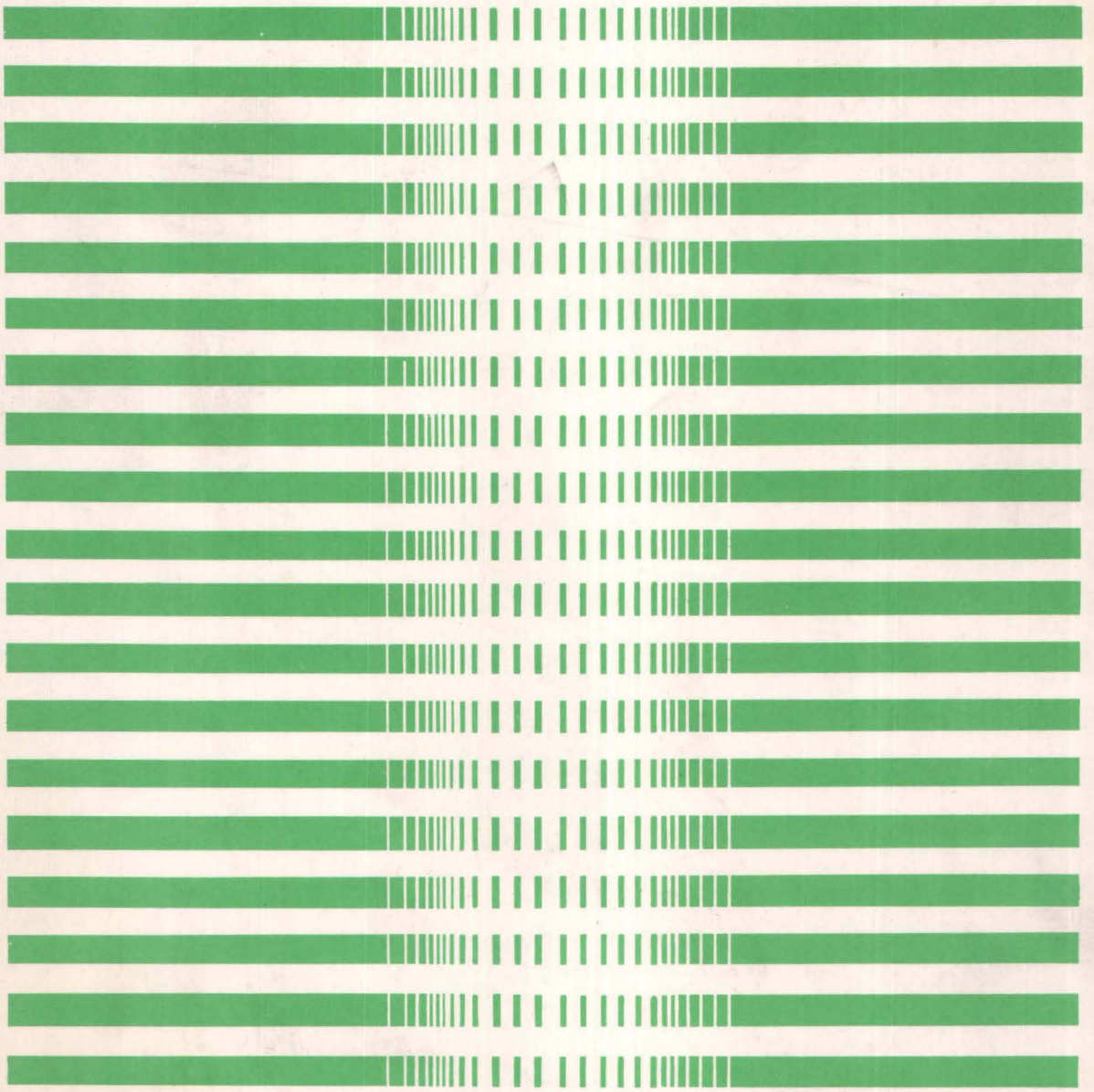
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神経化学

日本神経化学会事務局報〔12〕

〔付〕日本神経化学会会則



昭和56年12月

日本神経化学会事務局報

〔12〕

1. 理事会議事録

○昭和５６年度第１回理事会

と　き：昭和５６年２月７日

ところ：慶応義塾大学医学部生理学教室会議室

出席者：塚田裕三，黒川正則，加藤尚彦
宮本英七，柿本泰男，高垣玄吉郎
植村慶一，永津俊治，早石　修
垣内史朗，高橋　良，大月三郎

欠席者：な　し

1）理事長互選の件

互選の結果，塚田裕三氏（慶大・医・生理）に決定した。

2）常務理事互選の件

互選の結果，黒川正則氏（東大・医・脳研）に決定した。

3）補充理事の推薦の件

専門別，地方別及び選挙時の得票数を考慮して投票の結果，次の三氏が推薦された。

吉田　博（阪大・医・薬理）
佐武　明（新大・医・脳研）
栗山欣弥（京府医大・薬理）

4）監事推薦の件

理事会として
平野修助（東邦大・医・生理）
高坂睦年（岡山大・医）
の両氏を監事として推薦した。

5）第２４回日本神経化学会実施案

世話人代表・高橋良氏（長崎大・医・精神神経）より示めされ，討議の後，下記の如く決定した。

期日：昭和５６年１１月２７日（金）
２８日（土）
ところ：ＮＢＣホール（長崎市）
原稿〆切：昭和５６年９月１２日（土）
審査会：昭和５６年１０月３日（土）

6）第２４回日本神経化学会プログラム編成専門委員を下記１０氏に委嘱した。

内村英幸（国立肥前療養所）
公文　明（佐賀医大・生化）
武富　保（信大・医・順応研）
芳賀達也（浜松医大・生化）
融　道男（国立神経センター）
森　浩一（阪市大・医・神経）
三木直正（金沢大・がん研）
北村邦男（埼玉医大・生理）
鈴木義之（東大・医・小児）
御子柴克彦（慶大・医・生理）

但し公文明氏は海外出張のため辞退されたため，９名をもって構成した。

7）評議員選任の件

下記９９名の候補者を推薦し総会で承認を求めることとした。（ＡＢＣ順）

阿部　輝雄（新大・脳研）
天野　武彦（三菱生命研）
出口　武夫（都神経研）
芳賀　達也（浜松医大・生化）
早石　　修（京大・医・医化）
飯田　静夫（東医歯大・医・生化）
長谷川和夫（聖マ医大・神経）
鳩谷　　龍（三重大・医・精神）
林　　浩平（群大・医・生化）
挾間　秀文（鳥大・医・精神）
日高　弘義（三重大・医・薬理）
平野　修助（東邦大・医・生理）
市山　　新（浜松医大・生化）
柿本　泰男（愛媛大・医・精神）
垣内　史朗（阪大・医・高次研）
鴨下　重彦（自治医大・小児）
加藤　　武（東工大・生命化学）
仮屋　哲彦（東医歯大・神経）
笠井　久隆（都立大・理・化学）
柏俣　重夫（愛知コロニー）
片岡　喜由（愛媛大・医・生理）
加藤　尚彦（東大・医・脳研）
加藤　伸勝（京府医大・精神）
加藤　隆一（慶大・医・薬理）
川北　幸男（阪市大・医・神経）
城戸　　亮（和医大・病態生化）
小林　健一（都立松沢病院）
高坂　睦年（岡山大・医）
小宮　義璋（東大・医・脳研）
熊倉鴻之助（上智大・生命科学研）

熊代　永（福島医大・精神）
公文　明（佐賀医大・生化）
栗原　正（新大・脳研）
栗山　欣弥（京府医大・薬理）
黒田洋一郎（都神経研）
黒川　正則（東大・医・脳研）
町山　幸輝（群大・医・精神）
松田　友宏（名市大・医・薬理）
松谷天星丸（名保衛大・医・総医研）
三木　直正（金沢大・がん研）
御子柴克彦（慶大・医・生理）
三宅　正治（愛媛大・医・精神）
宮武　正（自治医大・神経内科）
宮本　英七（熊大・医・薬理）
宮本　侃治（国立神経センター）
森　昭胤（岡山大・医・脳代謝研）
森　浩一（阪市大・医・神経）
永井　克孝（東大・医・生化）
永田　豊（名保衛大・医・生理）
永津　俊治（東工大・生命化学）
中嶋　照夫（大阪第２警察病院）
中村　陸郎（都立府中病院・神経）
中沢　欽哉（京大・医・薬理）
中沢　恒幸（名保衛大・医・神経）
成瀬　浩（国立神経センター）
西村　健（阪大・医・精神）
西塚　泰美（神戸大・医・生化）
野口　鉄也（慶大・医・生理）
野村　正彦（名保衛大・医・生理）
小笠原信明（愛知コロニー）
小川　紀雄（岡大・医・　内）
岡田　安弘（神戸大・医・生理）
奥山　典生（都立大・理・化学）
大塚　正徳（東医歯大・医・薬理）
大月　三郎（岡山大・医・精神）
尾崎　正若（長崎大・医・薬理）
斉藤　喜人（阪大・医・薬理）
斉藤　章二（日大・医）
佐武　明（新大・脳研・神経化学）
嶋津　孝（愛媛大・医・医化）
瀬川　高朗（広大・薬・薬効）
清水　宏俊（日本ロシュ研）
庄盛　敏廉（岡山大・医・脳研）
反町　勝（鹿児島大・医・生理）
須田　治彦（慶大・医・生理）
多田　啓也（東北大・医・小児）
高垣玄吉郎（都神経研）
高橋　良（長崎大・医・精神）
高橋　康夫（新大・脳研・神経薬理）
武富　保（信州大・医・順応研）
竹田　稔（昭大・医・生化）
竹内　宏（岐阜大・医・生理）
玉井　洋一（北里大・医・生化）
田中千賀子（神大・医・薬理）
田中　亮（名市大・医・生化）
谷口　和覧（国立大阪病院・神経）
田代　朋子（東大・医・脳研）
融　道男（国立神経センター）
塚田　裕三（慶大・医・生理）
内村　英幸（国立肥前療養所）
植村　慶一（埼玉医大・生理）
宇尾野公義（都立神経病院）
渡辺　昌祐（川崎医大・精神）
八木　国夫（名大・医・生化）
山上　栄（阪市大・医・神経）
山川　民夫（東大・医・生化）
山本長三郎（金大・医・生理）
横井　晋（横浜市大・医・精神）
吉田　博（阪大・医・薬理）

8）会則変更の件

塚田理事長より評議員の定数変更の件が提案され，討議の結果，下記の如く会則を変更することを決定し，次回の総会に提出して承認を求めることとした。

日本神経化学会会則

第４章　役員，評議員および職員

第２１条　本会に評議員をおく。

2. 評議員の定数は５０名乃至100名とする。
3. 評議員は正会員中から総会において選任する。
4. 理事はその任期中は評議員となる。

第２２条　評議員には第２０条の規定を準用する。

第２３条　評議員は評議員会を組織し，本会の運営上の重要事項について理事会の諮問に応ずるものとする。

第２４条　本会の事務を処理するため職員をおく。

2. 職員は理事長が任免し理事会の承認をうける。
3. 職員は有給とすることが出来る。

改　訂　案

第２１条　本会に評議員をおく。

2. 評議員の定数は５０名乃至１５０名とする。

9）名誉会員推薦の件

塚田理事長より台弘氏（山田病院）を名誉会員に推薦したいとの提案がなされ，理事会として推薦することを決定し，総会で承認を求めることとした。

10）学会運営検討委員会の設置の件

学会運営検討委員会を設置し，発足されることに決定した。

但し本委員会は今期理事会に付置する諮問委員会とすることとした。

委員長：加藤尚彦（東大・医・脳研）

委員の選定は委員長一任とし理事会の承認を受けるものとした。尚理事会はこの委員会に理事１名を入れることを条件し高垣理事を推薦した。

○昭和５６年度第２回理事会

と　き：昭和５６年１０月３日（土）

ところ：日本都市センター会議室

出席者

理事：塚田裕三，黒川正則，加藤尚彦
宮本英七，柿本泰男，高垣玄吉郎
植村慶一，永津俊治，早石　修
垣内史朗，高橋　良，大月三郎
吉田　博

監事：平野修助，高坂睦年

欠席者：佐武　明，栗山欣弥

1）庶務会計報告

昭和５５年９月１日～昭和５５年１２月３１日までの決算報告があり承認された。

昭和５５年度　追加決算報告

（55.9.1～55.12.31）

収　　入		支　　出	
一般会費	1,078,500	事務局事務員謝金	424,000
賛助会費	0	事務局交通費（学会出張費含）	202,760
抄録売上代	2,472,000	アルバイト代	25,890
学会参加費	1,004,500	印刷代（事務局報及び名簿）	749,710
雑収入（英文抄録代含）	86,672	抄録集印刷代	1,310,000
小　計	4,641,672	学会運営費	0
前年度繰越金	1,092,185	会議費（旅費含）	464,245
合　計	5,733,857	通信連絡費	484,166
次年度繰越金	1,849,476	事務用品費	85,495
		事務雑費	11,965
		理事選挙費	126,150
		合　計	3,884,381

また昭和５６年度会計の中間報告がなされた。

昭和５６年度　中間報告

（56.1.1～56.9.30）

収　　入

	予　算 (56.1.1～56.12.31)	収　入	未収入分
一般会費	2,500,000	2,470,900	29,100
賛助会費	660,000	550,000	110,000
抄録売上代	2,500,000	120,300*	2,379,700
学会参加費	750,000	0	750,000
雑収入（利息・英文抄録代含）	100,000	27,399	72,601
小　計	6,510,000	3,168,599	3,341,401
前年度繰越金	1,382,185	1,849,476	
合　計	7,892,185		

備考　　＊前年度売掛金

支　　出

	予　算 (56.1.1～56.12.31)	中間支出	支出残
事務局事務員謝金	1,200,000	721,400	478,600
事務局交通費（学会出張費含）	250,000	76,590	173,410
事務局アルバイト代	500,000	139,230	360,770
印刷代（事務局報含）	1,200,000	417,140	782,860
抄録集印刷代	1,700,000	0.	1,700,000
学会運営費	600,000	600,000	0
会議費（旅費含）	700,000	217,700	482,300
通信連絡費	600,000	201,980	398,020
事務用品費	100,000	31,430	68,570
事務雑費	100,000	24,555	75,445
合　計	6,950,000	2,430,025	4,519,975
次年度繰越金	942,185		

昭和５７年１月１日～昭和５７年１２月３１日までの予算案が塚田理事長より示され，これを承認した。

昭和５７年度　予算案
（57.1.1～57.12.31）

収　　入		支　　出	
一般会費（@3,500×1,000）	3,500,000	事務局事務員謝金	1,200,000
賛助会費	650,000	事務局交通費（学会出張費含）	200,000
抄録売上代（@5,500×500）	2,750,000	事務局アルバイト代	500,000
学会参加費（@2,500×300）	750,000	印刷代（事務局報含）	1,320,000
雑収入（英文抄録代含）	100,000	抄録集印刷代	1,870,000
小　計	7,750,000	学会運営費	600,000
前年度繰越金（見込）	942,185	会議費（旅費含）	770,000
合　計	8,692,185	通信連絡費	600,000
		事務用品費	100,000
次年度繰越金	1,432,185	事務雑費	100,000
		合　計	7,260,000

2）第２４回日本神経化学会開催の件

学会の詳細な日程が世話人代表高橋良氏から報告された。下記の如し

学会会期：昭和５６年１１月２７日（金）
２８日（土）
理 事 会：１１月２６日（木）
評議員会：１１月２７日（金）　１２：００
総　　会：１１月２７日（金）　１３：００
参 加 費：会　員　2,500円
非会員　3,500円
抄録集代：会　員　5,000円
非会員　6,000円

尚１１月２６日１５：００より「痴呆の生物学の最近の進歩」の主題による講演会が催される。

3）第２５回日本神経化学会の件

第２５回は世話人代表として永津俊治氏（東工大・生命化学）のもとに行なわれることが決定され粗案が提出された。

ところ：昭和大学　旗ノ台校舎（東京）
と　き：昭和５７年１１月１３日(土)前夜祭
１４日(日)
１５日(月)

4）学会運営検討委員会報告

加藤尚彦委員長より学会運営検討委員会構成委員が示めされ，これを承認した。

学会運営検討委員会委員
阿部　輝雄（新大・医・脳研）
内村　英幸（国立肥前療養所）
小川　紀雄（岡山大・医・脳研）
委員長 加藤　尚彦（東大・医・脳研）
黒田洋一郎（都神経科学総合研）
幹事　高垣玄吉郎（都神経科学総合研）
芳賀　達也（浜松医大・生化）
松田　友宏（名市大・医・薬理）
三木　直正（金沢大・がん研）
御子柴克彦（慶大・医・生理）
三宅　正治（愛媛大・医・精神）
宮本　英七（熊本大・医・薬理）
森　　浩一（阪市大・医・神経精神）

2. 日本神経化学会理事選挙報告

理事選挙の郵送による投票の〆切を昭和５５年１２月１３日(土)として同１２月１６日(火)正午に選挙管理委員・仮屋哲彦（東京医歯大・医・精神），黒田洋一郎（都神経科学総合研），野口鉄也（慶大・医・生理）の立会で開票が行なわれた。その結果

