terms of cell function at the molecular level and a galaxy of transmitters and their modifiers "signaling" to each other.

## **Communication of Interpretations (San Juan 1986 – Paris 2004)**

In contrast to the major advances in neuropharmacology, there was little progress made in clinical psychopharmacology after the 1970s. The methodology of clinical psychopharmacology with its sensitized rating scales and consensus-based diagnostic endpoints has the capability only to demonstrate therapeutic efficacy but not to translate the differential receptor profiles of drugs into therapeutic profiles relevant to patients and

treatment. Idiosyncratic classifications are covered up by consensus-based classifications; signs and symptoms which are relevant to diagnosis are dismissed by sensitized rating scales. Multi-center, centrally-coordinated clinical investigations with sample-sizes determined by power statistics lead to semi-finished psychotropic drugs without any guidance in predicting which form or sub-form of illness is responsive to the drug.

By the late 1980s the gap between neuropharmacology and psychopharmacology grew so wide that without interpretation by neuropsychopharmacologists it could not be bridged. The objective of CINP congresses shifted from interaction and feedback between clinicians and basic scientists to interpretations about the mode of action of psychotropic drugs.

The shift of emphasis in CINP meetings from communication of findings to communication of interpretations began in 1986 at the end of the presidency of Ole Rafaelsen, a Danish neuropsychopharmacologist, with the presentation of industry-supported Travel Awards to Young Investigators to facilitate their participation in the Congress and with the first president's reception and dinner, supported by Bristol-Myers-Squibb, at the San Juan Congress.

The transformation of the college continued with tightening the ties with the drug industry and with national (sister) organizations in neuropsychopharmacology during the presidency of William Bunney, a prominent American neuropsychopharmacologist. It lead in 1998 to the implementation of corporate membership of pharmaceutical firms and to the starting of a meeting among presidents and secretaries of the sister organizations at the Munich Congress that was to become the corresponding organizations luncheon meeting, supported by Hoechst Marion Russell, now Aventis.

The changes culminated with a past-presidents symposia -- as well as with a past-presidents and meeting-organizers luncheon -- during the presidency of Alec Coppen, a pioneer British neuropsychopharmacologist, and with the organization of regional meetings during the presidency of Lewis Judd, a former director of the National Institute of Mental Health of the United States. It was also during the presidency of Coppen that the first award for recognizing excellence, the Max Hamilton Prize, was established with the support of Bristol-Myers Squibb and presented in 1990 at the Kyoto Congress to Steven Paul, vice president of research of Eli Lilly, an American pharmaceutical company.

To correspond with the changes in the activities of the organization, CINP's Constitution and By Laws were amended several times from 1986 to 2004 with the last amendment approved in April 2002. A move toward democratization started after the Melbourne Congress in 1996 during the presidency of Claude de Montigny, a Canadian neuropsychopharmacologist, with the nomination of a slate of two -- instead of one -- candidates for each of the five offices on the executive, and for each of the 10 positions on the council. During the presidency of Helmut Beckmann, a prominent German psychiatrist, CINP became legally incorporated. By the time of the Brussels' Congress in 2000, the organization had been a legal entity registered in Switzerland with domicile in Zurich.

The first president of CINP in the new millennium, and its first elected president, was Eugene Paykel, a prominent British psychiatrist. During his tenure from 2000 to 2002, a regional structure was established with "conveners" responsible for the coordination of activities in the different geographic regions; and a Central Office was set up for continuity and the smooth operation of the college. Paykel was succeeded by Herbert Meltzer, an American neuropsychopharmacologist, who was instrumental in complementing the central office with a Meeting Organizer Group which, if successful, would channel back to CINP's treasury the money spent on congress organizer business companies. Establishment of the Meeting Organizer Group could be the first step in resolving the situation that CINP shares profit from the revenues generated by meeting with the host organization in the proportion of three (CINP) to one (host) because it does not take financial responsibility for any of its meetings, including the biennial congresses.

## My Activities in CINP

At the time I was elected a fellow of CINP in 1962 I was in charge of an early clinical drug evaluation unit at the Verdun Protestant Hospital, a psychiatric inpatient facility in the suburbs of Montreal. Becoming a member of the college made it possible for me to get access to information in the new field and to interact with those who created the drugs we were studying in our research. It was about 30 years before the "computer age"; information was scarce and difficult to get. There were only two journals in the field, *Psychopharmacologia*, founded by Rothlin and Wikler in 1958, and *International Neuropharmacology* (which was to become *Neuoropsychopharmacology*), founded by Brodie, Costa and Radouco-Thomas a couple of years later.

I served on CINP's executive committee from 1970 to 1974 as secretary, from 1974 to 1976 as vice president, and from 1978 to 1986 as treasurer. During my service on the executive, the membership of CINP grew from 200 to more than 600, far beyond the allowed 15% from one congress to another, with virtually all members attending each congress and the general assembly at the congress. I took over the treasury from Paul Janssen with less than \$40,000 and passed it to Lauren Maitre with more than \$100,000. The organization in those years was operated on a shoestring. It was a very different organization from the CINP today which has well over a million dollars invested, disburses expenses for several offices, organizes larger and larger meetings with an attendance of only about one-quarter of its members, has general assemblies with hardly enough members attending to provide a quorum to vote and a slow growth of membership in spite of considerable efforts for recruitment.

What was to become CINP's history committee started as an informal collaboration (committee) between Ole Rafaelsen, Hanns Hippius and I at the tail end of Rafaelsen's presidency in 1986. Our plan was to reconstruct the history of CINP from eye-witness records before it was too late. Ole died shortly after, but Hippius and I continued with the work and from 1986 to 1994 we prepared a series of four booklets on the history of CINP. Shortly after the fourth booklet was completed the committee published a 457-page book with the title *A History of the CINP* which included the four booklets under one cover supplemented with some complementary information on the history of the college from the San Juan Congress in 1986 to the Sydney Congress in 1994.