発信数	1012
返信数	5
有効発信数	1007
総投票数	548
内有効と認めたもの	548
無効と認めたもの	0

当選者氏名：塚田裕三，黒川正則，加藤尚彦，宮本英七，柿本泰男，高垣玄吉郎，植村慶一，永津俊治，早石修，垣内史朗，高橋良，大月三郎

この結果を理事長・塚田裕三氏に報告した。

3. 評議員会議事録

昭和５５年度評議員会
と　き：昭和５５年１１月１４日（金）
ところ：ホテル奥道後

昭和５５年度総会に提出される議案につき塚田理事長より諮問があり，これを理事会案通りに認めた。

昭和５６年度評議員会
と　き：昭和５６年１１月２７日（金）
ところ：レストラン チサン（長崎）

昭和５６年度総会に提示される議案につき塚田理事長より諮問があり，これを理事会案通りに認めた。

4. 総会議事録

昭和５５年度総会
と　き：昭和５５年１１月１４日（金）
ところ：ホテル奥道後
議　長：柿本泰男

1）庶務会計報告
昭和５５年度決算報告が提示され承認された。つづいて昭和５６年度予算案が提示され承認された。

2）プログラム編成報告

本年度の応募件数	１０７件
採用不可となったもの	９件
採　用　演　題	９８件

3）会則変更の件

日本神経化学会会則
（昭和４１年１０月８日制定）
（昭和４５年１０月１７日改正）
（昭和５０年１１月１５日改正）
（昭和５１年１０月１６日改正）
（昭和５５年１１月１４日改正）

第６章　会　　計

第３８条　本会の事業遂行に要する費用は，会費，事業に伴う収入をもって支弁する。

第３９条　本会の収支決算は毎年会計年度が終了後理事長が作成し，監事の意見をつけ理事会および総会の承認を受けなければならない。

第４０条　本会の会計年度は毎年９月１日に始まり８月３１日迄とする。

Ⓑ　年会費値上げの件。塚田理事長より昭和５６年度予算が提案説明され，討議が重ねられた結果，会計年度期日の変更に伴い４ヵ月の追加予算を組まねばならず，この分の支出超過が見込まれ，さらに郵便料金及び国鉄運賃の値上げ，人件費増等で，昭和５７年度予算から赤字が予想

改　訂　案

第４０条　本会の会計年度は毎年１月１日に始まり１２月３１日迄とする。

される。したがって昭和５７年度から年会費を1,000円値上げせざるを得ないことが説明され，昭和５７年度より正会員及び団体会員の年会費を3,500円とすることが承認され，総会に提出することとした。

第3章　会　　員

第６条　本会の会員は次のとおりとする。

1. 正 会 員：神経化学に関する学識または経験を有するもので本会の目的に賛同し，会費年額2,500円を納める者。
2. 名誉会員：本会に特に功労のあった正会員（外国人は正会員であることを要しない）のうちから総会の議決をもって推薦する者。ただし名誉会員は会費を納めることを必要としない。
3. 団体会員：本会の目的に賛同し会費年額2,500円納める団体（図書館を含む）
4. 賛助会員：本会の事業を後援し，会費年額10,000円以上納める者または団体
5. 学生会員：大学またはこれに準ずる学校（大学院を含まず）に在籍し，神経化学に関係ある学科を修める学生であって，本会の目的に賛同し会費年額1,500円を納める者。

第9章　付　　則

第４３条　新総会発足以前の役員，評議員は現神経化学懇話会常任委員及び委員により代行される。

第４４条　現会員はそのまま本会の会員となる。

改　訂　案

1. 正 会 員：神経化学に関する学識または経験を有するもので本会の目的に賛同し，会費年額3,500円を納める者。

3. 団体会員：本会の目的に賛同し会費年額3,500円を納める団体（図書館を含む）

追　　加

第４５条　会計年度の改訂は昭和５６年１月１日より実施する。

第４６条　昭和５５年度会費として納入したもの（昭和５４年９月１日～昭和５５年８月31日迄）は昭和５５年１２月３１日迄有効期限を延長する。

第４７条　昭和５６年度までの正会員及び団体会員の会費の年額は2,500円とする。

4）次期学会世話人および開催地の件

世話人代表：高橋良（長崎大・医・精神神経）

開　催　地：長崎

昭和５６年度総会

と　き：昭和５６年１１月２７日（金）

ところ：ＮＢＣホテル

議　長：高橋　良

1）庶務会計報告

昭和５５年９月１日～昭和５５年12月31日までの決算報告が提示され承認された。また昭和５６年度会計の中間報告がなされた。つづいて昭和５７年１月１日～昭和57年12月３１日までの予算案が提示され承認された。

2）プログラム編成報告

本年度の応募件数	１３２件
採用不可となったもの	１３件
採用演題	１１９件

3）各種委員会報告

ⅰ）科学研究費調査委員会

佐武明委員長より委員の交替の報告があった。

ⅱ）学会運営検討委員会

加藤尚彦委員長より活動状況につき報告があった。

学会運営検討委員会の成立とその活動

東京大学医学部脳研究所

加藤　尚彦

1. 成立までの経過

近年の神経科学の目ざましい発展を反映して，１９７５年以降我々の学会も内容，規模ともに急激な発展を続けている（4.資料参照）。そのため従来の学会運営法では現実に則応しきれない点が見られ，数年来改革を望む声が高く聞かれるようになって来た。そこでこれらの意見について議論する場として，1980年松山学会で，“神経化学の将来を語る”と題する学会員による集会（１１月１４日，世話入：加藤尚彦，小宮義璋，黒田洋一郎，笠井久隆）が持たれることになった。

その集会で約１２０～１３０人ほどの参加者から率直な意見が述べられ，(1) 我々の分野をよく理解する審査員が審査を受持つ，我々自身の科学研究費の応募細目の設置が望まれること，(2) 本学会の運営法（演題応募規定，審査制度，抄録集の形式，毎年の学会の発表様式，等）の問題点　などがとり上げられた。(1)の問題を検討するための機関として，“科学研究費調査委員会”（別項，同委員会報告参照），(2)の問題点の改善を目指すものとして，“学会運営検討委員会”が設置されることとなった。

2. 学会運営検討委員会の発足

今年度の新理事選挙の結果，１９８１年２月７日に第１回の理事会が開かれ，その場で下記のメンバーによる委員会が承認され発足した。

委員長	加藤　尚彦（東大医・脳研）
副委員長	宮本　英七（熊大医・薬理）
（同）	高垣玄吉郎（東京都神経研）

阿部　輝雄（新潟大医・脳研）
内村　英幸（国立肥前療養所）
小川　紀雄（岡山大医・脳研）
黒田洋一郎（東京都神経研）
芳賀　達也（浜松医大・生化）
松田　友宏（名市大医・薬理）
三木　直正（金沢大・癌研薬理）
御子紫克彦（慶大医・生理）
三宅　正治（愛媛大医・精神）
森　　浩一（大阪市大医・精神）

3. 第１回委員会

上記委員（芳賀・松田氏欠席）と，科学研究費調査委員全員（佐武，笠井，加藤，小宮，熊倉，高坂：オブザーバーとして出席）による，第１回合同委員会が，１９８１年度長崎学会において１１月２６日に開かれ，活発な討論が行われた。その結果は同日夜の理事会で報告され，現在明年度の学会から改善案が実施されるように具体的な理事会に対する答申案のとりまとめが行われつつある。次に討

論の荒筋を報告する。

(1) 学会発表論文の審査制度

学会発足当時（１９５８年）に比し，学問的レベルは格段に向上しており，現在の制度では審査に不適な場合が見られる。毎年応募演題の約１０％を不適格と判定するために，多くの費用をかけるのは効率が悪い。審査会に理事が入っているため，若手の審査員が遠慮して意見を言わなかったり，また初めて応募した会員が顔なじみでないため，その演題が不適格とされるなど，不公平となることがある，不採用の通知が一方的に応募者に通知されるのは好ましくなく，反論を受つけるべきである。審査制度があるため，本学会は閉鎖的な印象を与えるし，国際的視野に立って見ても，現在の制度が学問的発展を助けるより，阻害する両が強い。一方審査制度自体のポジティブな面として，学会のレベルを保つ上に必要であるし，合格したことにより若い研究者を鼓舞するなどの効果はある。全体的な意見の傾向としては，上記の理由により審査制度を廃止すべき（但し，よほどひどい演題は不採用とするという条件付きで），もし残すのなら上記の意見を生かすよう改革すべきである，と総めることができる。

(2) 抄録集の形態について

我々の学会の質的進展と国際化という要請に従って，抄録集の英文化が必要である。実際的には全抄録を英文化するが，一部を英文Abstractとするかの二方法が考えられる。発表様式としては，国際英文誌に掲載されることが望ましいが，国内誌に発表するとか，少なくとも自前でも英文抄録を世界の主要国に配布し，論文のPriorityがとれるよう努力すべきである。（この問題については，特に垣内史朗理事がオブザーバーとして出席され，御自分の経験から，Priorityをとれるようすべきことを強く主張された。

(3) 演題の発表形式について

十分な発表時間と口頭による十分な討論をすることが本学会の特徴であり，これを守るべきである。しかしなるべく少い会場で，なるべく多くの演題を聞けるようにすることが望ましい。だが参加者特に，臨床家にとっては3日間という会期が最長の限度である。これらの相矛盾する要請をなるべく生かすよう，ポスターの導入や一演題に対する質問時間を座長にまかせて時間を節約するなど，具体的な方法を模索すべきである。

(4) その他に，国際学会，他の学会との関連，交渉を深めること。現在の理事および評議員が現会員を正しく代表しているかどうか。研究費を得るための運営はどうすべきか。などの問題点が指摘された。

4. 発表演題より見た学会の発展推移（資料）

１９７１年より１９８１年までの我々の学会における発表演題に，一題当り数ケのkey wordをつけ，PDP 11－70 computing systemを用いて，key word別の演題数を数えて，発表演題に表われた学問的な動向を分析した。

発表演題数は１９７５年までは３５～５０題を前後したが，以後６６（'76），76（'77），74（'78），94（'79），98（'80），１１９（'81）と毎年確実に増加したが，全演題中で純粋に臨床的なテーマを取扱った演題数は０～１０題の間を一定の傾向なく変動した。残りの演題数は基礎的なテーマを扱っており，１９８１年度の学会員の構成数（９月現在，１１４２名；うち臨床教室所属会員３８％：事務局調べ）から明らかなように，臨床教室でも基礎生化学的なテーマを研究していることを示している。

演題のkey word別の分類によると，この１１年間にprotein，enzyme，transmitter，synapse等のテーマに関する演題数の増加率は２～３倍なのに反し，culture（primary，clonal cell，organ）やImmunology（radioimmunoassay，enzyme immuno－assay，immunohistochmisttry）などの技術

的な発展を反映する演題数は，１９７５年を契機として急激に増加している。同様にreceptor，neuropeptide，calmodulin などを扱う演題は１９７５年，１９７６年より表われ，本年度まで急激に増加し，本年度初めてmonoclonal（antibody）を扱う演題２題が登場している。

以上世界的な趨勢より２～４年遅れのlagは見られるが，我国における研究テーマも従来のneurochemistryに加えて，新たにneurobiologyというカテゴリーで統括すべき傾向に向っており，総演題数の増加もこの分野に負うところが大きい。この現象を支えるものとして，基礎生物学系の研究室からの参加会員数が増加しつつあることが挙げられよう。しかし本学会の特徴として，従来のneurochemistryの研究層は充分厚く，neurobiologicalな研究の基盤をなしており，また臨床研究が総数に占める割合は減少しつつあるが，常に学問的な貢献を続けて来たことも事実であろう。

4）会則変更の件

会則変更が提示され，承認された。

5）新評議員委嘱の件

日本神経化学会評議員候補者名簿（昭和56年11月～昭和60年10月）

阿部　輝雄(新大・脳研)
天野　武彦(三菱生命研)
出口　武夫(都神経研)
芳賀　達也(浜松医大・生化)
早石　　修(京大・医・医化)
飯田　静夫(東医歯大・医・生化)
長谷川和夫(聖マ医大・神経)
鳩谷　　龍(三重大・医・精神)
林　　浩平(群大・医・生化)
挾間　秀文(鳥大・医・精神)
日高　弘義(三重大・医・薬理)
平野　修助(東邦大・医・生理)
市山　　新(浜松医大・生化)
柿本　泰男(愛媛大・医・精神)
垣内　史朗(阪大・医・高次研)
鴨下　重彦(自治医大・小児)
加藤　　武(東工大・生命化学)
仮屋　哲彦(東医歯大・神経)
笠井　久隆(都立大・理・化学)
柏俣　重夫(愛知コロニー)
片岡　喜由(愛媛大・医・生理)
加藤　尚彦(東大・医・脳研)
加藤　伸勝(京府医大・精神)
加藤　隆一(慶大・医・薬理)
川北　幸男(阪市大・医・神経)
城戸　　亮(和医大・病態生化)
小林　健一(都立松沢病院)
高坂　睦年(岡山大・医)
小宮　義璋(東大・医・脳研)
熊倉鴻之助(上智大・生命科学研)
熊代　　永(福島医大・精神)
公文　　明(佐賀医大・生化)
栗原　　正(新大・脳研)
栗山　欣弥(京府医大・薬理)
黒田洋一郎(都神経研)
黒川　正則(東大・医・脳研)
町山　幸輝(群大・医・精神)
松田　友宏(名市大・医・薬理)
松谷天星丸(名保衛大・医・総医研)
三木　直正(金沢大・がん研)
御子柴克彦(慶大・医・生理)
三宅　正治(愛媛大・医・精神)
宮武　　正(自治医大・神経内科)
宮本　英七(熊大・医・薬理)
宮本　侃治(国立神経センター)
森　　昭胤(岡山大・医・脳代謝研)
森　　浩一(阪市大・医・神経)
永井　克孝(東大・医・生化)
永田　　豊(名保衛大・医・生理)
永津　俊治(東工大・生命化学)
中嶋　照夫(大阪第2警察病院)
中村　陸郎(都立府中病院・神経)
中沢　欽哉(京大・医・薬理)
中沢　恒幸(名保衛大・医・神経)
成瀬　　浩(国立神経センター)
西村　　健(阪大・医・精神)
西塚　泰美(神戸大・医・生化)
野口　鉄也(慶大・医・生理)
野村　正彦(名保衛大・医・生理)
小笠原信明(愛知コロニー)
小川　紀雄(岡大・医・III内)
岡田　安弘(神戸大・医・生理)
奥山　典生(都立大・理・化学)
大塚　正徳(東医歯大・医・薬理)
大月　三郎(岡山大・医・精神)
尾崎　正若(長崎大・医・薬理)
斉藤　喜八(阪大・医・薬理)
斎藤　章二(日大・医)
佐武　　明(新大・脳研・神経化学)
嶋津　　孝(愛媛大・医・医化)
瀬川　富朗(広大・薬・薬効)
清水　宏俊(日本ロシュ研)
庄盛　敏廉(岡山大・医・脳研)
反町　　勝(鹿児島大・医・生理)
須田　治彦(慶大・医・生理)
多田　啓也(東北大・医・小児)
高垣玄吉郎(都神経研)
高橋　　良(長崎大・医・精神)
高橋　康夫(新大・脳研・神経薬理)
武富　　保(信州大・医・順応研)
竹田　　稔(昭大・医・生化)
竹内　　宏(岐阜大・医・生理)
玉井　洋一(北里大・医・生化)
田中千賀子(神戸大・医・薬理)
田中　　亮(名市大・医・生化)
谷口　和覧(国立大阪病院・神経)
田代　朋子(東大・医・脳研)
融　　道男(国立神経センター)
塚田　裕三(慶大・医・生理)
内村　英幸(国立肥前療養所)
植村　慶一(埼玉医大・生理)
宇尾野公義(都立神経病院)
渡辺　昌祐(川崎医大・精神)
八木　国夫(名大・医・生化)
山上　　栄(阪市大・医・神経)
山川　民夫(東大・医・生化)
山本長三郎(金大・医・生理)
横井　　晋(横浜市大・医・精神)
吉田　　博(阪大・医・薬理)

6）監事承認の件

理事会より推薦された下記２名の監事が承認された。

平野　修助　（東邦大・医・生理）

髙坂　睦年　（岡山大・医）

7）名誉会員推薦の件

台　弘氏が推薦され，承認を受けた。

8）次期学会世話人および開催地の件

世話人代表：永津　俊治(東工大・生命化学)

開　催　地：東京

5. 第２４回日本神経化学会プログラム編成委員会報告

と　き：昭和５６年１０月３日（土）

ところ：日本都市センター（東京）

出席者

理事：塚田裕三，黒川正則，加藤尚彦
宮本英七，柿本泰男，高垣玄吉郎
植村慶一，永津俊治，早石　修
垣内史朗，高橋　良，大月三郎
吉田　博，栗山欣弥（文書で回答）

監事：平野修助，高坂睦年

プログラム専門委員：
北村邦男，公文　明，三木直正
御子柴克彦，森　浩一，鈴木義之
武富　保，融　道男，内村英幸

1）本年度の応募件数　１３２件

2）各応募原稿は例年のごとく２名の査読者が決められ，採用，保留，不可の３段階に分け審査が行なわれた。

3）採用不可となったもの　１３件

4）採用したもの　１１９件

４会場を使用し２日間に配分し，プログラム編成を行った。

6. 第２４回日本神経化学会プログラム

〈世話人代表〉　高橋　良
（長崎大・医・精神）

〈日　時〉　昭和56年11月27日（金）
28日（土）

〈会　場〉　ＮＢＣホール
長崎市上町１番35号
TEL. 0958－24－3111

第１日　11月27日(金)

●Ａ会場

9：00～12：00

1．多発性硬化症患者の脳白質のホモジネートおよび精製ミエリン中のミエリン糖蛋白ならびに他のミエリン蛋白の定量的研究
……佐藤修三*，R. H. Quarles, D. Johnson, R. O. Brady（NINCDS, NIH, *現・新大・脳研・神経内科）

2．各種神経・精神疾患患者における髄液中GABA濃度
……黒田広生(岡大・医・Ⅲ内)，小川紀雄(同・脳研)，山脇泰秀，貫名至，大藤真(同・Ⅲ内)，山本光利，大月三郎(同・神経精神)

3．ヒト尿中アセチルアスパラギン酸と精神・神経疾患
……森野日出緒，三宅正治，柿本泰男(愛媛大・医・神経精神)

4．初老期・老年期痴呆における脳蛋白の変化(Ⅴ)　－神経原線維変化の構成蛋白について－
……多田国利，播口之朗，武田雅俊，尾崎哲，窪田耕輔・西村健(阪大・医・精神)

5．陳旧性パーキンソン病におけるNE補充療法としてのL-Threo-3, 4-Dihydroxyphenylserine（L-Threo-DOPS）治療
……楢林博太郎，近藤智善(順天堂大・医・脳神経内科)，林昭，鈴木友和(阪大・医・Ⅲ内)

6．オリーブ・橋・小脳萎縮症の小脳における神経伝達物質の変化
……村本治，金沢一郎(筑波大・臨床医系・神経内科)

7．重水素標識アミノ酸を用いた in vivo の代謝変化の研究
……鈴木恵美子，林時司，成瀬浩(国立神経センター)，高橋良(長崎大・医・精神)

8．うつ病における 5HTPresponder の研究
－うつ病患者に対する L-5HTPester 点滴静注時の精神症状と血中パラメーター－
…大島直和，金子元久，沼田吉彦，星野仁彦，山本俊昭，渡辺厚，渡辺実，熊代永(福島県立医・神経精神)

9．脊髄小脳変性症におけるβ受容体感受性に関する研究
……小山司，岡五百理，加沢鉄士，松原繁広，三国雅彦，山下格(北大・医・精神)

12：00～13：00　――昼食(評議員会)――

13：00～13：30　――総　会(Ａ会場)――

〔議　題〕　1．庶務・会計報告　2．プログラム編成報告　3．各種委員会報告　4．昭和55年度追加決算承認の件　5．会則変更の件　6．新評議員委嘱の件　7．名誉会員推選の件　8．昭和57年度予算の件　9．次期学会世話人および開催地の件　10．その他

13：40～15：20

10. Rolling Mouse Nagoya の中枢神経系における GABA およびグルタミン酸受容体ならびにリン脂質について。

……山口知子，林恵齢(東京女子医大・生化)，村上博彦，丸山勝一(同・脳神経センター・神経内科)

11．正常ならびにうつ病モデルラットの脳セロトニンレセプター結合能に対する抗うつ剤の作用．II
……広中郁朗，立石紀昭，吉田秀夫，高橋良(長崎大・医・精神)

12．methamphetamine 慢性投与による [^{3}H]－Spiperone 高親和性結合部位の変化
……秋山一文，佐藤光源，大月三郎(岡山・医・神経精神)

13．β-フェニルエチルアミンのラット脳内ドーパミン代謝と常同行動におよぼす影響
－メトアンフェタミン投与ラットと比較して－
……中河原通夫，渡辺明子，石井一平，本橋伸高，斉藤彰一，仮屋哲彦(東医歯大・神経精神)

14．逆耐性現象形成ラットの常同行動発現時の線条体・中脳辺縁領域における dopamine 代謝。
……西川徹，俣賀宣子，高嶋瑞夫，融道男(国立神経センター・疾病III)

15：20～15：40　　――休　　憩――

15：40～17：20

15．『微細脳障害症候群モデル』ラットにおける脳 dopamine 受容体
……渡部修三(国立神経センター・疾病III)，P. Seeman(トロント大学・薬理)

16．ビリルビン性脳症：Gunnラット脳における DNA 量および化学伝達関連酵素活性
……大野拓夫(愛媛大・医・生理)

17．Gunn ラット小脳におけるタンパク濃度の低下機構について
……仙波りつ子，柏俣重夫(愛知県コロニー・周生期)

18．小脳低形成と Gunn ラット小脳の Arylsulfatase, Succinate Dehydrogenase, Lactate Dehydrogenase, Arylesterase, Acetylcholine Esterase 活性の加齢変化
……青木英子，仙波りつ子，柏俣重夫(愛知県コロニー・周生期)

19．脳障害ラットにおける脳脊髄液中エノラーゼ量の増加
……仙波禮治(愛知県コロニー・周生期)，加藤兼房(同・生化)

第2日　11月28日(土)

●A会場

9：00～12：00

20．低栄養環境下における実験的小頭症ラットの脳発育
……中原務，永吉道子，田丸政男，早川洋一，松谷天星丸(保健衛生大・医・総医研・発達生理)

21．筋ジストロフィーマウスと除神経筋の筋蛋白代謝
……溝渕睦彦，三宅正治，柿本泰男(愛媛大・医・精神)

22．実験的ヘルペスウイルス（Type 1）感染脳の生化学的研究
……阿部敏明(帝京大・医・小児)，藤原仁(同・病理)，小川希代子(同・小児)，倉田毅（東大・医科研・病理)，平岩幹男，野中千鶴(帝京大・医・小児)，所安夫(同・病理)，青山友三(東大・医科研・病理)

23．Pyrithiamine-induced Encephalopathy における脳浮腫の生化学的研究
……高橋弘，志村俊郎，中沢省三(日本医大・脳外)，吉野芳夫(同・II生化)

24．痙攣と脳内フリーラジカルについて
……平松緑，高知宏喜(岡大・医・脳研・機能生化)
河野雅弘(日本電子・応用研)，森昭胤(岡大・医・脳研・機能生化)

25．Elマウス脳RNAの発育期における変化
……山上栄，大野京介，辻正記，森浩一，川北幸男(阪市大・医・神経精神)

26．扁桃核キンドリングラットにおける痙攣準備性と脳内環状ヌクレオチドとの関連について
……沼田吉彦，金子元久，中西重雄，大島直和，森則夫，深津敏彦，板垣茂，渡辺原，田子久夫，熊代永(福島県医大・神経精神)

27．El系マウス脳の分離核の RNA ポリメラーゼの諸特性と poly（A）RNA 合成
……大西博，山上栄，森浩一，辻正記，千頭孝史，川北幸男(阪市大・医・神経精神)

28. 虚血脳における phospholipase A_1, A_2, lysophospholipase および acyl CoA:lysophospholipid acyl transferase の酵素活性
……平島豊，中田潤一，甲州啓二，遠藤俊郎，高久晃(富山医薬大・脳外)，本田昂，野田清美(同・RI実験施設)，高崎親久(東北大・理・生物有機)

12：00～13：00　　——昼　　食——

13：00～15：00

29. G_{M1}-ガングリオシドーシスの大脳，肝臓及び脾臓における糖脂質及び関連物質の異常
……原厚，笠間透，武富保(信大・医・順応研・生化)

30. レックリングハウゼン病における神経線維腫及び神経線維肉腫のガングリオシド
……土田哲也，井上由紀子(東大・医・皮膚)，新村真人(慈恵医大・皮膚)，大塚英昭，橋本康弘，背山洋右，山川民夫(東大・医・I生化)

31. Rat 脳での脂肪酸代謝の研究 I
……溝渕真人(東大・脳研・神経内科)，森崎信尋，松岡信夫，斉藤康(千葉大・医・II内)，杉田秀夫(東大・脳研・神経内科)，熊谷朗(千葉大・医・II内)

32. ジャイアント・パンダとヒグマ脳の脂質組成
－キャピラリーカラム－GLC による直鎖脂肪酸と α-ハイドロキシ脂肪酸の同時分析の応用－
……阿部久美子，玉井洋一(北里大・医・生化)

33. ラット脳ミクロソームの電子伝達系と脂肪酸代謝
……竹下正純，三木真由美，田村実，指吸俊次(大分医大・生化)

34. イノシトールリン脂質の代謝回転と環状ヌクレオチド
……貝淵弘三，佐野公彦，松原司，于乗治，高井義美(神戸大・医・II生化)

第1日　11月27日(金)

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35. 金魚視神経損傷後のオルニチン脱炭酸酵素活性上昇について。
……高坂新一(慶大・医・生理)，A. M. Heacock, B. W. Agranoff (Neurosci. Lab. Univ. of Mich.)

36. 発達期のラット脳における蛋白合成及び mRNA レベルの変化－二次元電気泳動法による分析
……荒木一明，崎村建司，吉田豊，高橋康夫(新大・脳研・神経薬理)

37. 発達期のラット脳におけるS－100蛋白 mRNA レベルの変化
……増田達，崎村建司，吉田豊，櫛谷悦子，高橋康夫(新大・脳研・神経薬理)，礒辺俊明，奥山典生(都立大・理・化学)

38. 培養毛様体神経節ニューロンに働く神経突起伸展因子の精製と性質について
……林要喜知，郭哲輝，東田陽博，三木直正(金大・がん研・薬理)

39. ラット睾丸の発育における自律神経の役割
……村野俊一，永井克也，中川八郎(阪大・蛋白研・代謝)，奥田拓道(愛媛大・医・生化)，絹谷政江(同・解剖)，熊谷朗(千葉大・医・II内)

40. ラットグリオーマ細胞中の細胞増殖促進因子
……山川洋右(保健衛生大・医・外)，加藤泰治，田中亮(名市大・医・生化I)

41. ラットグリア芽細胞由来の神経芽腫増殖抑制因子 (NGIF) の同定
…坂崎由紀夫(名市大・医・外II)，加藤泰治(同・生化)，角岡秀彦，正岡昭(同・外II)，田中亮(同・生化)

12：00～13：00　　——昼食(評議員会)——

13：00～13：30　　——総会(A会場)——

13：40～15：20

42. ラット脳ミエリンの5′-nucleotidase 活性
……小嶋久子，玉井洋一(北里大・医・生化)

43. 両生類神経組織における糖脂質とミエリン蛋白の多様性
……斉藤信太郎(山梨県立中央病院・精神), 小嶋久子, 玉井洋一(北里大・医・生化)
44. P_2 蛋白およびその構成ペプチドの脱髄活性について
……植村慶一, 北村邦男, 堀江賀与子, 鈴木勝(埼玉医大・Ⅰ生理)
45. Myelin proteolipids 由来の 5-hydroxytryptamine 結合物質の本体について
……宮川明久, 石谷良一(城西大・薬・薬理)
46. 培養小脳組織によるミエリン形成細胞の分裂と分化の神経化学的研究
……長池一博, 塚田裕三(慶大・医・生理)

15：20～15：40 ——休　　憩——
15：40～16：40
47. トリプトファン欠乏餌飼育ラットの脳ミエリンたん白及び学習行動の変動
……野村正彦, 大辻正高, 岡村邦博, 永田豊(保健衛生大・医・生理)
48. 網膜 2′, 3′-cyclic nucleotide 3′-phosphodiesterase の免疫組織化学
……西沢芳子, 栗原正, 高橋康夫(新大・脳研・神経薬理)
49. Snell 下垂体性 dwarf マウスのミエリン形成不全について
……野口鉄也, 杉崎哲朗, 塚田裕三(慶大・医・生理)

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●C会場

9：00～12：00
50. S-100タンパクの高感度エンザイムイムノアッセイ（EIA)法 －人脳脊髄液（CSF）中の S-100 タンパクとNeuron-specific enolase（NSE）の測定－
……加藤兼房(愛知県コロニー・生化), 中島孝(国立がんセンター・病理), 松谷天星丸(保健衛生大・医・総医研・発達生理)
51. Enzyme Immunoassay による膜結合性 S-100 蛋白質の測定
……古田知久, 大西林吉, 原田泰弘, 田渕和雄, 西本詮(岡山大・医・脳外)
52. 神経特異エノラーゼ（NSE）の大量調製と免疫組織化学への応用
……石岡憲昭, 磯辺俊明, 奥山典生(都立大・理・化), 中島孝(国立ガンセンター・Ⅱ病理)
53. クロマトフォーカシングカラムを使った人脳エノラーゼ（$\alpha\alpha$と$\gamma\gamma$）の精製とそれらの性質
……伊藤温子, 鈴木富士子, 加藤兼房(愛知県コロニー・生化)
54. ショウジョウバエ神経系に対するモノクローナル抗体
……藤田忍, A. Ferrus, S. L. Shotwell, S. Benzer(カルフォルニア工科大学・生物)
55. アストログリア・フィラメントの蛋白構成 －グリア繊維酸性蛋白とヴィメンチンの共存－
……横山和仁, 森啓, 黒川正則(東大・医・脳研)
56. 小脳プルキンエ細胞膜蛋白（P_{400}蛋白）の代謝的特徴
……御子柴克彦, 塚田裕三(慶大・医・生理)
57. コルヒチンによる坐骨神経無髄繊維の選択的変性
……小宮義璋(東大・医・脳研・生化)
58. カルモデュリン及びカルモデュリン類縁蛋白質の軸索内輸送
……田代朋子, 黒川正則(東大・医・脳研)

12：00～13：00 ——昼食(評議員会)——
13：00～13：30 ——総会(A会場)——
13：40～15：20
59. Calmodulin 阻害剤固定化 Sepharose による S-100 および Calmodulin の精製
……遠藤登代志, 日高弘義(三重大・医・薬理)
60. グリア性細胞の増殖に及ぼすカルモデュリン阻害剤の影響
……加藤泰治, 奥村久仁子, 伊藤仁一, 田中亮(名市大・医・生化Ⅰ)

61. ブタ脳中に存在する des（Ala-Lys）カルモデュリン
……礒辺俊明，石岡憲昭，奥山典生(都立大・理・化)
62. 脳シナプス膜のカルモデュリン様タンパク質の活性と構造の検討
……中村泰治，中条茂男，大松孝樹，相内敏弘，柴山敏子，林久美子(昭和大・薬・生化)，竹田稔(同・医・生化)，中谷一泰(同・薬・生化)，石岡憲昭，礒辺俊明，奥山典生(都立大・理・生物化学)
63. 脳のミオシン軽鎖キナーゼの特異性
……福永浩司，山本秀幸，宮本英七(熊大・医・Ⅰ薬理)

15：20～15：40　　——休　　憩——

15：40～17：40

64. ラット脳のカルモデュリン結合性蛋白質の検索
……阿部輝雄，西須英雄(新大・脳研・神経化学)
65. 向精神薬と calmodulin 及び phospholipid の相互作用
……菅野仁喜，佐々木泰治(旭化成・医薬品・生化)，日高弘義(三重大・医・薬理)
66. サンゴイソギンチャク毒素とザリガニ神経の結合
……藤田省三(生理研・生体膜)，藁科彬(新大・医・Ⅰ生理)，佐武明(同・脳研・神経化学)
67. 神経成長因子によって導き出される培養神経細胞のエンケファリン受容体
……畠中寛，井上順雄(三菱化成生命研)
68. 電気ウナギ電気器官形質膜のテトロドトキシン結合蛋白のホトアフィニティラベル
……上原政治，植村慶一(埼玉医大・Ⅰ生理)
69. ラット骨格筋培養細胞の細胞内 α-トキシン結合成分の性質
……杉山博之，山下幸子(生理学研究所)

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●C会場

9：00～12：00

70. ラット脳における^{3}H-kainate binding の内因性抑制物質
……辻村良太郎，野村純一，鳩谷龍(三重大・医・精神)
71. ラット脳の VIP（vasoactive intestinal polypeptide）受容体
……小川紀雄，水野幸子，塚本修司，森昭胤(岡大・医・脳研)，貫名至(同・Ⅲ内)
72. High affinitive GABA receptor site をもつ synaptic membrane の精製
……栗岡晋，堀誠治，松田誠(慈恵医大・医化)
73. GABA 受容体および benzodiazepine 受容体に対する GABA 構造類似体の作用の差異
……水野幸子，塚本修司，小川紀雄，森昭胤(岡大・医・脳代謝研・機能生化)
74. バルビツール酸誘導体による BABA 受容体結合の増強
……浅野富子，小笠原信明(愛知県コロニー)
75. 抗精神病の賦活作用と α_2-Adrenergic Receptor 阻害作用;^{3}H-Clonidine および ^{3}H-Yohimbine 結合親和性
……朝倉幹雄，塚本徹，鴨志田智津恵，平田進英，長谷川和夫(聖マリアンナ医大・神経精神)
76. 抗うつ剤長期投与と α_2，β リセプター感受性調節機構
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第1日　11月27日(金)

●D会場

9：00～12：00

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13：00～13：30　——総会(A会場)——

13：40～15：20

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第2日　11月28日(土)

●D会場

9：00～12：00

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7. 第8回国際神経化学会プログラム

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SCIENTIFIC PROGRAMME

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PC2	Amino-Acid Transmitters and Neuron-Glia Interactions
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PC3	Transmitter Interactions in the Basal Ganglia
PC3	Immune Response to Nervous System Proteins in Neurological Disease
PC3	Neurochemical Role and Regulation of Calcium
PC3	Essential Fatty Acids and Prostaglandins
PC3	Protein Phosphorylation
PC3	Phosphoinositide Metabolism
PC3	Novel Neurotoxins
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PC4	Inherited and Acquired Disorders of Brain Carbohydrate Metabolism
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PC4	Mechanisms of Neurotoxic Disease: Drugs and Other Compounds
PC4	The Use of HPLC in Neurochemistry
PC4	Brain-Gut Peptides: Latest Developments

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PLAN OF MEETING (see facing page)