In 1996 the history committee was extended to include nine members and strengthened with the inclusion of David Healy, a psychiatrist trained in neuropharmacology who had challenged some of the practices of neuropsychopharmacology, and Edward Shorter, a social historian with a background in the history of psychiatry and a special interest in psychopharmacology. From 1996 to 2004 the committee published the "CINP International Photo Archives in Neuropsychopharmacology 2000," the "Selected Writings of Joel Elkes," one of the CINP-Pfizer pioneers, and a series of four books on "The History of Psychopharmacology and the CINP, As Told in Autobiography." The series provides information on the origin of the discipline and the organization; on the place of the organization in society and among the other professional societies; on the direction in which the field and the organization is moving; and on possible alternatives to this direction. Although prepared primarily as a source book, the series should be of interest to all those involved in research and teaching neuropsychopharmacology.

#### **Conclusions**

By the end of the 20th century pharmacotherapy with psychotropic drugs has become the primary form of treatment in all the various psychiatric disorders from sexual dysfunction to the dementias. By supplying drugs with demonstrated therapeutic efficacy, together with information on their pharmacological profile, mode of action and clinical effects, the pharmaceutical industry was instrumental in reintegrating psychiatry with the other medical disciplines. Furthermore, by providing financial support for research from genetics through neuropharmacology to brain imaging, industry succeeded in establishing psychopharmacology as the dominant paradigm in psychiatry around the world. With the development of neuropsychopharmacology, the term "psychiatry" with its implicit separation of the afflictions of the "mind" from the diseases of the "body," has become anachronistic and ready to be replaced in the new millennium.

Simultaneously with this development, CINP has grown into a prosperous organization which is incorporated in Switzerland and has a central office in Nashville, with a membership from all six continents, approaching 1,000. The organization has played a role in converting the thinking of psychiatrists from psychological to biological; in facilitating the development of a cadre of neuropsychopharmacologists; and in providing a forum for the communication of new developments in the pharmacotherapy of psychotropic drugs. In 1957, at the time it was founded, CINP was the only organization in the new field and the pharmaceutical industry was hoping for interaction through the organization among the different isolated disciplines involved with neuropsychopharmacology. It was also seeking guidance by feedback through the translation of pharmacological profiles into clinical effects in order to develop new drugs. In the absence of clinical feedback, by the 1970s neuropharmacology became the driving force in neuropsychopharmacology and CINP became the platform for the communication of findings on psychotropic drug development to an international audience. The increasing sophistication in neuropharmacology, without a parallel development in the methodology of clinical investigations, created a widening gap between neuro- and psychopharmacology. By the mid-1980s clinical interpretations of neuropharmacological findings were filling in the missing information from translational research. Translational research is dedicated to the establishment of relationships between findings in different areas of the field whereas interpretations in neuropsychopharmacology make neuropharmacological research findings applicable for clinical use before establishing a definite relationship between the findings and clinical effects.

In 2004, by the time Brian Leonard succeeded Herbert Meltzer as president, CINP had expanded its membership and evolved into its present form. Yet, CINP was no longer a unique organization dedicated to the communication of "translational research," but one of many organizations dedicated to the communication of clinical interpretations in neuropharmacological research.

Confronted with this reality CINP may continue in the direction set in the late 1980s – organize larger and larger meetings and become the most powerful organization in the communication of interpretations in neuropsychopharmacology – or return to its roots, dedicated to the discussion and communication of findings in translational research.

December 19, 2013

# Neuropsychopharmacology and the First Fifty Years in the History of CINP

PowerPoint presentation prepared for a meeting of the Colegio Peruviano Neuropsycofarmacologia held in Lima, Peru, from November 23 to November 30, 2005.

Developments that led to the Founding of the Collegium Internationale Neuro-Psychopharmacologicum Began in the Mid-1950s

The Therapeutic and Commercial Success of Chlorpromazine Generated Interest in the Pharmaceutical Industry to Develop Drugs for Psychiatry

Psychotropic Drugs Available for Clinical Use by the End of the 1950s:

<u>Drugs</u> developed by <u>Companies</u>

Chlorpromazine Rhône-Poulenc

Methotrimeprazine Rhône-Poulenc

Prochlorperazine Rhône Poulenc

Thioproperazine Rhône Poulenc

Reserpine Ciba

Trifluoperazine SKF
Thioridazine Sandoz
Chorprothixene Lundbeck
Haloperidol Janssen

Meprobamate Carter Wallace

Hydroxyzine Pfizer
Iproniazid Roche
Imipramine Geigy
Nialamide Pfizer

Phenelzine Warner Chilcott

Tranylcypromine SKF

Amitriptyline Merck/Rosche/Lundbeck

.....

Lithium

## Psychopharmacology (Macht 1920)

## Neuropharmacology Born by the End of The 1950s

Synaptic transmission from electrically to chemically mediated events

Neurotransmitters: Acetylcholine (Ach)

Dopamine (DA)

Gamma-aminobutyric acid (GABA)

Norepinephrine (NE)

Serotonin (5-HT)

Substance P

Spectrophotofluorometry: Detection of biochemical changes might be responsible for therapeutic effects

<sup>\*</sup>Scope extended to study the effectiveness of new drugs

<sup>\*</sup>Difficulty of showing effectiveness indicated heterogeneity within diagnoses

<sup>\*</sup>Methodology developed to overcome difficulty by sensitive instruments for demonstration of effectiveness instead of resolving heterogeneity

<sup>\*</sup>Efficacy studies was to dominate research

## Neuropsychopharmacology

\*Scientific discipline dedicated to the study and treatment of the pathophysiology of mental symptoms with the employment of centrally acting drugs

\*One of the essential prerequisites of successful neuropsychopharmacological research is a continuous dialogue between clinicians and basic scientists

## International Symposium on Psychotropic Drugs Milan, Italy, May 1957



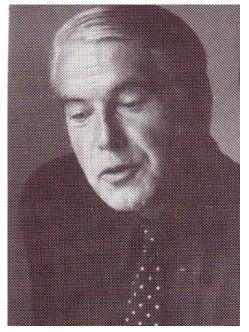


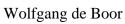


Silvio Garattini

Proposal for an International Organization in Psychopharmacology

Milan, Italy, May 1957







Corneille Radouco-Thomas

The Formal Inauguration of CINP Took Place on September 2, 1957, at the Buffet of the Zurich Railway Station

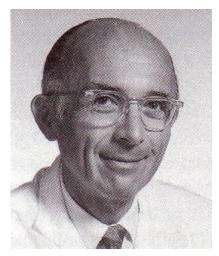
## **The First CINP Executive Committee**



Ernst Rothlin President



W.A.Stoll Treasurer



Herman Denber Secretary



**C. Radouco-Thomas** Secretary



Pierre Deniker Councilor

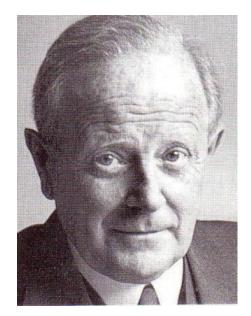


Philip Bradley Councilor

**Constitution, Article II** 

.....organize meetings for its members at least once every two years "to consider and discuss matters related to neuropsychopharmacology and through the organization encourage and promote international scientific study, teaching and application of neuropsychopharmacology."

## Disagreement



**Ernst Rothlin** Involved-Closed

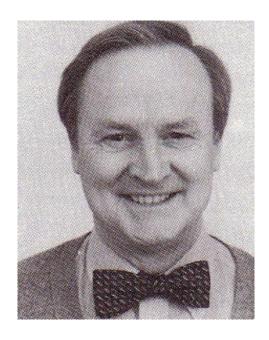


**Emilio Trabucchi** Interested-Open

1 <sup>st</sup> Congress Rome	1958 Open	500 Participants
2 <sup>nd</sup> Congress Basel	1960 Closed	250 Participants

**Second Congress** 

Basel, Switzerland, 1960



**Arvid Carlsson** 

Selected changes in brain monoamines with psychotropic drugs (dominate neuropsychopharmacology for two decades)

**Second Congress** 





## **Fritz Freyhan**

Compounds showing higher frequencies of hyperkinetic syndromes have higher failure rates

## **Fourth Congress**

## Birmingham, England, 1964

The Mode of Action of Psychotropic Drugs and its Implications for the Pathophysiology of Psychotic Disturbances



F. Brucke, H. Selbach, W. Schleidt, and H.J. Eysenck

Communication of Findings

1970s

<sup>\*</sup>Pharmacotherapy becomes primary form of treatment

<sup>\*</sup>Psychopharmacologists become part of psychiatric establishment

<sup>\*</sup>Shift of emphasis from feedback to presentations of newly emerging areas of research

## TABLE C NEWLY EMERGING AREAS OF RESEARCH

7<sup>th</sup> Congress Prague 1970

Lithium with special attention on the prophylactic treatment of bipolar disorder

8<sup>th</sup> Congress Copenhagen 1972

Long-term effect of psychotropic drugs

9<sup>th</sup> Congress Paris 1974

Effect of neurotropic drugs on cyclic AMP in the brain

10<sup>th</sup> Congress Quebec 1976

Interrelationship among neurotransmitter systems

11<sup>th</sup> Congress Vienna 1977

The role of GABA-ergic mechanisms in the action of benzodiazepines

## By the End of the 1970s

Recognition that pharmacotherapy based on neuropharmacological hypotheses does not work. Neuropsychopharmacology dominated by neuropharmacology driven by technological progress

- -Receptor binding assays
- -Receptor subtypes

#### TABLE D

## **EXTENSION OF NEUROPHARMACOLOGY**

12th Congress Goteborg 1980

"..shift from neurotransmitter biochemistry at the synaptic cleft to receptor research" (Carlsson)

13<sup>th</sup> Congress Jerusalem 1982

"...documented the effort to understand mental disease in terms of molecular processes" (Janssen)

14th Congress Florence 1984

"...employment of molecular neurobiology could lead to research that will transcend the existing boundaries of neuropsychopharmacology" (Kielholz)

15th Congress San Juan 1986

"...a Brave New World that will be known in terms of cell function at the molecular level, and a galaxy of transmitters and their modifiers signaling to each other" (Bloom)

## The Methodology of Clinical Psychopharmacology

\*Capable only to demonstrate therapeutic efficacy but not to translate receptor profiles into therapeutic profiles

\*Prototype-based diagnoses are covered up by consensus-based diagnoses

\*Signs and symptoms relevant to prototype-based diagnoses are dismissed by sensitized rating scales

\*Multi-center, centrally coordinated clinical investigations with sample sizes determined by power statistics lead to semi-finished drugs without guidance to predict responsiveness to treatment

## Gap Between Neuropharmacology and Psychopharmacology

## **Late 1980s**

- \*Could not be bridged without interpretations
- \*Congresses shifted from interaction and feedback between clinicians and basic scientists to discussion of interpretations about the clinical relevance of neuropharmacological findings about the mode of action of drugs
- \*Since all pre-clinical and clinical data on a new drug are in the possession of the company sponsoring its development, in the profiling of drugs for clinical use corporate marketing considerations built on interpretations about the clinical relevance of neuropharmacological findings play an increasing role
- \*Shift of emphasis in meetings from communication of findings to dissemination of interpretations