Key

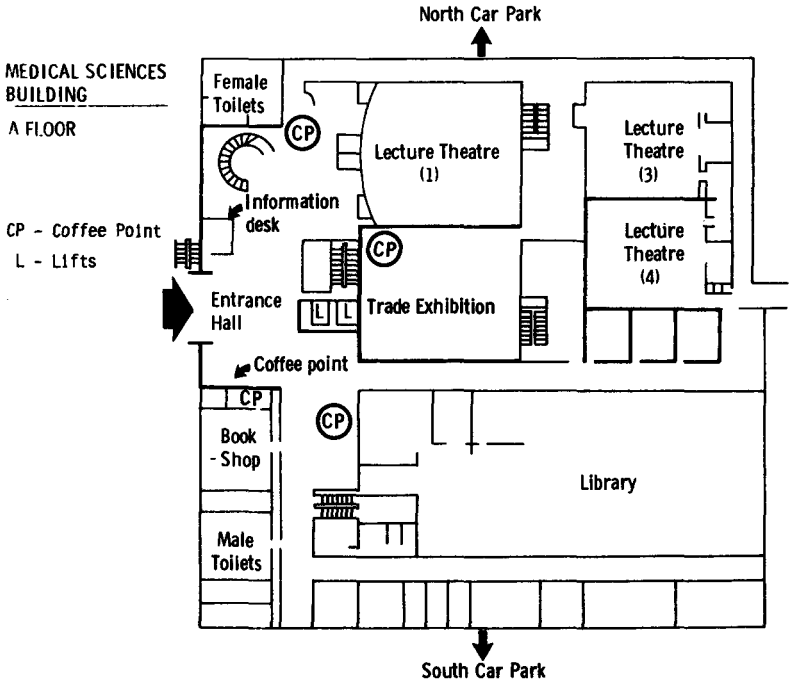
S — Symposium
C — Colloquium
R — Round Table
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PC — Free Communication (Poster) Session

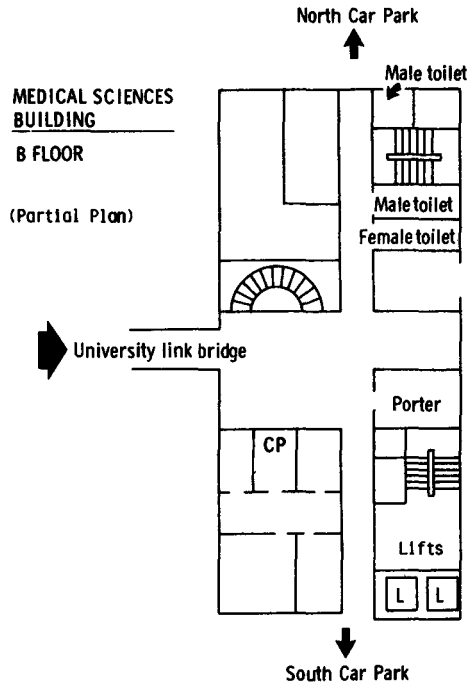
Figures in bold type denote rooms:

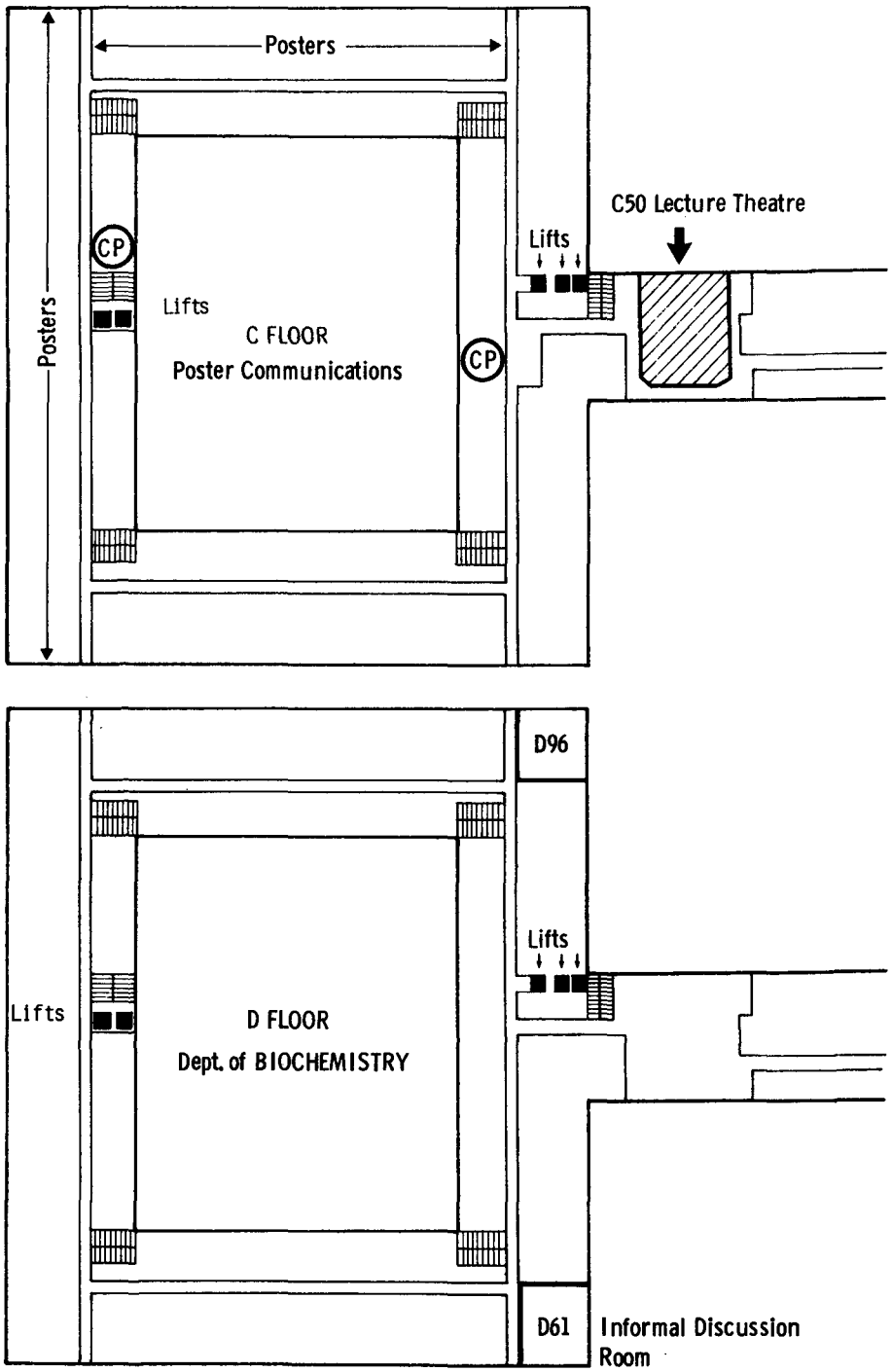
LT1, LT3, LT4 — Lecture Theatres (Floor A)
C50 — Lecture Theatre (Floor C)
B128 — Seminar Room (Floor B)
D61 — Seminar Room (Floor D)
D96 — Seminar Room (Floor D)
MDL — Multidisciplinary Laboratories (Floor C)

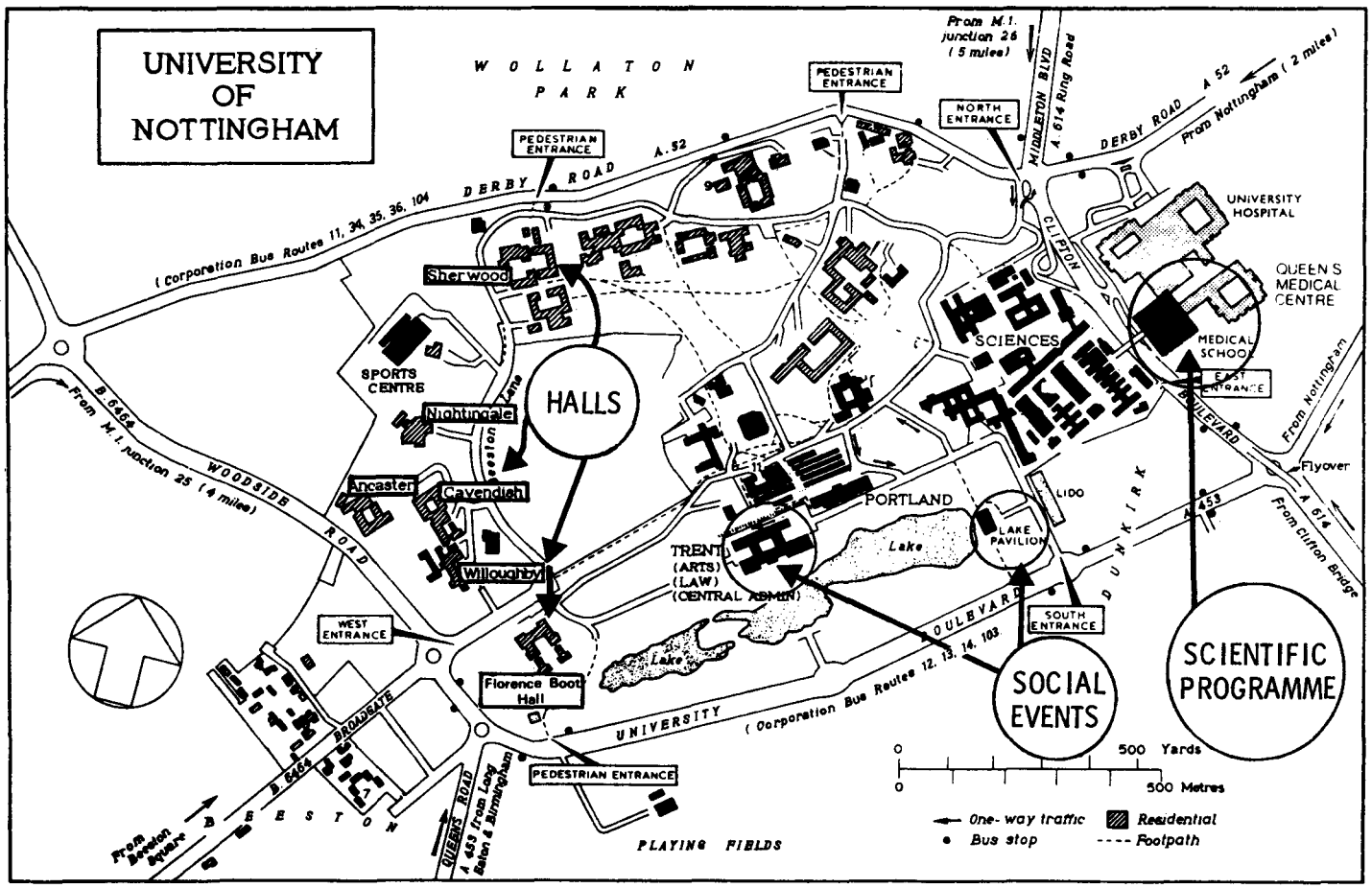
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	11.30 PC1 — **MDL**	11.30 PC2 — **MDL** S7 continued	11.20 I.S.N. Business Meeting — **LT1**	11.30 PC3 — **MDL**	11.30 PC4 — **MDL**
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14.00 Registration in Halls of Residence until 21.00	14.00 S1, S2, S3 continued	14.00 S4, S5, S6, S7 continued	Afternoon free for visits	14.00 S8, S9, S10 continued C8 — **C50**	14.00 S11, S12, S13 continued T.R.H. Satellite — **C50**
	16.00 Tea	16.00 Tea		16.00 Tea	
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18.30 Dinner	20.00 Brass Band Concert				20.00 Farewell Party


North Car Park
MEDICAL SCIENCES BUILDING
A FLOOR
CP - Coffee Point
L - Lifts
Female Toilets
CP
Lecture Theatre (1)
Lecture Theatre (3)
Lecture Theatre (4)
Information desk
CP
Entrance Hall
L L
Trade Exhibition
Coffee point
CP
Book - Shop
CP
Library
Male Toilets
South Car Park


North Car Park
MEDICAL SCIENCES BUILDING
B FLOOR
(Partial Plan)
Male toilet
Male toilet
Female toilet
University link bridge
Porter
CP
Lifts
L L
South Car Park


Posters
Posters
CP
Lifts
C FLOOR
Poster Communications
CP
Lifts
C50 Lecture Theatre
D96
Lifts
Lifts
D FLOOR
Dept. of BIOCHEMISTRY
D61
Informal Discussion
Room



PLAN OF UNIVERSITY SITE

GENERAL INFORMATION

LOCATION

The Location of the Meeting is The Medical School, Queen's Medical Centre, Nottingham, UK. The Secretariat is in the Department of Biochemistry, Telephone 0602 700111 Ext. 3488.

LANGUAGE

The Meeting will be conducted in English.

LIABILITY

The organisers will not be responsible for the loss of personal belongings.

REFRESHMENTS

Coffee and Tea will be served to those wearing 8th ISN badges from several service points in the foyer of the Medical School (Floor A and B) and on Floor C near the Multidisciplinary Laboratories where the poster presentations are given.

COFFEE VOUCHERS

Two major department stores in Nottingham (Pearsons and Co-op) have provided vouchers for refreshments for delegates when they visit the City of Nottingham.

ARRANGEMENTS FOR MEALS

Participants registered with the Halls of Residence will take all meals in their particular Hall. Meal times are as follows:

Breakfast — 08.00
Lunch — 13.00
Dinner — 18.30

LIST OF PARTICIPANTS

A list of participants who have registered prior to the Meeting will be displayed near the information desk.

BADGES AND SECURITY

The 8th ISN Badge contained with the registration materials must be worn throughout the meeting. Persons not wearing a badge are likely to be denied entry to scientific sessions and social functions and access to coffee/tea.

DESKS AND OFFICES

A general Information Desk will be situated in the main foyer of the Medical School throughout the Meeting. Information about the progress of the Meeting and messages for participants will be relayed via the television screens situated in all lecture theatres and in the foyer. Tickets for the Brass Band Concert and information books about Chatsworth House may be purchased from the Information Desk. Queries relating to the Trips organised for Wednesday, September 9 and to Poster Communications may be dealt with at the Information Desk. Desks for late registration and for dealing with banking problems will be available in the foyer of the Medical School.

MAIL/MESSAGES/MEDICAL ASSISTANCE/LOST PROPERTY
Please apply to the Information Desk.

PUBLIC TELEPHONES
A public telephone is available in the Medical School on Floor B above the foyer accessible by staircase. 5p or 10p coins are needed; public telephones are also available in each Hall of Residence.

POST OFFICES
There are three small Post Offices within 10 minutes walk of the Medical School. In addition, mail bearing appropriate stamps may be left for collection at the Information Desk.

BUSES
There will be a bus service to transport participants between Halls of Residence and the Medical School. Buses will leave the Halls of Residence for the Medical School each day at 8.15–8.30 returning for lunch to the Halls of Residence from the Medical School at 12.30–12.45. Buses will leave the Halls of Residence for the Medical School again at 13.30–13.45 and return leaving the Medical School at 18.00–18.15. Although an adequate bus service will be provided for all participants, the distance from the Halls of Residence to the Medical School is not great and makes a pleasant walk on a fine day. Public bus routes for Nottingham and bus stops are indicated on the plans (page 12).

BANK FACILITIES
A desk will be provided by National Westminster Bank in the foyer of the Medical School (Floor A) and will be available for foreign exchange transactions. Main banking facilities will be provided by National Westminster Bank in the foyer of the Hospital (Floor B). Banking hours will be 10.30–14.30 Monday to Friday.

VISIT TO CHATSWORTH HOUSE
We have been fortunate to arrange receptions for participants at the Meeting at Chatsworth House, the Derbyshire home of the Duke of Devonshire. Half of the participants will visit Chatsworth on Tuesday night and half on Thursday night and tickets will be colour-coded appropriately. Chatsworth House dates from 1552 although the present building dates from the seventeenth century. The house is in a splendid setting in the Derwent Valley and in fine weather, walks in the magnificent gardens are very pleasant in the early evening.

ARRANGEMENTS FOR SLIDES
Those giving oral presentations with slides (both main sessions and Free Communications) should take their slides to the projectionist in charge of the venue at least 15 minutes before the beginning of the session. Projection facilities will be available for 5 cm × 5 cm slides. Boxes of slides should bear the author's name and slides should be marked clearly with the author's name and indicate the correct mode of insertion into the projector. Slides can be previewed in the Informal Discussion Room (D61, Floor D). All slides must be collected after presentation. **Uncollected slides will not be forwarded.**

ARRANGEMENTS FOR POSTER COMMUNICATIONS

Each poster communication has been allocated a number (see Programme Book) and a poster board bearing this number will be available on the day assigned. It is the responsibility of the presenter to set up his/her poster in time for the presentation period (11.30–12.30) and to be present during this period. Posters may be left on display until 17.00 on the presentation day but any remaining after this time will be removed to make way for the following day's posters.

INFORMAL DISCUSSION ROOM

Room D61 (Floor D) will be available for informal discussions by participants.

BOOK/TRADE EXHIBITION

The following companies are hoping to exhibit in the Examination Hall off the main foyer (Floor A) of the Medical School:

Academic Press
Amersham International
Anachem
Beckman
Biorad
Croom-Helm
Dupont U.K.
Elsevier
Heyden and Sons Ltd.
Kratos
Northern Media Supplies
M.S.E.
Pergamon Press
Plenum Press
Raven Press
Royal Society of Chemistry (UKCIS)
University of Sheffield Biomedical Information Service
Whyteleafe Scientific
John Wiley Ltd.

SOCIAL PROGRAMME

MONDAY, SEPTEMBER 7, 1981

18.30–19.30 University Sherry Reception in Halls of Residence.

20.00 Brass Band Concert in Great Hall of Trent Building—by the Great Universal Stores Brass Band, winners of the BBC 'Best of Brass' Competition. Admission by ticket, price £1 from the Information Desk. Refreshments will be served during the interval (20.40–21.00).

TUESDAY, SEPTEMBER 8, 1981

18.30 Buses leave front of Medical School **PROMPTLY** for

19.30–21.00 Visit to Chatsworth House (ancestral home of the Duke of Devonshire—see page 14). Official conference reception and exhibition of Cavendish (discoverer of hydrogen) artefacts.

Admission to the buses will be by **white** ticket only. Half the delegates will attend this reception on Tuesday; the other half will attend on Thursday.

WEDNESDAY, SEPTEMBER 9, 1981

Afternoon/ Evening Excursions (including evening meal) to places of historical, architectural and cultural interest

or Free

The excursions should have been booked in advance at the time of registration and details of times etc. will be posted near the Information Desk.