Fifteenth Congress
San Juan, Puerto Rico, 1986



## **Ole Rafaelsen** President 1984-86

Travel Awards to Young Investigators (Rafaelsen Fellowship Program President's Reception and Dinner (Bristol-Myers-Squibb)

## Sixteenth Congress Munich, Germany, 1988



William Bunney President 1986-1988

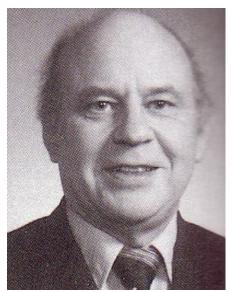
Tightening ties with industry and sister organizations

Corporate membership

Corresponding Organizations Luncheon (Hoechst Marion Russell – Aventis)

**Seventeenth Congress** 

Kyoto, Japan, 1990



**Alec Coppen** President 1988-1990

Past Presidents Symposium Presidents and Meeting Organizers Luncheon

## Twentieth Congress Melbourne, Australia, 1996



**Lewis Judd** President 1994 - 1996

Regional Meetings

**Twenty-First Congress** 

Glasgow, Scotland, 1998



Claude de Montigny President 1996 - 1998

Democratization

Twenty-Second Congress

Brussels, Belgium, 2000



## **Helmut Beckmann** President 1998 - 2000

Twenty-Third Congress

Montreal, Canada, 2002



**Eugene Paykel** President 2000 - 2002

Regionalization

Central Office

**Twenty-Fourth Congress** 

Paris, France, 2004



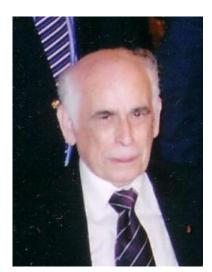
## **Herbert Meltzer** President 2002 - 2004

Meeting Organizer Group

Thomas A. Ban

In 1962 & 2004





"In 1962 I was in charge of an Early Clinical Drug Evaluation Unit at the Verdun Protestant Hospital (now Douglas Hospital). Becoming a member of CINP made it possible for me to get access to information and to interact with those who created the drugs we were studying. There were only two journals in the field, *Psychopharmacologia* (Rothlinand Wikler) and *Neuropharmacology* (Brody, Costa, and Radouco-Thomas)."

	TABLE F			
ACTIVITIES ON	ACTIVITIES ON COMMITTEES			
1970-1974	Secretary			
1974-1976	Vice President			
1978-1986	Treasurer			
1986-2004	Chair History Committee			

"From 1970-1986 I served as Secretary, Vice President and Treasurer. During those years CINP's membership grew from 200 to more than 600 and almost all members were attending each congress and the general assembly of the congress. CINP operated on a shoestring budget and from 1978 to 1986 its the treasury grew from US\$40,000 to US\$100,000. Today CINP has about 1000 members, several hundred thousand dollars invested, organizes larger and larger meetings but with attendance of only about one quarter of its members."

## **CINP History Committee**

#### San Juan, Puerto Rico, 1986







**Hans Hippius** 



**Thomas Ban** 

TABLE F

## HISTORY COMMITTEE PUBLICATIONS

30 Years CINP

Psychopharmacology in Perspective

**Toward CINP** 

Early Years

A History of the CINP

The Rise of Psychopharmacology and the Story of CINP
The Triumph of Psychopharmacology and the Story of CINP
From Psychopharmacology to Neuropsychopharmacology
Reflections on Twentieth Century Psychiatry

CINP International Photo Archives in Neuropsychopharmacology 2000

Selected Writings of Joel Elkes

The series provides information on the origin of the discipline and the organization; on the place of the organization in society and among other professional societies; and on the direction in which the field and the organization is moving.

In 1957, at the time it was founded, CINP was the only organization in the new field and the pharmaceutical industry was seeking for interaction through the organization among the different isolated disciplines involved with neuropsychopharmacology. It was also seeking guidance by feedback through the translation of pharmacological profiles into clinical effects in order to develop new drugs.

#### **Conclusions**

In 2004 by the time Brian Leonard succeeded Herbert Meltzer as president, CINP had expanded its membership and evolved into its present form. Yet, while retaining its excellence, CINP was no longer a unique organization but one of many organizations involved in the communication of clinical interpretations of neuropharmacological findings. Confronted with this reality CINP will have to choose whether to continue in the direction set in the late 1980s and organize larger and larger meetings for the communication of clinical interpretations of findings in neuropharmacology as most of its sister organizations in neuropsychopharmacology do or return to its roots and become a unique organization again dedicated to facilitation of discussion and communication between preclinical and clinical researchers in the field.

October 1, 2013

## **Presidents of CINP**

This manuscript was written in 2005 and provided the basis of a documentary on the history of the CINP prepared by Oakley Ray, at the time executive secretary of the Collegium. The documentary was presented, at the 25<sup>th</sup> Congress in Chicago in 2006. The text was amended in 2008 in preparation for the celebration of CINP's 50-year anniversary.

Successful neuropsychopharmacological research is dependent on a continuous dialogue between clinicians and basic scientists. To start the dialogue an International Symposium on Psychotropic Drugs was hosted by Emilio Trabucchi and Silvio Garattini at the University of Milan in May 1957. On the second day of this symposium Wolfgang de Boor, a German psychiatrist, and Corneille Radouco-Thomas, a Romanian born pharmacologist, proposed the founding of an "international association" that was to become CINP. A few months later, on September 2, 1957, CINP was inaugurated during a buffet dinner at the Zurich railway station. The 32 participants of the dinner became the founders of CINP and Ernst Rothlin (1957-1958), a former director of Sandoz, was elected president.