THURSDAY, SEPTEMBER 10, 1981

18.30 Buses leave front of Medical School **PROMPTLY** for

Visit to Chatsworth House and official reception for other half of delegates.

Admission to the buses will be by **blue** ticket only.

FRIDAY, SEPTEMBER 11, 1981

20.00–23.45 Farewell Party in Lakeside Pavilion, including licensed bar, folk music (Belzeebub Folk Music Band) and exhibition (20–30 minutes) of Traditional English Morris Dancing.

PROGRAMME FOR ACCOMPANYING MEMBERS

All visits will leave the front of the Medical School and arrangements will be posted near the Information Desk.

MONDAY, SEPTEMBER 7, 1981

Visit to Lincoln including tour of Cathedral.

TUESDAY, SEPTEMBER 8, 1981

Visit to Newstead Abbey (Home of Lord Byron) including tour of house and elegant gardens.

THURSDAY, SEPTEMBER 10, 1981

Visit to a Nottingham Lace Factory including a guided tour.

FRIDAY, SEPTEMBER 11, 1981

Opportunity to visit Nottingham Shopping Precincts including invitations to take refreshments at two major department stores.

SATELLITE MEETINGS

1. NERVOUS SYSTEM REGENERATION
   Chairman of Organising Committee: **B. Haber**
   Catania, Italy, 1–5 September 1981

2. CELLULAR AND MOLECULAR MECHANISMS OF AGEING
   Organisers: **E. Giacobini** and **A. Vernadakis**
   St. Vincent, Italy, 27–29 August 1981

3. METABOLISM OF PHOSPHOLIPIDS IN THE NERVOUS SYSYEM
   Organisers: **G. B. Ansell, L. A. Horrocks** and **G. Porcellati**
   Birmingham, U.K. 12–15 September 1981

4. THYROTROPIN RELEASING HORMONE
   Organisers: **E. C. Griffiths** and **G. W. Bennett**
   Department of Physiology & Pharmacology, Queen's Medical Centre, University of Nottingham, Nottingham, UK 11–13 September 1981

5. PHARMACOLOGICAL AND NEUROCHEMICAL APPROACHES TO MUSCULAR DYSTROPHY
   Organisers: **E. A. Barnard** and **P. J. Barnard**
   Imperial College, London, UK 3–5 September 1981

MONDAY, SEPTEMBER 7, 1981

09.00–11.00 **Lecture Theatre LT1**
14.00–16.00

SYMPOSIUM S1

NEWER ASPECTS OF NEUROTRANSMITTER RECEPTORS: PHYSIOLOGICAL REGULATION AND MOLECULAR GENETICS

Organiser: **E. A. Barnard** (UK)

Session 1
Chairman: **J. O. Dolly** (UK)

09.00 *IN VITRO* BIOSYNTHESIS AND MEMBRANE INTEGRATION OF THE ACETYLCHOLINE RECEPTOR
D. Anderson and **G. Blobel,** Rockefeller University, New York, USA

09.30 Discussion

09.40 THE BIOSYNTHESIS AND ASSEMBLY OF ACETYLCHOLINE RECEPTOR MOLECULES
M. Houghton, K. Sumikawa, J. S. Emtage, B. M. Richards and **E. A. Barnard,** Searle Research Laboratories, High Wycombe, UK, and Department of Biochemistry, Imperial College, London, UK

10.10 Discussion

10.20 THE GABA-BENZODIAZEPINE RECEPTOR COMPLEX: MOLECULAR SIZES AND PROPERTIES IN THE MEMBRANE AND IN THE ISOLATED STATE
E. A. Barnard and **L.-R. Chang,** Department of Biochemistry, Imperial College, London, UK

10.50 Discussion

Session 2
Chairman: **E. Costa** (USA)

14.00 INTRODUCTION
E. Costa, Laboratory of Preclin. Pharmacology, Saint Elizabeths Hospital, Washington DC, USA

14.05 INTERACTION OF GABA RECEPTORS WITH BENZODIAZEPINES
M. Karobath, Preclinical Research Laboratories, Sandoz Ltd., Basle, Switzerland

14.35 Discussion

MONDAY, SEPTEMBER 7, 1981

09.00–11.00 **Lecture Theatre LT1**
14.00–16.00

SYMPOSIUM S1 (Continued)

NEWER ASPECTS OF NEUROTRANSMITTER RECEPTORS: PHYSIOLOGICAL REGULATION AND MOLECULAR GENETICS

14.45 β–CARBOLINES: INTERACTION WITH MULTIPLE BENZODIAZEPINE RECEPTORS AND WITH GABA RECEPTORS
C. Braestrup, Research Division, Ferrosan, Copenhagen, Denmark

15.15 Discussion

15.25 GABA AND BENZODIAZEPINE RECEPTORS: CO-PURIFICATION AND CHARACTERIZATION
M. Gavish and **S. H. Snyder*** Department of Pharmacology, Technion University, Haifa, Israel and *Department of Neuroscience, Johns Hopkins School of Medicine, Baltimore, USA

15.45 ISOLATION AND PARTIAL CHARACTERIZATION OF BENZODIAZEPINE RECEPTORS
C. Martini and **A. Lucacchiani,** Institute of Biological Chemistry, School of Medicine, University of Pisa, Italy

15.55 Discussion

MONDAY, SEPTEMBER 7, 1981

09.00–11.00 **Lecture Theatre LT3**
14.00–16.00

SYMPOSIUM S2

IMMUNOHISTOCHEMISTRY

Organiser: **T. Hökfelt** (Sweden)

09.00 NEURONAL IDIOTYPY AS REVEALED BY IMMUNOCYTOCHEMISTRY WITH MONOCLONAL ANTIBODIES
L. Sternberger, L. W. Harwell and **J. L. Greenwald,** University of Rochester Medical Center, Rochester, NY 14642, USA

09.40 CELL MARKERS IN NERVOUS SYSTEM CULTURES
R. Mirsky, MRC Neuroimmunology Group, University College, London, UK

10.20 IMMUNOHISTOCHEMICAL AND AUTORADIOGRAPHIC STUDIES ON THE CEREBELLA FROM *WEAVER, NERVOUS, STAGGERER* AND *REELER* MUTANT MICE
K. Mikoshiba, K. Takamatsu and **Y. Tsukada,** Department of Physiology, Keio University School of Medicine, Shinano-machi, Shinjukû-ku, Tokyo, Japan

10.40 IMMUNOHISTOCHEMISTRY OF CEREBELLAR ANTIGENS WITH MONOCLONAL ANTIBODIES
O. K. Langley, M. S. Ghandour, G. Gombos, M. Hirn,* C. Goridis,* Centre de Neurochimie du CNRS, Strasbourg, France and *Centre d'Immunologie INSERM-CNRS, Marseille, France

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14.00 MONOCLONAL ANTIBODIES IN IMMUNOHISTOCHEMISTRY
A. C. Cuello, University Departments of Pharmacology and Human Anatomy, Oxford, UK

14.35 ORGANISATION OF GABA NEURONS AS DEMONSTRATED BY IMMUNOCYTOCHEMICAL LOCALISATION OF GLUTAMIC ACID DECARBOXYLASE
C. R. Houser, J. E. Vaughn and **E. Roberts,** City of Hope Research Institute, Duarte, California, USA

15.10 IMMUNOHISTOCHEMISTRY COMBINED WITH RETROGRADE TRACING AS A TOOL TO STUDY COEXISTING PUTATIVE TRANSMITTERS IN NEURONS AND THEIR PROJECTIONS
T. Hökfelt, L. Skirboll, J. M. Lundberg and **O. Johansson,** Department of Histology, Karolinska Institutet, Stockholm, Sweden

15.40 A SPECIFIC METHOD FOR THE LOCALISATION OF CHOLINERGIC NERVE TERMINALS BY INDIRECT IMMUNOFLUORESCENCE
R. T. Jones, J. H. Walker, P. J. Richardson, G. Q. Fox and **V. P. Whittaker,** Abteilung Neurochemie, Max-Planck-Institut für Biophysikalische Chemie, Postfach 968 D-3400 Göttingen, FRG

MONDAY, SEPTEMBER 7, 1981

09.00–11.00 **Lecture Theatre LT4**
14.00–16.00

SYMPOSIUM S3

MYELINOGENESIS

Organisers: **N. Baumann** (France)
B. Droz (France)

09.00 NEUROLOGICAL MUTANTS AS A TOOL TO STUDY MYELIN ASSEMBLY
J. M. Bourre, Laboratoire de Neurochimie, INSERM U.134, CNRS ERA 421, Hôpital de la Salpêtrière, 75651 Paris Cedex 13, France

09.30 GLYCOPROTEINS ASSOCIATED WITH CNS MYELIN: A REVIEW
J.-M. Matthieu, Laboratoire de Neurochimie, Service de Pediatrie, Centre Hospitalier Universitaire Vaudois, CH-1011 Lausanne, Switzerland

10.00 SYNTHESIS AND TRANSIT OF MYELIN PROTEINS
A. T. Campagnoni, University of Maryland, College Park, MD. USA

10.30 MYELINOGENESIS IN DEVELOPING RAT SCIATIC AND OPTIC NERVES: A BIOCHEMICAL STUDY
C. Linington, M. G. Rumsby and **T. V. Waehneldt,** Forschungsstelle Neurochemie, Max-Planck-Institut für Experimentelle Medizin, D-3400 Göttingen, FRG

10.45 GENETIC AND TOXIC MODELS OF MYELIN DISFUNCTION: AXONAL METABOLISM STUDIES
A. Kidman, N. Cooper, C. Morris, A. Gow, Neurobiology Unit, NSW, Institute of Technology, Gore Hill, NSW, Australia 2007

14.00 AXONAL CONTRIBUTION TO MAINTENANCE OF MYELIN
M. Brunetti, L. Di Giamberardino, G. Porcellati and **B. Droz,** Department of Biochemistry, University of Perugia, Italy and Départment de Biologie, Commissariat à l'Energie Atomique, CEN Saclay, Gif sur Yvette, France

14.30 INTRINSIC VS EXTRINSIC CONTROLS OF MYELINOGIC GENE EXPRESSION
S. E. Pfeiffer, University of Connecticut Medical School, Farmington, CT 06032 USA

15.00 CULTIVATION AND SOME BIOCHEMICAL PROPERTIES OF BULK ISOLATED OLIGODENDROCYTES (CAT, RAT)
H.-H. Althaus, P. J. Gebicke-Härter, A. Stoykova, I. Rittner and **V. Neuhoff,** Max-Planck-Institut für Experimentelle Medizin, Dep. Neurochem., H.-Reinstr. 3, 3400 Göttingen, FRG

15.15 Poster Discussion

MONDAY, SEPTEMBER 7, 1981

09.00–11.00 **Lecture Theatre C50**

COLLOQUIUM C1

NEUROFILAMENTS

Organiser: **D. Soifer** (USA)

09.00 DYNAMICS OF NEUROFILAMENT PROTEINS
D. Soifer and **H. Czosnek,*** Institute for Basic Research in Mental Retardation, Staten Island, NY, USA and *Weizmann Institute of Science, Rehovot, Israel

09.20 NEUROFILAMENTS AND ASTROGLIAL 10 NM FILAMENTS
M. Kurokawa and **K. Yokoyama,** Department of Biochemistry, Institute of Brain Research, Tokyo University Faculty of Medicine, Hongo, Tokyo 113, Japan

09.40 ANTIBODY DECORATION OF NEUROFILAMENTS
M. Willard, C. Simon and **M. Glicksman,** Departments of Anatomy-Neurobiology and Biochemistry, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, Missouri 63110, USA

10.00 IMMUNOCHEMICAL STUDIES OF NEUROFILAMENT PROTEINS
B. H. Anderton and **J. N. Wood,** Department of Immunology, St. George's Hospital Medical School, Cranmer Terrace, London SW17 0RE, UK

10.20 CALCIUM-ACTIVATED PROTEOLYSIS OF NEUROFILAMENT PROTEINS
W. W. Schlaepfer and **U.-J. P. Zimmerman,** University of Pennsylvania Medical School, Philadelphia, Pa., USA

10.40 NEUROFILAMENT PROTEIN PATHOLOGY
H. M. Wisniewski, Institute for Basic Research in Mental Retardation, Staten Island, NY 10314 USA

MONDAY, SEPTEMBER 7, 1981

16.30–18.00 **Seminar Room B128**

ROUND TABLE R1

DEOXYGLUCOSE IN NEUROPHARMACOLOGY

The premise that the local rate of glucose phosphorylation is indicative of the local rate of energy production which, in turn, represents the local 'functional activity' is central to the use of the autoradiographic deoxyglucose technique. Application of the deoxyglucose technique has provided, particularly in neurophysiology, elegant demonstrations of the functional organisation of various CNS processes, whereas, in contrast, in neuropharmacology the concept of 'functional activity' has remained poorly defined. The theme of the round table will be able to relate the neuropharmacological observations obtained with the deoxyglucose technique to our present knowledge of the distribution within the CNS of the receptor sites with which drugs interact, and of the neuroanatomical organisation of neurotransmitter systems. The discussion will be focussed initially on dopaminergic and GABAergic influences upon glucose utilisation, but will be broadened thereafter to consider other aspects of neuropharmacology in which sufficient information is available from the use of the deoxyglucose technique. The primary aim of the round table will be to highlight the strengths **and** the weaknesses of the deoxyglucose technique, and to place this particular technique in a proper perspective with other neuropharmacological approaches.

Organiser: **J. McCulloch** (UK)

Participants: **O. Lindvall** (Sweden)
K. G. Lloyd (France)
J. McCulloch (UK)
L. Sokoloff (USA)

MONDAY, SEPTEMBER 7, 1981

16.30–18.00 **Lecture Theatre LT3**

ROUND TABLE R2

CHARACTERISATION AND PROPERTIES OF PRIMARY ASTROGLIAL CULTURES

Within the past few years it has been established that primary cultures from neonatal rodent brains are comprised predominantly of astrocytes. Such cultures would appear to be good *in vitro* models for normal astrocytes and their ready availability greatly increases the potential for the study of the basic properties of the astroglia. This round table is designed to provide a forum in which the composition and purity of these cultures can be critically evaluated. Also, the uptake and effects of putative transmitters on these cultures and some aspects of their ion transport properties will be briefly covered as examples of their usefulness as models for astroglial function.

Organiser: **H. K. Kimelberg** (USA)

Participants: **G. Labourdette** (France)
R. M. Lindsay (UK)
D. van Calker (FRG)
F. Henn (USA)
A. Schousboe (Denmark)
L. Hertz (Canada)
G. Franck (Belgium)

MONDAY, SEPTEMBER 7, 1981

16.30–18.00 **Seminar Room D96**

ROUND TABLE R3

TRACE AMINES

These substances have recently assumed a much higher profile and significance. Although present in trace amounts their turnovers are such that their accumulation rate equals that of the classical amines. In neurophysiological terms they have now been shown to be neuromodulators and some of them are almost certainly neurotransmitters in their own right. Others of them now appear to be responsible for certain components of behaviour whilst still others mediate the actions of the more classical transmitters. They are also profoundly affected by neuroleptic and stimulant drugs. In some psychiatric and neurological disorders the trace amines appear clearly to be implicated and in fact in schizophrenia and aggression, phenylethylamine has been claimed to be causal. All of this, and more, will be reviewed by their chief proponents.

Organiser: **A. A. Boulton** (Canada)

Participants: **G. B. Baker** (Canada)
F. Karoum (USA)
A. V. Juorio (Canada)
D. L. Murphy (USA)
O. Suzuki (Japan)
M. Sandler (UK)

MONDAY, SEPTEMBER 7, 1981

16.30–18.00 **Lecture Theatre C50**

ROUND TABLE R4

NEUROCHEMICAL EFFECTS OF ETHANOL ON THE CNS

The strong (potent) effect of ethanol (EtOH) and its primary oxidation product acetaldehyde (AcCHO) on CNS function has led to interest into the molecular mechanism involved in such effects. The theme will be posed in terms of:

(a) The EtOH action on the neuronal production and transduction of energy from the intermediary metabolism and the course of the respiratory mitochondrial process; the events occurring at neuron membranes and its bound enzymes will be emphasised.

(b) The action of EtOH/AcCHO on DNA/RNA/protein function and cyclic nucleotides will deserve attention.

(c) The mechanism of the EtOH/AcCHO effects on the central neurotransmitters will be presented.

(d) Finally, it will look for the neurochemical basis of EtOH addiction and the relation of EtOH and opiates.

In summary, this round table will refer only to some neurochemical aspects of EtOH/AcCHO in CNS. The organisers are conscious of the fact that many other very relevant topics of the theme will be only mentioned in passing.