The 1<sup>st</sup> CINP congress took place in 1958 in Rome. There was an audience with Pope Pius XII at Castel Gondolfo and in his address the Pontiff recognized that psychotropic drugs could offer relief from distress in conditions that just a few years before were beyond the reach of medical science. The 2<sup>nd</sup> CINP congress took place in 1960 Basel during the second term of Rothlin's (1958-1960) presidency; the 3<sup>rd</sup> in 1962 in Munich during Paul Hoch's (1960-1962); the 4<sup>th</sup> in 1964 in Birmingham, England, during Hans Hoff's (1962-1964); the 5<sup>th</sup> in 1966 in Washington, DC, during Jean Delay's (1964-1966); and the 6<sup>th</sup> in 1968, in Tarragona, Spain, during Francisco Garcia Valdecasas' (1966-1968).

During the 1970s pharmacotherapy with psychotropic drugs became the primary form of treatment in psychiatry. This was reflected in the program of the 7<sup>th</sup> CINP congress in Prague during Heinz Lehmann's (1968-1970) presidency; the 8<sup>th</sup> congress in Copenhagen during Eric Jacobssen's (1970-1972); the 9<sup>th</sup> in Paris during Hanns Hippius' (1972-1974); the 10<sup>th</sup> in Quebec City, Canada, during Pierre Deniker's (1974-1975); and the 11<sup>th</sup> in Vienna during the presidency of Leo Hollister (1976-1978). By the early 1980s basic research in neuropharmacology shifted from neurotransmitter biochemistry at the synaptic cleft to receptor research. The shift had a major impact on the program of the 12<sup>th</sup> CINP congress in Göteborg, during Arvid Carlsson's (1978-1980) presidency; on the program of the 13<sub>th</sub> congress in Jerusalem during the presidency of Paul Janssen (1980-1982); and on the program of the 14<sup>th</sup> congress in Florence, Italy, during the presidency of Paul Kielholz (1982-1984).

Ninety-eighty six heralded the beginning of a new era in CINP. The first Travel Awards to Young Investigators were presented at the 15<sup>th</sup> CINP congress in San Juan, Puerto Rico, during Ole Rafalesen's (1984-1986) presidency; the first meeting of the presidents and secretaries of national societies was organized at the 16<sup>th</sup> congress in Munich during William

Bunney's (1986-1988) presidency; and the Max Hamilton Memorial Prize was first presented at the 17<sup>th</sup> congress in Kyoto during the presidency of Alec Coppen (1988-1990). The 18<sup>th</sup> CINP congress in 1992 in Nice, France, during the presidency of Julien Mendlewicz (1990-1992) was the largest CINP congress during the 20<sup>th</sup> century. It set the stage for the 19<sup>th</sup> congress, the second largest meeting, in Washington, DC, during Giorgio Racagni's (1992-1994) presidency, and the 20<sup>th</sup> congress in Melbourne during the presidency of Lewis Judd (1994-1996).

In the mid-1990s the activities of CINP were extended to regional meetings between the biennial congresses. The first Pfizer-CINP Pioneer Awards were presented in 1998 during Claude de Montigny's (1996-1998) presidency at the 21<sup>st</sup> congress in Glasgow. It was also during de Montigny presidency that CINP's journal, the *International Journal of Neuropsychopharmacology*, was launched, and "democratization" of CINP began. Democratization was followed by incorporation on July 26, 1999, during the presidency of Helmut Beckmann (1998-2000). By the time of the 22<sup>nd</sup> CINP Congress in 2000 in Brussels the organization became a legal entity registered in Switzerland with domicile in Zurich.

Planning for the regionalization of CINP began during the presidency of Eugene Paykel (2000-2002). Conveners for seven geographic regions were elected at the end of the 23<sup>rd</sup> CINP congress in Montreal and regionalization was implemented during the presidency of Herbert Meltzer (2002-2004). As chairman of the international scientific program committee of the 24<sup>th</sup> CINP congress in Paris, Meltzer complemented traditional symposia with "synthesia" and interactional workshops. He was also instrumental in establishing CINP's central office in Nashville with Oakley Ray as executive secretary and complementing the central office with a congress-organizing group.

CINP's structural organization was completed during the presidency of Brian Leonard (2004-2006) with the appointment of Mike Mitchell as the organization's executive director. It was also during Leonard's tenure that CINP's central office was transferred from Nashville to Glasgow. Then, in 2008, CINP celebrated its 50-year anniversary at its biennial meeting in Munich, during the presidency of Torgny Svensson (2006-2008).

## **Fifty Years in Progress**

"Fifty years in progress" was presented at a symposium chaired by Fridolin Sulser, organized in celebration of the fifty-year anniversary of CINP at the 26th biennial congress of the organization, held in Munich in 2008.

The dream of Jacques Moreau de Tours (1804-84), a French psychiatrist, to use drugs in the dissection of mental illness, and of Claude Bernard (1813-78), a French physiologist, in the study of the physiology of the nervous system, has become a realistic goal in the mid-1950s with the introduction of effective pharmacological treatments in psychiatry and the spectrophotofluorometer. The capability to measure changes in the concentration of neurotransmitter monoamines in the brain led to the birth of neuropsychopharmacology and opened a perspective for the development of rational pharmacological treatments of mental disorders. The notion that studying the mode of action of psychotropic drugs could lead to information about the neurochemical underpinning of mental pathology, a pre-requisite for the development of rational treatment, was encouraged by findings of Bernard Brodie and his associates, and especially of Alfred Pletscher (at the National Heart Institute of the United States), that drugs, like reserpine and iproniazid, reserpine, which were reported to cause depression and euphoria respectively in some patients, have the opposite effects on serotonin levels in the brain (Ban 2004).

Successful research in neuropsychopharmacology depends on communication between pharmacologists and psychiatrists, as pointed out in 1957 by Abraham Wikler, an American pioneer of neuropsychoharmacology, in his classic text *The Relationship of Psychiatry and Pharmacology*. To facilitate interaction Wolfgang de Boor, a German psychiatrist, and Corneille Radouco-Thomas, a Romanian born pharmacologist (working in Switzerland at the time), proposed at the First International Symposium on Psychotropic Drugs in Milan, the founding of an international association that was to become the CINP. The CINP was inaugurated about four months later, on the 2<sup>nd</sup> of September in 1957, at a dinner meeting in the buffet of the Zurich railway station. Ernst Rothlin, a former director of Sandoz, (a major Swiss pharmaceutical company at the time), was elected president and the 32 participants of the dinner became the founders of the Collegium. Today, 50 years later, seven of the founders are alive and two, Hanns Hippius and Cornelis Van Rhyn, are participating in this congress.

The founders agreed that the members of the organization should meet at least once every two years to discuss matters related to neuropsychopharmacology, but differed in opinion about CINP's role in education and, consequently, about membership and the format of the biennial meetings. For Emilio Trabucchi, the professor of pharmacology at the University of Milan (who was to become the organizer of CINP's first congress), the purpose of the CINP was education, the spreading of information on developments in the new field, whereas for Rothlin, it was research, the bringing together experts from all around the world to scrutinize and debate their findings in order to generate information that would guide psychotropic drug development. A compromise was reached and it was decided that membership should be restricted to experts, but congresses should alternate between open and closed meetings (Ban 2006).

The CINP was launched in September 1958 with an open meeting in Rome. At this first congress, as well as at the three subsequent congresses (in Basel, Munich, and Birmingham in 1960, '62 and '64) organized by (five of the founders), Rothlin, Dieter Bente, Hanns Hippius and Fritz Flugel and Philip Bradley, during the presidencies of Rothlin, Paul Hoch and Hans Hoff, issues at the heart of neuropsychopharmacology, such as drug-induced psychoses, the mode of action of drugs with known therapeutic effects, the translation of findings from animal to man, the relationship between "model psychoses" to naturally occurring psychoses and the relevance of mode of action of psychotherapeutic drugs to the pathophysiology of psychiatric disorders, were addressed and discussed. It was at the Basel congress that Arvid Carlsson, a Swedish professor of pharmacology, presented his findings on selective changes on brain monoamines with psychotropic drugs that were to influence psychotropic drug development for decades. Neuropharmacological research focused on monoamines was instrumental to the formulation of the catecholamine hypothesis of affective disorders by Joseph Schildkraut (an American psychiatrist), and the dopamine hypothesis of schizophrenia by Jacques Van Rossum (a Dutch pharmacologist). Yet, by the time of the Tarragona congress in 1968, organized by Francisco Valdecasas during his own presidency, it was recognized that the pharmacological heterogeneity in responsiveness to the same drug within a psychiatric diagnosis has precluded the possibility of deriving meaningful information about the biochemical underpinning of mental disorders by studying the mode of action of psychotropic drugs.

The pharmacological heterogeneity within psychiatric diagnoses also delayed the acceptance of psychotropic drugs by the psychiatric community. It was only in the 1970s, during the presidencies of Eric Jacobssen, Hanns Hippius, Pierre Deniker and Leo Hollister, that pharmacotherapy became the primary form of treatment of mental disorders. Presentations, like Mogens Schou's, a Danish pioneer of neuropsychopharmacology, at the Prague congress in 1970 during Heinz Lehmann's presidency, on the prophylactic use of lithium in bipolar

disorder, and of many others, to international audiences at other CINP congresses, facilitated this development.

In the early 1980s, during the presidencies of Carlsson, Paul Janssen and Paul Kielholz, neuropharmacological research extended from cerebral monoamines to neuropeptides and from neurochemistry at the synaptic cleft to receptor bindings. Since the clinical methodology remained restricted to that developed for the demonstration of "efficacy" (with the objective that no substance with potential benefit in a given population should be discarded), the gap between pre-clinical and clinical findings grew so wide that it required the translation of neuropharmacological findings for clinicians that the new drugs could be used optimally. With these new developments, the emphasis at CINP congresses shifted to presentations that would guide and train a steadily growing new cadre of neuropsychopharmacologists to be involved in teaching prescribing physicians how to use of psychotropic drugs with consideration of their pharmacodynamic and pharmacokinetic properties. The changes began in the mid-1980s, during the presidencies of Ole Rafaelsen and William Bunney, with the establishment of Travel Awards for Young Investigators to be able to attend CINP meetings. They continued throughout the 1990s by extending CINP activities to presidents' workshops, during the presidencies of Alec Coppen and Julien Mendlewicz, and regional meetings, during the presidencies of Lewis Judd and Claude de Montigny, increasing the size of the biennial meetings and implementing a "mentor-mentee" program during the presidencies of Julien Mendlewicz and Giorgio Racagni. Simultaneously with these developments in 1986, during Rafaelsen's presidency, CINP's logo was introduced; in 1999 (July 26), during Helmut Beckmann's presidency, the Collegium was incorporated in Zurich; and, at the dawn of the 21st century, during the presidencies of Eugene Paykel and Herbert Meltzer, the corporation established its central office in Nashville with Oakley Ray as its executive secretary and regionalized to facilitate its educational activities.

The increasing emphasis in CINP on communication of information and education about the use of psychotropic drugs was formally recognized in 2006 during Brian Leonard's presidency with the amendment of CINP's constitution to include training programs as one of the three activities for the CINP to achieve its objectives. By appointing Norman Sartorius, the former director of the division of mental health of the World Health Organization, as chairman of a special task force with the mandate to review the evidence for the use of antidepressant medications, Leonard succeeded in having the report of the task force and CINP's recommendations about the use of antidepressants based on the report, discussed worldwide.