Organisers: **E. Egaña** (Chile)
I. A. Sytinsky (USSR)

Participants: **K. Blum** (USA)
C. J. P. Eriksson (Finland)
T. Eriksson (Sweden)
P. Mandel (France)
E. Noble (USA)
B. Tewari (USA)
L. Volicer (USA)

MONDAY, SEPTEMBER 7, 1981

16.30–18.00 **Lecture Theatre LT1**

ORAL COMMUNICATIONS OC1

NEWER ASPECTS OF NEUROTRANSMITTER RECEPTORS: PHYSIOLOGICAL REGULATION AND MOLECULAR GENETICS

Chairman: **P. G. Strange** (UK)

16.30 THE EFFECT OF ALPRENOLOL ON THE β-RECEPTOR AND ADENYLATE CYCLASE ACTIVITY IN RABBIT HEART MEMBRANES
M. Wollemann and **V. A. Tkachuk,** Institute of Biochemistry Biological Research Center, Hungarian Academy of Sciences, Szeged, Hungary and Department of Biochemistry, Moscow State University, Moscow, USSR

16.45 SOLUBILIZATION AND PARTIAL PURIFICATION OF OPIATE RECEPTORS FROM DIFFERENT NEURONAL SOURCES
M. Dornay and **R. Simantov,** Department of Genetics, Weizmann Institute of Science, Israel

17.00 GENETICS OF DOPAMINE RECEPTORS
J. Bannet, R. H. Belmaker, R. P. Ebstein, Mental Health Center—Ezrath Nashim, P.O. 140, Jerusalem, Israel

17.15 5-HYDROXYTRYPTAMINE SENSITIVITY DURING DIFFERENTIATION OF NEUROBLASTOMA CELLS
F. Guharay, I. R. Duce and **P. N. R. Usherwood,** Nottingham University, Nottingham, UK

17.30 DISSOCIATION OF THE ACETYLCHOLINE RECEPTOR BY CERTAIN SOLUBILISING AGENTS
H. Eriksson, G. Liljeqvist and **E. Heilbronn,** Unit of Neurochemistry and Neurotoxicology, University of Stockholm, S-172 46 Sundbyberg, Sweden

17.45 α2-ADRENERGIC RECEPTORS IN BRAIN AND CULTURED NEURAL CELLS: REGULATION IN HYPERINNERVATED AND DENERVATED STATES
D. C. U'Prichard, C. H. Wang and **D. J. Kahn,** Department of Pharmacology, Northwestern University School of Medicine, Chicago, Illinois 60611, USA

MONDAY, SEPTEMBER 7, 1981

16.30–1800 **Lecture Theatre LT4**

ORAL COMMUNICATIONS OC2

MYELINOGENESIS

Chairman: **M. G. Rumsby** (UK)

16.30 CEREBROSIDE SYNTHESIS DURING MYELINATION
F. B. Jungalwala and **O. Koul**, E. K. Shriver Center for Mental Retardation, Waltham, MA. 02254, USA

16.45 INCORPORATION OF ^{3}H PALMITIC ACID INTO MYELIN AND MICROSOMAL PROTEOLIPIDS
E. F. Soto, O. A. Bizzozero and **J. M. Pasquini**, Departmento de Química Biológica, Facultad de Farmacia y Bioquímica, Universidad de Buenos Aires, Junín 956 (1113), Buenos Aires, Argentina

17.00 ISOLATION OF A PLASMA MEMBRANE FRACTION OF GLIAL CELLS IN CULTURE
N. M. Neskovic, A. Benenson and **P. Mandel**, Centre de Neurochimie du CNRS, U 44 de l'INSERM, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

17.15 HYDROCORTISONE AND TRIIODOTHYRONINE REGULATION OF MYELINOGENESIS IN VITRO IN DEFINED MEDIUM
J. L. Stephens and **R. A. Pieringer**, Department of Biochemistry, Temple University School of Medicine, Philadelphia, PA 19140, USA

17.30 CATABOLISM OF PLASMALOGEN IN RAT BRAIN
H. Debuch and **J. Gunawan**. Inst. Physiol. Chemie, University Köln, FRG

17.45 MYELIN-MARKER 2'3'-CYCLIC NUCLEOTIDE 3'-PHOSPHODIESTERASE (CNPASE): CHARACTERISATION OF MEMBRANE-BOUND AND SOLUBLE CNPASE ACTIVITIES AND LOCALISATION OF THE ENZYME IN NERVE CELL CULTURES
H. W. Müller, P. A. Clapshaw and **W. Seifert**, Friedrich-Miescher-Laboratium, Max-Planck-Institute, Spemannstr. 37–39, 7400 Tübingen 1, FRG

MONDAY, SEPTEMBER 7, 1981

11.30–12.30 **Floor C**

POSTER COMMUNICATIONS PC1

NEWER ASPECTS OF NEUROTRANSMITTER RECEPTORS (RECEPTOR CHARACTERISATION)

Poster No.

1 MUSCARINIC AND NICOTINIC ACETYLCHOLINE RECEPTOR DISTRIBUTION IN THE CHICK BRAIN
J. C. Coulter and **S. P. R. Rose,** Brain Research Group, Biology Dept., Open University, Walton Hall, Milton Keynes MK7 6AA, UK

2 MUSCARINIC RECEPTOR (MAChR) DISTRIBUTION IN THE MARMOSET, RABBIT AND RAT BRAIN. A COMPARATIVE STUDY OF MAChR AND BRAIN REGION HOMOLOGY
J. C. Coulter, Brain Research Group, Biology Department, Open University, Walton Hall, Milton Keynes MK7 6AA, UK

3 IDENTIFICATION OF 5-HYDROXYTRYPTAMINE BINDING COMPONENTS FROM MYELIN PROTEOLIPIDS
R. Ishitani and **A. Miyakawa,** Department of Pharmacology, Faculty of Pharmaceutical Sciences, Josai University, Sakado, Saitama 350–02, Japan.

4 A POLYPEPTIDE WITH AN APPARENT MOLECULAR WEIGHT OF 94.000, COPURIFIED WITH THE ACETYLCHOLINE RECEPTOR FROM **TORPEDO** ELECTRIC ORGAN, BELONGS TO Na^+K^+-ATPase
L. Elfman, P. L. Jørgensen* and **E. Heilbronn,** *Institute Physiology, University Aathur, Denmark. Unit of Neurochemistry and Neurotoxicology, University of Stockholm, S-172 46 Sundbyberg, Sweden

5 BENZODIAZEPINE EFFECT ON ASTROGLIAL PRIMARY CULTURES
M. Tardy, M. F. D. Costa, C. Fages and **B. Rolland,** Départment de Biochimie, C. H. U. Henri-Mondor 94010 Créteil Cedex, France

6 α-BUNGAROTOXIN RECEPTORS IN THE RAT SUPERIOR CERVICAL GANGLION: AN ULTRASTRUCTURAL AUTORADIOGRAPHIC STUDY
L. Fumagalli and **G. De Renzis,** Istituto di Anatomia Umana Normale, Università Cattolica S. Cuore, Rome, Italy

7 HIGH AND LOW AFFINITY RECEPTORS FOR NERVE GROWTH FACTOR
J. Bramhall and **E. M. Shooter,** Department of Neurobiology, Stanford University Medical School, Stanford, California 94305, USA

8 ULTRASTRUCTURAL LOCALIZATION OF AChE AND NICOTINIC RECEPTORS IN THE CHICK CILIARY GANGLION
L. Fumagalli,* **A. Del Fà,**** **D. Cocchia*** and **C. Olivieri-Sangiacomo,**** *Istituto di Anatomia Umana Normale, **Istituto di Biologia Generale, Università Cattolica del S. Cuore, Roma, Italy

POSTER COMMUNICATIONS PC1 (Continued)

NEWER ASPECTS OF NEUROTRANSMITTER RECEPTORS (RECEPTOR CHARACTERISATION)

Poster No.

9 STUDIES ON THE INTERACTION OF β-CARBOLINE DERIVATIVES WITH BENZODIAZEPINE BINDING SITES IN RAT BRAIN
R. A. Locock,[1] H. A. Robertson, [2] G. B. Baker,[1] R. T. Coutts,[1] A. Benderly[1] and **I. L. Martin,[3]**
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10 PROPERTIES OF ^{3}H-SPIPERONE BINDING TO HOMOGENATE OF SHEEP CAUDATE NUCLEUS
C. R. Oliveira and **A. P. Carvalho,** Centro de Biologia Celular, Departmento de Zoologia e Clinica Neurológica, Universidade de Coimbra, Coimbra, Portugal

11 SPECIFIC HIGH AFFINITY BINDING OF ^{3}H-RO5-4864 TO BENZODIAZEPINE SITES IN THE RAT CEREBRAL CORTEX AND KIDNEY
H. Schoemaker, M. Bliss, S. H. Yamamura and **H. I. Yamamura,** Department of Pharmacology, University of Arizona Health Sciences Center, Tucson, Arizona 85724, USA

12 BINDING OF TAURINE AND GABA TO BRAIN CRUDE SYNAPTIC MEMBRANE FRACTIONS
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13 NICOTINE-LIKE CHOLINERGIC RECEPTOR SITES IN BRAIN AND MUSCLE
C. Larsson and **A. Nordberg,** Department of Pharmacology, University of Uppsala, Box 573, S-751 23 Uppsala

14 SOLUBILIZATION OF BRAIN DOPAMINE RECEPTORS
P. A. Frankham, M. Wheatley, R. M. Withy and **P. G. Strange,** Department of Biochemistry, The Medical School, Queen's Medical Centre, Nottingham NG7 2UH, UK

15 A SEARCH FOR SYNAPTIC VESICLE-BOUND SUBSTANCES IN RAT CNS THAT CAN BIND TO THE GABA RECEPTOR
N. Lagos and **F. Orrego,** Department of Physiology and Biophysics, Faculty of Medicine, University of Chile, Santiago, Chile

16 AN ALBUMIN-LIKE PROTEIN ASSOCIATED WITH 5-HT BINDING IN THE CNS
B. Bader,[1] T. O. Kleine,[2] G. Stroh[1] and **W. Wesemann[1]**
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17 EXISTENCE OF β-ADRENERGIC RECEPTOR IN GLIAL CELLS
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18 H_1 AND H_2 BINDING SITES IN SEVERAL AREAS OF RAT BRAIN
P. Venutti, C. Ferretti, E. Genazzani and **P. Portaleone,** Institute of Pharmacology, Medical School, University of Turin, Turin, Italy.

19 FURTHER CHARACTERISATION OF DOPAMINE (DA) RECEPTORS IN THE RAT HIPPOCAMPAL FORMATION
S. Bischoff, H. Bittiger, A. Delinistula, R. Ortmann and **P. Waldmeier,** Research Department, Pharmacology Division, Ciba-Geigy Ltd., CH 4002 Basel, Switzerland

20 DEPOLARIZATION OF NEUROBLASTOMA CELLS BY CYANINE DYES
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21 THE AXONAL TRANSPORT OF FLUORESCENT SUBSTANCES STUDIED WITH A FLUORIMETRIC SCANNING TECHNIQUE
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22 AFFERENT REGULATION OF TYROSINE HYDROXYLASE AND DOPAMINE LEVELS IN THE OLFACTORY BULB
F. L. Margolis,* T. Kawano,* H. Baker** and **T. Joh****
*Roche Institute of Molecular Biology, Nutley, NJ. 07110 USA and **Department of Neurobiology, Cornell University Medical College, NY, NY 10021, USA

23 MICROSPECTROFLUORIMETRIC REGISTRATION OF THE AGE-RELATED CHANGES IN THE HISTOCHEMICALLY DEMONSTRABLE CATECHOLAMINES OF PERIPHERAL AND CENTRAL NEURONS
M. Partanen and **A. Hervonen,** Department of Biomedical Sciences, University of Tampere, Tampere, Finland

24 MYELIN MARKERS *IN SITU* AND *IN VITRO*
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25 IMPROVED IMMUNOHISTOCHEMICAL VISUALISATION OF CENTRAL SEROTONIN (5-HT) NERVES AFTER LOADING WITH 5,7-DIHYDROXYTRYPTAMINE (5,7-DHT)
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26 SULFATIDE AND UROMUCOID: A POSSIBLE GLYCOLIPOPROTEIN COMPLEX PRESENT IN THE KIDNEY AND THE BRAIN
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**Laboratoire de Chimie Clinique et Biologique Moléculaire, 15 rue de l'Ecole de Médecine, 75720 Paris Cedex 06, France

27 IMMUNOHISTOCHEMICAL DISTRIBUTION OF GLUTAMATE DECARBOXYLASE AND GABA TRANSAMINASE IN CULTURES OF NEWBORN RAT NEOSTRIATUM
P. Panula and **J.-Y. Wu,** Department of Anatomy, University of Helsinki, Helsinki, Finland and Department of Cell Biology, Baylor College of Medicine, Texas Medical Center, Houston, Texas, USA

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D. Cocchia, F. Pansera, A. Palumbo and **R. Donato,** Department of Anatomy, Universtà Cattolica, 00168 Roma, Italy

29 AXONAL TRANSPORT OF IMMUNO REACTIVE 'CHOLINERGIC VESICLES' IN RAT SCIATIC NERVE
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30 IMMUNOELECTRONMICROSCOPY OF PURKINJE CELL SPECIFIC GLYCOPROTEIN
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31 IMMUNOELECTRON MICROSCOPIC LOCALIZATION AND CHARACTERIZATION OF α-MSH-LIKE IMMUNOREACTIVITY IN THE RAT BRAIN
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32 IMMUNOHISTOCHEMICAL LOCALIZATION OF 2':3'-CYCLIC NUCLEOTIDE 3'-PHOSPHODIESTERASE IN THE CENTRAL NERVOUS SYSTEM
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33 EVIDENCE FOR THE EXISTENCE OF GABAERGIC NEURONS IN THE NUCLEUS RAPHE DORSALIS. POSSIBLE EXISTENCE OF NEURONS CONTAINING SEROTONIN AND GABA
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34 S-100 PROTEIN IN MELANOCYTES AND IN LANGERHANS CELLS OF NORMAL HUMAN SKIN
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M. Hirn, C. Goridis, Centre d'Immunologie INSERM CNRS de Marseille-Luminy, Marseille, France

36 IMMUNOLOGICAL CHARACTERIZATION OF RAT BRAIN GUANYLATE CYCLASE
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37 ISOLATION AND IMMUNOHISTOCHEMICAL LOCALIZATION OF A 'PURKINJE CELL SPECIFIC GLYCOPROTEIN SUBUNIT' FROM RAT CEREBELLUM
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38 ISOLATION OF A CALCIUM-DEPENDENT MEMBRANE-BINDING PROTEIN ASSOCIATED WITH CHOLINERGIC SYNAPSES
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39 CHARACTERIZATION OF A CHOLINERGIC SPECIFIC ANTIGEN (CHOL 1)
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40 A MONOCLONAL ANTIBODY USED TO FOLLOW THE DEVELOPMENTAL APPEARANCE OF SURFACE GALACTOSPHINGOLIPIDS IN OLIGODENDROCYTES AND SCHWANN CELLS
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41 IMMUNOPEROXIDASE LOCALIZATIONS OF HUMAN BRAIN-SPECIFIC PROTEINS
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G. Konat, H. Offner and **J. Clausen,** The Neurochemical Institute, 58 Radmandsgade, 2200 Copenhagen N, Denmark

44 MYELIN-SPECIFIC PROTEINS OF THE FRUIT BAT
R. C. Cantrill, M. Oldfield, J. McLoughlin and **J. van der Westhuysen,** MRC Brain Metabolism Research Group, Departments of Medical Biochemistry and Haematology, University of Witwatersrand and South African Institute for Medical Research, Johannesburg, South Africa

45 BIOCHEMICAL AND ELECTRON MICROSCOPIC STUDIES OF BOVINE BRAIN MYELIN ISOLATED IN THE PRESENCE OF DIVALENT CATIONS
H. H. Berlet and **B. Volk,** Institute of Pathochemistry and Institute of Neuropathology of the University, Heidelberg, FRG

46 ONTOGENY OF THE VISUAL PATHWAY OF TROUT
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47 PREFERENTIAL USE OF KETONE BODIES, COMPARED TO GLUCOSE, FOR THE SYNTHESIS OF MYELIN CHOLESTEROL IN THE RAT
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48 RATES OF LIPOGENESIS IN INFANT RAT BRAIN: ESTIMATES OF CONTRIBUTIONS BY BLOOD METABOLITES
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49 A PRELIMINARY STUDY ON DEVELOPING HUMAN CENTRAL NERVOUS SYSTEM MYELIN
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50 DETECTION OF MYELIN PROTEOLIPID BY IMMUNOBLOTTING
W. B. Macklin,[1] **K. Kasperski,**[2] **P. E. Braun**[2] and **M. B. Lees,**[1]
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O. A. Bizzozero, M. Besio-Moreno, J. M. Pasquini and **E. F. Soto,** Departmento de Química Biológica, Facultad de Farmacia y Bioquímica, Universidad de Buenos Aires, Junín 956 (1113), Buenos Aires, Argentina

52 SYNTHESIS AND DEPOSITION OF PROTEOLIPID PROTEIN IN MYELIN OF NORMAL AND MALNOURISHED RATS
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53 INCORPORATION OF [^{3}H]-LEUCINE INTO MYELIN PROTEINS WITH SPECIAL REFERENCE TO PROTEOLIPID PROTEIN SPECIES
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54 'CATCH-UP' MYELINATION IN MLD MUTANT MICE
H. Ginalski-Winkelmann, P. Burgisser and **J.-M. Matthieu,** Laboratoire de Neurochimie, Service de Pédiatrie, Centre Hospitalier Universitaire Vaudois, CH-1011 Lausanne, Switzerland

55 MYELINOGENESIS IN QUAKING AND NORMAL MICE
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56 COMPARATIVE DEVELOPMENTAL PROFILES OF MYELIN BASIC PROTEIN IN SCIATIC AND OPTIC NERVES OF NORMAL AND DYSMYELINATING MUTANT MICE
A. Delassalle,* **M. Raoul, N. Baumann** and **C. Jacque,** Laboratoire de Neurochimie Hôpital de la Salpêtrière 75651 Paris Cedex 13, France et *Laboratorie de Biochimie Medicale, Faculté de Médecine Pitíe-Salpêtrière 75634 Paris Cedex 13.