It was also during Leonard's presidency that CINP's history committee, chaired at the time by Ronaldo Ucha Udabe (an Argentine psychiatrist) published its review on the neurotransmitter era, the first epoch in the history of neuropsychopharmacology (Ban and Ucha Udabe 2006). The history committee has evolved from a working collaboration that started in 1986 at CINP's San Juan congress between Ole Rafaelsen, Hanns Hippius and Tom Ban with the objective to document the founding and early years of the organization. However, in the mid-1990s, with the appointment of David Healy, a psychiatrist with special interest in critically reviewing the history of neuropsychopharmacology, and Edward Shorter, a medical historian to the committee, the objective of the committee was extended to review, in autobiographical accounts, the history of neuropsychopharmacology and the CINP.

While CINP's educational activities were extended by meetings worldwide, organized by the antidepressant task force, CINP's administrative structure was completed in 2006 during Torgny Svensson's presidency, after moving the central office from Nashville to Glasgow, with the appointment of Mike Mitchell as the corporation's first executive director. Svensson's presidency concludes the first 50 years in the history of CINP with this Congress, the third CINP Congress in Munch, organized by Hans-Jurgen Möller.

Far from being an aging, moribund society, the CINP is an active, energetic society at its 50<sup>th</sup> anniversary, invigorated by the debate triggered by the report of its antidepressant task force in CINP's journal, *The International Journal of Neuropsychopharmacology*, launched in 1998 during de Montigny's presidency, with Bernard Lerer as editor-in chief. Central to this debate is the limitation of the methodology used in clinical investigations with antidepressants and the danger that a review of evidence-based findings without the necessary understanding the limitations of the methodology could lead to wrong conclusions about the optimal use of antidepressants.

Today, the CINP is a prosperous organization with a membership approaching 1,500 from 52 countries on six continents. But the organization is confronted with the fact that despite all advances in neuropharmacological research, rational drug development has not progressed since the birth of neuropsychopharmacology in the 1950s.

In about two days, at the business meeting, Robert Belmaker will take over the baton from Torgny Svensson to lead the CINP into a new epoch. It remains to be seen whether the organization will continue only moving further in the direction set in the mid-1980s and become an even more powerful organization in the communication of information as it is, or

extends its activities by spearheading a continuous pharmacological re-evaluation of psychiatric classifications and diagnoses to fulfill the vision of Ernst Rothlin, its founding president, to generate information that would guide the pharmaceutical industry in the development of rational pharmacological treatments for mental illness.

## **References:**

Ban TA. Neuropsychopharmacology and the history of pharmacotherapy in psychiatry. A review of developments in the 20th century. In: Ban TA, Healy D, Shorter E, editors. Reflections on Twentieth-century Psychopharmacology. Budapest: Animula; 2004, pp. 697-720.

Ban TA. A history of the Collegium Internationale Neuro-Psychopharmacologicum. Progress in Neuro-Psychophamacology & Biological Psychiatry 2006; 30: 599-616.

Ban TA, Ucha Udabe R, editors. The Neurotransmitter Era in Neuropsychopharmacology. Buenos Aires: Polemos; 2006.

September 12, 2013

# Psychopharmacology and the First 50 Years in the History of CINP

"Psychopharmacology and the first 50 years in the history of the CINP" (PowerPoint presentation) was prepared for the 26<sup>th</sup> biennial meeting of the organization held in Munich in 2008. It corresponds with the presentation "Fifty years progress," delivered in the symposium organized by Fridolin Sulser in celebration of CINP's 50 years anniversary.



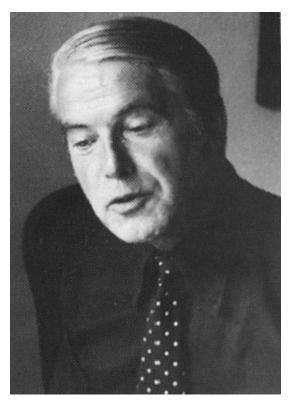


## **Bernard (Steve) Brodie**

## **Alfred Pletscher**

National Heart Institute USA

Reserpine and iproniazid have opposite effects on brain serotonin levels and in some patients on mood



Wolfgang de Boor



**Corneille Radouco-Thomas** 

Proposed at first international congress on Psychotropic Drugs

(Milan, May 1957) the founding of the CINP



**Ernst Rothlin** 

Former Director of Sandoz Founding President September 2, 1957



Hanns Hippius German psychiatrist

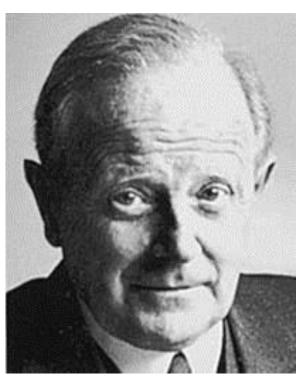


Cornelis C. Van Rhyn Dutch psychiatrist

Two of the 32 founders of the CINP



Emilio Trabucchi
Professor of Pharmacology
Purpose: Education



**Ernst Rothlin**Former Director of Sandoz
Purpose: Research

1958-1964

## First Four Congresses

Ernst Rothlin	Ernst Rothlin	Paul Hoch	Hans Hoff	

1<sup>st</sup> Rome 1958 2<sup>nd</sup> Basel 1960 3<sup>rd</sup> Munich 1962 4<sup>th</sup> Birmingham 1964