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57 EFFECT OF ORNITHINE DECARBOXYLASE (ODC) INHIBITION ON NEURONAL ONTOGENESIS
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59 CNS CELL NUMBER (MEASURED AS DNA CONTENT) OF INTRAUTERINE AND EXTRAUTERINE GAMMA IRRADIATED (^{60}Co) RAT: RNA AND PROTEIN CONTENT PER CELL
E. Egana, S. Schoelermann and **M. T. Ramirez,** Institute of Experimental Medicine, Laboratory of Neurochemistry; Faculty of Medicine, University of Chile; Hospital J. J. Aguirre; Santiago 7, Chile

60 SUPEROXIDE DISMUTASE ACTIVITY IN DEVELOPING RAT BRAIN
M. Ledig,* R. Fried** and **P. Mandel,***
*Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France. **Department of Biochemistry, Creighton University Medical School, Omaha, Nebraska, 68178, USA

61 *XENOPUS* OOCYTES MICROINJECTED WITH RAT BRAIN MRNA SYNTHESIZE AND SECRETE CATALYTICALLY ACTIVE ACETYLCHOLINESTERASE
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62 REGIONAL DIFFERENCES IN THE METABOLISM AND BINDING OF THYROID HORMONES IN THE DEVELOPING RAT BRAIN
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63 DISTRIBUTION AND DISAPPEARANCE OF INJECTED ISETHIONATE IN BRAIN AND HEART OF ADULT AND 7-DAY-OLD MICE
E. Kumpulainen, I. Pesonen and **P. Lähdesmäki,** Department of Biochemistry, University of Oulu, SF-90570 Oulu 57, Finland

64 DEVELOPMENTAL CHANGES OF GLYCOPROTEINS IN RAT CEREBRAL CORTEX
J. S. Rudge and **S. Murphy,** Brain Research Group. Biology Department, Open University, Milton Keynes, UK

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66 EFFECTS OF NEONATAL THYROID DEFICIENCY ON BRAIN PEPTIDES AND CATECHOLAMINE LEVELS
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67 THIAMIN CONTENT OF RAT BRAIN DURING POSTNATAL DEVELOPMENT
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68 DEVELOPMENTAL CHANGES IN BLOOD BRAIN TRANSPORT OF SOME AMINO ACIDS IN THE RAT
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69 S-100 PROTEIN IN HYPOTHYROID RATS
M. Rende, M. Zucco, D. Cocchia and **F. Michetti,** Department of Anatomy, Università Cattolica, 00168 Roma, Italy

70 DEVELOPMENT OF DIFFERENT BINDING SITES OF ^{3}H-SPIPERONE
A. Bruinink, M. Schlumpf and **W. Lichtensteiger,** Institute of Pharmacology, University of Zurich, CH-8006 Zurich, Switzerland

71 DEVELOPMENTAL CHANGES IN EXTRACELLULAR PROTEINS IN SERUM-FREE BRAIN CELL CULTURE
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72 GLYCEROPHOSPHOLIPIDS OF RAT CAUDATE N. DURING POSTNATAL DEVELOPMENT
D. Kostic, Institute of Biochemistry, Medical Faculty, Belgrade, Yugoslavia

73 ONTOGENETIC DEVELOPMENT OF CLONIDINE BINDING IN THE RAT CEREBRAL CORTEX
Y. Nomura, I. Yotsumoto and **T. Segawa,** Department of Pharmacology, Institute of Pharmaceutical Sciences, Hiroshima University School of Medicine, Kasumi 1-2-3, Minami-ku, Hiroshima 734, Japan

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75 GAS CHROMATOGRAPHY-MASS SPECTROMETRIC DETERMINATION (GC/MS) OF PLASMALOGENS IN THE DEVELOPING CHICK BRAIN
M. Imazawa, S. Nakajima and **K. Miyamoto,** Department of Metabolism, National Center for Nervous, Mental and Muscular Disorders, Kodaira, Tokyo, Japan

75A HISTONES IN NEURAL AND GLIAL CELLS FOLLOWING POSTNATAL DEVELOPMENT IN RATS
M. Ćirović, L. M. Rakić and **J. J. Ivanus,** Institute of Biochemistry, Medical School, University of Belgrade, Belgrade, Yugoslavia

75B AMNIOTIC FLUID AND MATERNAL SERUM AMINO-ACID LEVELS IN MALFORMATION OF FOETAL CNS
S. Kumas and **M. Raghi,** Perinatal Laboratory, Christ Hospital, Oak Lawn, Illinois, USA

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76 INCORPORATION OF ^{14}C AND ^{3}H GLYCEROL IN BRAIN SUBCELLULAR MEMBRANES OF UNDERNOURISHED AND HYPOTHYROID RATS
J. M. Pasquini, E. M. V. de Cavanagh and **E. F. Soto,** Departmento de Química Biológica, Facultad de Farmacia y Bioquímica, Universidad de Buenos Aires, Junín 956, 1113-Buenos Aires, Argentina

77 ORIGIN OF TAURINE IN NEONATAL RAT BRAIN: A QUANTITATIVE STUDY
J. A. Sturman, Department of Pathological Neurobiology, Institute for Basic Research in Mental Retardation, Staten Island, NY 10314, USA

78 BRAIN $TRNA^{LYS}$: EFFECTS OF METHIONINE SULFOXIMINE (MSO) ON ITS METHYLATION *IN VIVO*
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79 EFFECT OF TRYPTOPHAN OVERLOAD IN THE PREGNANT RAT ON BRAIN AMINO ACIDS LEVELS AND *IN VITRO* PROTEIN SYNTHESIS
F. Dominguez, J. L. Fando and **E. Herrera,** Departmento de Investigacíon Centro Ramón y Cajal, Madrid, Spain

80 CAPACITY FOR KETONE BODY UTILIZATION IN REGIONS OF DEVELOPING RAT BRAIN
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81 THE EFFECT OF HYPERPHENYLALANINAEMIA (HYPERPHE) ON CEREBELLAR DEVELOPMENT
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82 MUTUAL INHIBITION OF LEUCINE, ISOLEUCINE AND VALINE INFLUX INTO BRAIN SLICES OF DEVELOPING RATS
M. Pajari and **S. S. Oja,** Department of Biomedical Sciences, University of Tampere, Tampere, Finland

83 EFFECT OF MATERNAL HYPERPHENYLALANINAEMIA ON POSTNATAL DEVELOPMENT OF RAT BRAIN
Y. Takagi, T. Kanamatsu, H. Asou and **S. Hirano,** Department of Physiology, Toho University, School of Medicine, Ohmori, Tokyo 143, Japan

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85 IMMUNOFLUORESCENT STUDY ON THE LOCALIZATION OF ACTIN AND TUBULIN IN ASTROGLIA IN PRIMARY CULTURE
J. Ciesielski-Treska and **D. Aunis,** Unité INSERM U-44, Centre de Neurochimie, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

86 SEPARATION OF NEUROFILAMENT PROTEINS BY GEL FILTRATION
F.-C. Chiu and **W. T. Norton,** Albert Einstein College of Medicine, Bronx, New York 10461, USA

87 LOCAL SYNTHESIS OF TUBULIN IN AXONS REGENERATING *IN VITRO*
E. Koenig and **P. Adams,** State University of New York at Buffalo, Buffalo, New York 14214, USA

88 *IN VITRO* INTERACTION BETWEEN MICROTUBULES AND SMOOTH ENDOPLASMIC RETICULUM
A. J. Hargreaves and **W. G. McLean,** Department of Microbiology and Department of Pharmacology and Therapeutics, University of Liverpool, Liverpool, UK

89 ASSEMBLY OF PRE-SYNAPTIC MICROTUBULES IN RAT BRAIN SYNAPTOSOMES
P. R. Gordon-Weeks, R. D. Burgoyne and **E. G. Gray,** Laboratory of Biological Ultrastructure, National Institute for Medical Research, The Ridgeway, Mill Hill, London NW7 1AA, UK

90 HETEROGENEOUS BREAKDOWN OF DIFFERENT TUBULIN FORMS BY BRAIN CATHEPSIN D
F. Bracco, M. Banay-Schwartz, T. DeGuzman and **A. Lajtha,** Center for Neurochemistry, Rockland Research Institute, Ward's Island, New York 10035, USA

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I. H. Ulus, Y. Arslan, B. Kavakli and **B. K. Kiran,** Department of Pharmacology and Clinical Pharmacology, Bursa Medical School, University of Bursa, Bursa, Turkey

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92 EFFECTS OF BRAIN TRYPSINIZATION ON THE DISTRIBUTION OF SURFACE LIPIDS IN PRIMARY CULTURES
M. Mersel, A. Benenson and **P. Mandel,** Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

93 GABA AND DOPAMINE METABOLISM IN PRIMARY ASTROGLIAL CULTURES
E. Hansson,[1] **H. Isacsson**[1] and **A. Sellström,**[2]
[1]Institute of Neurobiology, University of Göteborg, and
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94 AFFINITY MECHANISM OF NEURONAL-GLIAL CELL ADHESION
B. Foucaud, G. Gombos, Centre de Neurochimie de CNRS, Strasbourg, France

95 PRIMARY ASTROCYTES ACTIVELY INCORPORATE RADIOLABELLED PRECURSORS INTO THE CYTOSKELETON
F.-C. Chiu, J. E. Goldman and **W. T. Norton,** Albert Einstein College of Medicine, Bronx, New York 10461, USA

96 MODIFICATIONS OF THE ENERGY METABOLISM DURING THE DIFFERENTIATION OF CHICK GLIAL CELLS IN CULTURE
G. Tholey,* **M. Ledig**** and **P. Mandel,****
*Laboratoire de Biochimie Microbienne, Université Louis Pasteur, Strasbourg, France
**Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

97 NEGATIVE PROBING OF SURFACES OF CULTURED RAT ASTROCYTES
A. Benenson, M. Mersel and **P. Mandel,** Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

98 LIPIDS IN SURFACES OF GLIAL CELLS TREATED WITH DIBUTRYL CYCLIC AMP
A. Benenson and **P. Mandel,** Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

MONDAY, SEPTEMBER 7, 1981

11.30–12.30 **Floor C**

POSTER COMMUNICATIONS PC1 (Continued)

PRIMARY ASTROGLIAL CULTURES

Poster No.

99 PLATING CELL DENSITY AFFECTS THE MATURATION OF ASTROBLASTS IN PRIMARY CULTURE
G. Labourdette, INSERM U44, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

100 ISOLATION OF NEURONAL PROLIFERATION FACTORS FROM BEEF BRAIN
I. Barakat, G. Labourdette and **M. Sensenbrenner,** Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

101 PURIFICATION AND CHARACTERIZATION OF A GLIAL MATURATION FACTOR FROM BEEF BRAIN
B. Pettmann, G. Labourdette and **M. Sensenbrenner,** Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

102 UPTAKE AND METABOLISM OF CATECHOLAMINES BY PRIMARY ASTROGLIAL CULTURES
H. K. Kimelberg, E. W. Pelton and **S. V. Shipherd,** Albany Medical College, Albany, New York, 12208, USA

103 EFFECT OF 5'AMP ON ECTO 5'-NUCLEOTIDASE, ADENYLATE AND GUANYLATE CYCLASES IN GLIAL CELL CULTURES
A. N. K. Yusufi, A. A. Farooqui, G. Schmitt, G. Rebel and **P. Mandel,** Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

104 GANGLIOSIDE METABOLISM IN HUMAN GLIOMA AND FETAL NEURAL CELLS
V. A. Liepkalns, A. J. Yates, C. Icard-Liepkalns and **R. Stephens,** Departments of Pathology and Radiology, Ohio State University, Columbus, Ohio, USA

105 THE EFFECT OF CHLORPROMAZINE ON THE PHENOMENON OF CELL ADHESION AND ON THE CYTOSKELETON OF GLIOBLASTS IN CULTURE
V. Alemán, E. Morales and **A. Espinosa de los Monteros,** Departamento de Neurociencias, Centro de Investigación y de Estudios Avanzados del IPN, México 14, D.F., México

MONDAY, SEPTEMBER 7, 1981

11.30–12.30 **Floor C**

POSTER COMMUNICATIONS PC1 (Continued)

NEUROCHEMICAL EFFECTS OF ETHANOL

Poster No.

106 THE ACUTE EFFECTS OF ETHANOL ON THE ACTIVITY OF THE CENTRAL CHOLINERGIC SYSTEM. A COMPARATIVE STUDY USING INBRED MOUSE STRAINS
T. Durkin, H. Hashem-Zadeh, P. Mandel and **A. Ebel,** Centre de Neurochimie de CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

107 FATTY ACID COMPOSITION OF PHOSPHOGLYCERIDES IN RAT BRAIN MEMBRANES AFTER CHRONIC ETHANOL ADMINISTRATION
C. Alling, J. Engel and **S. Liljequist,** Department of Psychiatry and Neurochemistry, and Department of Pharmacology, University of Göteborg, Sweden

108 CHANGES IN THE CONCENTRATION OF CATECHOLAMINES IN CEREBROSPINAL FLUID AND SERUM DURING HEPATIC ENCEPHALOPATHY
J. Borg,[1] **J. M. Warter,**[2] **J. L. Schlienger,**[3] **M. Imler**[3] and **G. Mack,**[1]
[1]Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France
[2]Clinique Neurologique, Hospices Civils, 67000 Strasbourg, France
[3]Service de Médecine Interne, CHU Hautepierre, 67200 Strasbourg, France

109 MATERNAL ETHANOL INGESTION IN THE RAT: EFFECTS ON BRAIN CYCLIC-AMP AND PERIPHERAL METABOLISM DURING THE PERINATAL PHASE
M. Salinas Fando, M. Llobera and **E. Herrera,** Departamento de Investigación, Centro Ramón y Cajal, Madrid, and Cátedra de Fisiología General, Fac. de Biología, Universidad de Barcelona, Spain

110 CNS MITOCHONDRIAL PROTON-PUMPING RESPIRATORY CHAIN IN ALCOHOLIC GENERATION RATS ('ALCOHOLISM PERMANENT AND FILIAL')
E. Egana, M. T. Ramirez and **S. Schoelermann,** Institute of Experimental Medicine, Laboratory of Neurochemistry, Faculty of Medicine, University of Chile, Hospital J. J. Aguirre, Santiago 7, Chile

111 PSYCHOGENETIC THEORY OF ALCOHOL SEEKING BEHAVIOUR
K. Blum, Department of Pharmacology, University of Texas Health Science Center, San Antonio, Texas 78284, USA

112 EFFECT OF ETHANOL AND ACETALDEHYDE ON GABA UPTAKE INTO RAT BRAIN SYNAPTOSOMES
R. C. Cantrill, W. W. Nyati and **B. C. Shanley,*** MRC Brain Metabolism Research Group, Department of Medical Biochemistry, University of the Witwatersrand and South African Institute for Medical Research, Johannesburg, South Africa
*Department of Biochemistry, University of Queensland, St. Lucia, Queensland, Australia

TUESDAY, SEPTEMBER 8, 1981

09.00–11.00
14.00–16.00

Lecture Theatre LT3

SYMPOSIUM S4

BIOSYNTHESIS AND METABOLISM OF NEUROPEPTIDES

Organisers: **J. C. Schwartz** (France)
E. Costa (USA)

09.00 IDENTIFICATION AND CHARACTERIZATION OF AN 80,000 DALTON POLYPEPTIDE CONTAINING NEUROPHYSIN AND VASOPRESSIN ISOLATED FROM BOVINE NEUROHYPOPHYSIS
P. Cohen, P. Nicolas, M. Lauber, P. Beguin, H. Bousetta, C. Fahy, M. J. O. Masse and **M. Camier,** Groupe de Neurobiochimie Cellulaire et Moléculaire, Université P. and M. Curie, 96 boulevard Raspail, 75006, Paris, France

09.30 SELECTIVE INCREASE OF ANGIOTENSIN CONVERTING ENZYME ACTIVITY IN POSTERIOR PITUITARY OF RATS LACKING VASOPRESSIN (ADH)
C. Chevillard and **J. M. Saavedra,** Laboratory of Clinical Science, National Institute of Mental Health, Bethesda, MD., 20205, USA

09.45 ISOLATION AND CHARACTERIZATION OF PROENKEPHALIN AND INTERMEDIATES IN THE ENKEPHALIN BIOSYNTHETIC PATHWAY
S. Stein, A. S. Stern, K. Kojima, D. L. Kilpatrick, B. N. Jones, R. A. Wolfe and **S. Udenfriend,** Roche Institute of Molecular Biology, Nutley, New Jersey 07110, USA

10.15 RELEASE AND METABOLISM OF SUBSTANCE P IN CNS
L. L. Iversen, C. M. Lee, M. Hanley and **B. E. Sandberg,** MRC Neurochemical Pharmacology Unit, Medical School, Hills Road, Cambridge, UK

14.00 PROPERTIES OF THE N-TERMINAL AND C-TERMINAL SEGMENTS OF SUBSTANCE P
S. Blumberg and **V. I. Teichberg,*** Department of Biophysics and *Department of Neurobiology, The Weizmann Institute of Science, Rehovot, Israel

14.20 PROPERTIES OF ENKEPHALINASE AND ENKEPHALINASE INHIBITORS
B. Malfroy, S. De La Baume, C. Llorens and **J. C. Schwartz,** Unité 109 de Neurobiologie, Centre Paul Broca de l'INSERM, 2 ter, rue d'Alesia 75014 Paris, France

14.50 ENKEPHALIN METABOLISM IN CULTURED GLIOMA AND NEUROBLASTOMA CELLS
J. W. Lazarewicz, J. Wideman and **M. Kanje,*** Department of Neurochemistry, Medical Research Centre, Polish Academy of Sciences, Warsaw, Poland and *Department of Zoophysiology, University of Lund, Lund, Sweden

TUESDAY, SEPTEMBER 8, 1981

09.00–11.00
14.00–16.00

Lecture Theatre LT3

SYMPOSIUM S4 (Continued)

BIOSYNTHESIS AND METABOLISM OF NEUROPEPTIDES

15.05 DEGRADATION PATHWAYS OF LH-RH AND NEUROTENSIN IN RAT SYNAPTOSOMAL FRACTIONS
J. R. McDermott, A. I. Smith, J. A. Biggins, P. R. Dodd, J. A. Hardy and **J. A. Edwardson,** MRC Neuroendocrinology Unit, Newcastle General Hospital, Newcastle upon Tyne NE4 6BE, UK