## Issues at the Heart of Neuropsychopharmacology:

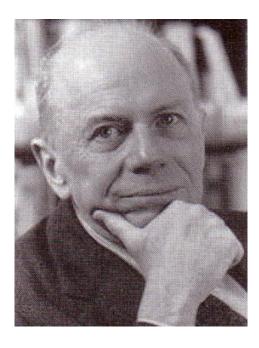
- \* Relevance of "model psychoses" to naturally occurring psychoses
- \* Mode of action of drugs with known therapeutic effects
- \* Translation of findings from animal to man
- \* Relevance of mode of action of drugs to pathophysiology of psychoses



**Arvid Carlsson**Swedish pharmacologist

Selective changes in brain monoamines with psychotropic drugs

Influenced psychotropic drug development to date





## Joseph Schildkraut

American psychiatrist Catecholamine hypothesis affective disorders (1965)

## Jacques Van Rossum

Dutch pharmacologist Dopamine hypothesis schizophrenia (1966)

1966-1968

Jean Delay Francisco Valdecasas

5<sup>th</sup> Washington DC 1966 6<sup>th</sup> Tarragona, Spain 1968

## Pharmacological Heterogeneity within Diagnoses:

- \* Precluded the generation of information about pathophysiology (biochemical underpinning) of mental disorders
- \* Delayed acceptance of psychotropic drugs for clinical use

#### 1970-1978

Lehmann	Jacobssen	Hippius	Deniker	Hollister
7th Prague	8th Copenhagen	9th Paris	10 <sup>th</sup> Quebec	11 <sup>th</sup> Vienna
1970	1972	1974	1976	1978

## **During the 1970s**

Psychotropic drugs became primary form of treatment

1980-1984

Arvid Carlsson	Paul Janssen	Paul Kielholz
12 <sup>th</sup> Goteborg 1980	13 <sup>th</sup> Jerusalem 1982	14 <sup>th</sup> Florence 1984

## In the Early 1980s

## Training of New Cadres of Neuropsychopharmacologists

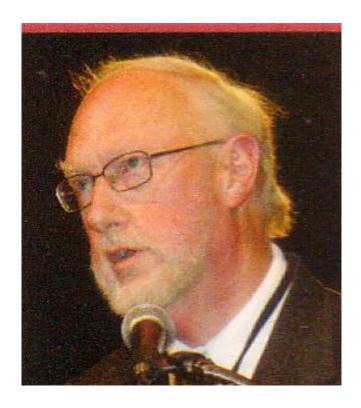
(1984-)

Period	President	Congress	<u>Development</u>
1984-1986	Ole Rafaelsen	San Juan	Logo
1986-1988	William Bunney	Munich	Travel Awards
1988-1990	Alec Coppen	Kyoto	Presidents' Workshop
1990-1992	Julien Mendlewicz	Nice	1st Presidents' Workshop
1992-1994	Giorgio Racagni	Washington DC	Regional meeting
1994-1996	Lewis Judd	Melbourne	1st Regional meeting
1996-1998	Claude de Montigny	Glasgow	Pioneer award
1998-2000	Helmut Beckmann	Brussels	Incorporation: July 26, 1999
2000-2002	Eugene Paykel	Montreal	Regionalization
2002-2004	Herbert Meltzer	Paris	Opening Central Office

<sup>\*</sup> Neuropharmacological research extended from neurochemistry at synaptic cleft to receptor bindings

<sup>\*</sup> Clinical methodology remained restricted to demonstrating therapeutic efficacy

<sup>\*</sup> The gap grew so wide that it required the translation of findings that their clinical relevance could be understood





Brian Leonard
President
2004-2006
Amendment of Constitution
to include training programs

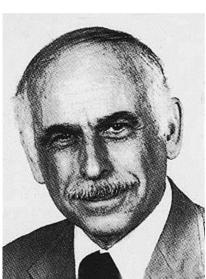
Norman Sartorius
Chairman
Antidepressant Task Force
Worldwide forum
to discuss recommendations





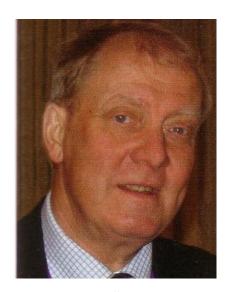


**Hanns Hippius** 



**Thomas Ban** 

The history committee began in 1986 as a working collaboration.

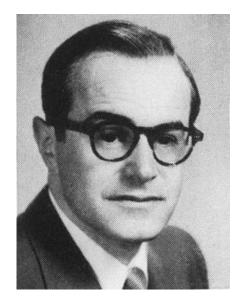


Torgny Svensson
President
2006-2008
Extension of educational activities
Completion of administrative structure

## **Central Theme in Debate**

(antidepressant task force report)

A review of evidence based findings generated in multi-center clinical studies designed with power statistics with the employment of consensus-based diagnoses and sensitized rating scales could lead to wrong conclusions about the optimal use of antidepressants.



Fritz Freyhan 1956 Pharmacological re-evaluation of psychiatric nosology needed



Donald Klein 2008 Pharmacological dissection sabotaged



Robert Belmaker
President elect

## The CINP'S Achievements in First 50 Years

Grown into a powerful organization

Membership grew to 1,100 from 52 countries

Transformation of thinking in psychiatry from psychological to biological

## **Entering New Era**

To continue on the road to becoming the world's most influential organization in the education of pharmacotherapy with psychotropic drugs.

&

To encourage scientific study in order to identify pharmacologically homogeneous populations that would make possible the generation of information on the pathophysiology (biochemical underpinning) of mental illness by studying the mode of action of psychotropic drugs.



**Ernst Rothlin** Founding President

Saw the CINP as a unique organization that will guide(pharmaceutical industry in developing increasingly more (selective and) effective drugs for mental illness.

September 26, 2013

March 12, 2020