15.20 MODULATION OF NEUROTRANSMITTER RECEPTORS BY NEUROPEPTIDES
E. Costa, Laboratory of Preclinical Pharmacology, National Institute of Mental Health, Saint Elizabeth's Hospital, Washington D.C. 20032, USA

15.50 General Discussion

TUESDAY, SEPTEMBER 8, 1981

09.00–11.00 **Lecture Theatre C50**
14.00–16.00

SYMPOSIUM S5

PURINE DERIVATIVES IN NEUROTRANSMISSION

Organisers: **H. McIlwain** (UK)
V. P. Whittaker (FRG)

09.00 INTRODUCTORY COMMENT
H. McIlwain, Department of Biochemistry, St. Thomas's Hospital Medical School, London, SE1 7EH, UK

09.05 EVIDENCE SPECIFYING PURINERGIC NEUROTRANSMISSION IN DISTINCTION TO NEUROMODULATION
G. Burnstock, Department of Anatomy and Embryology and Centre for Neuroscience, University College, London, UK

09.35 PURINERGIC RECEPTORS: ELECTROPHYSIOLOGICAL EVIDENCE AND SPECIFICATION
J. W. Phillis, Department of Physiology, College of Medicine, University of Saskatchewan, Saskatoon, Canada

10.05 FORMATION AND FUNCTION OF ADENOSINE IN THE CNS. I. RELEASE AND MODULATORY ACTION
P. Schubert, K. S. Lee and **G. W. Kreutzberg,** Max Planck Institute for Psychiatry, Munich, FRG

10.15 MODULATION OF INHIBITORY CIRCUITRY BY ADENOSINE IN THE HIPPOCAMPUS
K. S. Lee and **P. Schubert,** Max Planck Institute for Psychiatry, Munich, FRG

10.25 Discussion

10.30 PRESYNAPTIC ADENOSINE RECEPTORS IN MAMMALIAN BRAIN; THEIR NEUROMODULATORY ROLES MEDIATED BY CA^{2+} AND CYCLIC AMP
Y. Kuroda, Department of Neurochemistry, Tokyo Metropolitan Institute for Neurosciences, Fuchu-shi, Tokyo 183, Japan

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14.00 THE ADENOSINE CYCLE AT THE CHOLINERGIC ELECTROMOTOR NERVE TERMINAL
H. Zimmermann, Fachbereich IV, Universität Oldenburg, D-2900 Oldenburg, FRG

14.30 STORAGE AND TURNOVER OF ATP IN SYNAPTIC VESICLES STUDIED BY NMR ANALYSIS
H. Stadler, Abteilung Neurochemie, Max-Planck-Institut für Biophysikalische Chemie, Postfach 968, D-3400 Göttingen, FRG

TUESDAY, SEPTEMBER 8, 1981

09.00–11.00 **Lecture Theatre C50**
14.00–16.00

SYMPOSIUM S5 (Continued)

PURINE DERIVATIVES IN NEUROTRANSMISSION

15.00 THE ATP RELEASED BY STIMULATION AND ITS PHYSIOLOGICAL SIGNIFICANCE
F. M. Meunier, M. Israël, B. Lesbats, R. Manaranche and **P. Frachon,** Département de Neurochimie, Laboratoire de Neurobiologie Cellulaire, CNRS, 91190 Gif sur Yvette, France

15.10 ADENOSINE TRIPHOSPHATASE ACTIVITY AT THE EXTERNAL SURFACE OF SYNAPTOSOMES
Á. Nagy and **M. D. Rosenberg,*** Institute of Biochemistry, Biological Research Center of Hungarian Academy of Sciences, Szeged, Hungary and
*Department of Genetics and Cell Biology, University of Minnesota, St. Paul, Minn., USA

15.25 General Discussion

15.55 CONCLUDING COMMENT
V. P. Whittaker, Abteiling Neurochemie, Max-Planck-Institut für Biophysikalische Chemie, Postfach 968, D-3400 Göttingen, FRG

TUESDAY, SEPTEMBER 8, 1981

09.00–11.00 **Lecture Theatre LT1**
14.00–16.00

SYMPOSIUM S6

AMINO-ACID TRANSMITTERS AND NEURON-GLIA INTERACTIONS

Organisers: **A. Hamberger** (Sweden)
W. J. Nicklas (USA)

09.00 Introduction

09.05 THE GABA-GLUTAMINE-GLUTAMATE CYCLE IN BRAIN
C. J. Van den Berg, Studygroup Inborn Errors and Brain, Department of Psychiatry, Faculty of Medicine, University of Groningen, Groningen, The Netherlands

09.30 EXCITOTOXIC AMINO ACIDS: NEURONAL-GLIAL EFFECTS
W. J. Nicklas, Department of Neurology, College of Medicine and Dentistry of New Jersey-Rutgers Medical School, P.O. Box 101, Piscataway, New Jersey 08854, USA

09.55 STUDIES ON GLUTAMATE AS A NEUROTRANSMITTER
H. F. Bradford and **J. C. Coutinho-Netto,** Imperial College, London SW7, UK

10.20 EVIDENCE FOR GLUTAMATE COMPARTMENTATION IN THE SYNAPTOSOMAL FRACTION USING THE GLUTAMATE SENSITIVITY OF PHOSPHATE ACTIVATED GLUTAMINE AS A FUNCTIONAL TEST
E. Kvamme, Neurochemical Laboratory, The Oslo University, Oslo 3, Norway

10.45 L-GLUTAMATE AND L-GLUTAMINE TRANSPORT IN RAT CEREBELLUM: BIOCHEMICAL AND MORPHOLOGICAL ASPECTS
J. de Barry, G. Vincendon, G. Gombos, Unité 44 INSERM et Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cédex, France

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14.00 NEURONE-GLIA INTERACTION: EVIDENCE THAT THE ACTION OF AMINO ACID TRANSMITTERS ON GLIAL CELLS IS CAUSED BY THE EFFLUX OF POTASSIUM FROM NEURONES
L. Hösli, E. Hösli, Ch. Zehntner and **H. Landolt,** Department of Physiology, University of Basel, Vesalgasse 1, CH-4051, Basel, Switzerland

14.25 GLUTAMATE AS A NEUROTRANSMITTER IN HIPPOCAMPUS AND SEPTUM AND INTERACTION WITH GABAERGIC NEURONS. RELEASE AND ENDOGENOUS LEVELS OF AMINO ACIDS AFTER LESIONING OF DIFFERENT FIBRES
D. Malthe-Sørenssen, Norwegian Defence Research Establishment, Division for Toxicology, N-2007, Kjeller, Norway

TUESDAY, SEPTEMBER 8, 1981

09.00–11.00
14.00–16.00

Lecture Theatre LT1

SYMPOSIUM S6 (Continued)

AMINO-ACID TRANSMITTERS AND NEURON-GLIA INTERACTIONS

14.50 BACLOFEN: EFFECTS ON EVOKED FIELD POTENTIALS AND AMINO ACID NEUROTRANSMITTER RELEASE IN THE RAT OLFACTORY CORTEX SLICE
G. G. S. Collins, Department of Pharmacology, University of Sheffield, Sheffield S10 2TN, UK

15.15 DEPOLARIZATION-EVOKED RELEASE OF AMINO ACID TRANSMITTERS: MODULATION BY AMMONIA
A. Hamberger, S.-O. Molin and **B. Nyström,** Institute of Neurobiology, University of Göteborg, Göteborg, Sweden

15.40 Poster Discussion

15.55 Conclusion

TUESDAY, SEPTEMBER 8, 1981

09.00–12.30
14.00–16.30

Lecture Theatre LT4

SYMPOSIUM S7

PERINATAL BIOCHEMICAL CHANGES AND BRAIN DEVELOPMENT (UNESCO/IBRO SYMPOSIUM)

Organisers: **R. Balázs** (UK)
F. Mayor (Spain)

09.00 ENERGY METABOLISM OF THE PREMATURE NEWBORN RAT
J. M. Medina, J. M. Cuezva, C. Arizmendi, M. Benito, F. J. Moreno and **F. Mayor,** Departamento de Bioquimica y Biología Molecular, Centro de Biología Molecular, Facultad de Ciencias, Universidad Autónoma de Madrid, Madrid-34, Spain

09.30 ENERGY YIELDING SUBSTRATES: SUPPLY AND UTILIZATION
J. E. Cremer, MRC Toxicology Unit, Medical Research Council Laboratories, Carshalton, Surrey SM5 4EF, UK

10.00 DEVELOPMENT OF ENZYMES OF ENERGY METABOLISM IN MAMMALIAN BRAIN
J. B. Clark, S. F. Leong and **L. A. Munday,** Biochemistry Department, St. Bartholomew's Hospital Medical College, University of London, Charterhouse Square, London, EC1M 6BQ, UK

10.30 PERINATAL CHANGES IN BRAIN PROTEIN TURNOVER
A. Lajtha and **D. Dunlop,** Center for Neurochemistry, Rockland Research Institute, Ward's Island, New York 10035, USA

11.00 Coffee Break

11.30 FATTY ACID AND LIPID IN BRAIN MEMBRANES DURING DEVELOPMENT
G. Porcellati, G. E. De Medio, F. Gremo and **F. Trovarelli,** Department of Biochemistry, University of Perugia, Perugia, Italy and Department of Anatomy, University of Cagliari, Cagliari, Italy

12.00 EFFECT OF UNDERNUTRITION ON BRAIN DEVELOPMENT IN EXPERIMENTAL ANIMALS
A. J. Patel, P. D. Lewis* and **R. Balázs,** MRC Developmental Neurobiology Unit, Institute of Neurology, 33 John's Mews, London WC1N 2NS and
*Department of Histopathology, Royal Postgraduate Medical School, London WC12 0HS, UK

12.30 Lunch Break

TUESDAY, SEPTEMBER 8, 1981

00–16.30 **Lecture Theatre LT4**

SYMPOSIUM S7 (Continued)

PERINATAL BIOCHEMICAL CHANGES AND BRAIN DEVELOPMENT (UNESCO/IBRO SYMPOSIUM)

14.00 TAURINE IN NUTRITION AND BRAIN DEVELOPMENT: HUMAN AND ANIMAL CORRELATES
G. E. Gaull, J. S. Sturman and **G. Y. Wen,** Departments of Human Development and Nutrition and of Pathological Neurobiology, New York State Institute Basic Research Mental Retardation, Staten Island, New York; and Department of Pediatrics, Mount Sinai School of Medicine, City University, New York, USA

14.30 VITAMIN REQUIREMENTS AND BRAIN DEVELOPMENT
J. P. Blass, Cornell University Medical College, Burke Rehabilitation Center, White Plains, New York, USA

15.00 THE EFFECT OF IRON-DEFICIENCY ON DOPAMINE RECEPTORS: BIOCHEMICAL AND BEHAVIOURAL CORRELATES
M. B. H. Youdim, R. Ashkenazi and **S. Yehuda,*** Faculty of Medicine,Techrion, Haifa and *Bar Ilan University, Tel Aviv, Israel

15.30 HYPOGLYCEMIA AND BRAIN CELL DAMAGE
B. K. Siesjö, Laboratory for Experimental Brain Research, E-Blocket, University of Lund, Sweden

16.00 NEUROPATHOLOGY OF NUTRITIONAL GROWTH RESTRICTION
J. Dobbing, University of Manchester, the Department of Child Health, Manchester, UK

TUESDAY, SEPTEMBER 8, 1981

16.30–18.00 **Seminar Room D61**

ROUND TABLE R5

HISTORY OF NEUROCHEMISTRY

In 1956 the Journal of Neurochemistry started to appear, followed in 1965 by the foundation of the International Society of Neurochemistry. It may seem that neurochemistry was born at the same time, but that is a mistake. The search for the relation between chemical elements or the structure of matter and normal or abnormal behaviour is a very old one. Chemical solutions for various types of behaviour have been offered time and time again; some of these solutions disappeared, others served to understand or were used for working out treatments for brain or behavioural disorders.

In this century the brain itself became the heart of the behaviour problem, and with the increase in chemical or biochemical knowledge and techniques an enormous mass of data accumulated. We have learned a great deal about the static and dynamic biochemical processes in the brain, and we may expect that in the near future our insight in the plastic phenomena of the brain, growing within an organism, which itself is part of a dynamic world, will bring us closer to an appreciation of what we can do by having a brain.

In this round table a few aspects of the history or neurochemistry will be offered to the public; this may stimulate others to look backwards once in a while.

Organiser: **C. J. Van den Berg** (The Netherlands)

Participants: **H. McIlwain** (UK)
G. B. Ansell (UK)
S. P. R. Rose (UK)
V. Andreoli (Italy)

TUESDAY, SEPTEMBER 8, 1981

16.30–18.00 **Seminar Room B128**

ROUND TABLE R6

RAPID TRANSPORT OF LIPIDS AND GLYCOPROTEINS

Rapid axonal transport of lipids and glycoprotein from the nerve cell body to the axon and axon terminal is of crucial importance for the neuron. An increasing number of studies have been published on rather uncharacterised rapidly transported components. It is now time to concentrate on more characterised molecules of the rapid axonal transport. The round table will mainly deal with the last years' progress in the identification of rapidly transported proteins and lipids. It is the aim of the round table to avoid long presentations of experimental finding and to favour very short presentations, followed by discussions between the participants and the audience.

Organiser: **J.-O. Karlsson** (Sweden)

Participants: **B. Droz** (France)
L. DiGiamberardino (France)
J.-Y. Couraud (France)
M. Willard (USA)
C. Ohlson (Sweden)
R. Ledeen (USA)
L. Austin (Australia)
P. Morell (USA)
M. Alberghina (Italy)

TUESDAY, SEPTEMBER 8, 1981

16.30–18.00 Lecture Theatre C50

ROUND TABLE R7

ADRENAL PARANEURONS AND PC12 CELLS AS MODELS FOR NEURONAL FUNCTION

Biochemical studies on cellular mechanisms operating in neuronal process outgrowth, and in the release of neurohormones and neurotransmitters have been hampered by the diversity of cells found in the nervous system and the difficulty in obtaining defined cell types in adequate quantities and purity. Recently, several procedures have been described for the large scale isolation and maintenance of two cell types of neural crest origin—adrenal chromaffin cells (adrenal paraneurons), and pheochromocytoma (PC12) cells—and there is increasing interest in the use of these preparations because of the potential advantages they offer to the neurochemist. This round table will examine critically:

(a) The various procedures available for isolating and maintaining the cells, with particular attention to the criteria for assessing purity, yield, identity and survival in culture.

(b) The role of trophic factors (e.g. NGF) and substrate adhesion in process outgrowth from cells.

(c) The role of ATP and contractile proteins in the secretory process.

(d) The proposed role of neuropeptides (e.g. substance P, somatostatin and the enkephalins) as neuromodulators of catecholamine secretion from the cells.

Organiser: **B. Livett** (Canada)

Participants: **O. H. Viveros** (USA)
D. E. Knight (UK)
J. Trifaró (Canada)
D. Aunis (France)
S. Lemaire (Canada)
K. Unsicker (FRG)
A. Garcia (Spain)
H. Thoenen (FRG)
G. Guroff (USA)
E. Fenwick (FRG)
E. Costa (USA)

TUESDAY, SEPTEMBER 8, 1981

16.30–18.00 **Lecture Theatre LT1**

ORAL COMMUNICATIONS OC3

BIOSYNTHESIS AND METABOLISM OF PEPTIDES

Chairman: **P. Cohen** (France)

16.30 THE PRESENCE AND DISTRIBUTION OF ACETYL-ASPARATE IN SOME REGIONS OF THE BRAIN OF TORPEDO MARMORATA
P. D. Edminson, K. L. Reichelt and **V. P. Whittaker,*** Pediatric Research Institute, Rikhospitalet, Oslo 1, Norway and *Max-Planck-Institut für Biophysikalische Chemie, Abt. Neurochemie, Göttingen, FRG

16.45 EFFECT OF OVARIAN STEROIDS ON *IN VITRO* RELEASE OF LHRH BY HYPOTHALAMIC SLICES
S. V. Drouva, E. Laplante and **C. Kordon,** Unité 159 de Neuroendocrinologie de l'INSERM, Paris, France

17.00 PATHWAY FOR THE PROTEOLYTIC CONVERSION OF VASOPRESSIN AND OXYTOCIN BY BRAIN SYNAPTIC MEMBRANES
J. P. H. Burbach, Rudolf Magnus Institute for Pharmacology, University of Utrecht, Vondellaan 6, 3521 GD Utrecht, The Netherlands

17.15 A SPECIFIC RADIOIMMUNOASSAY FOR MET-ENKEPHALIN(ARG^6,PHE^7); IMMUNOREACTIVITY IN THE RAT BRAIN
M. R. Boarder, A. J. Lockfeld, J. D. Barchas, N. Pritzker, Laboratory of Behavioural Neurochemistry, Department of Psychiatry and Behavioural Sciences, Stanford University School of Medicine, Stanford, California 94305, USA

17.30 ENKEPHALIN-DEGRADING AMINOPEPTIDASE FROM HUMAN BLOOD
M.-A. Coletti-Previero, B. Descomps and **A. Previero,** Centre de recherche INSERM, 60 Rue des Navacelles, Montpellier, France

TUESDAY, SEPTEMBER 8, 1981

16.45–18.00 **Lecture Theatre LT4**

ORAL COMMUNICATIONS OC4

PERINATAL BIOCHEMICAL CHANGES AND BRAIN DEVELOPMENT

Chairman: **J. Cremer** (UK)

16.45 EFFECT OF CNS ACTING DRUGS ON BRAIN CELL PROLIFERATION *IN VITRO*
O. Barachovsky* and **A. J. Patel,** MRC Developmental Neurobiology Unit, Institute of Neurology, 33 John's Mews, London WC1N 2NS, UK
*Now at Department of Biochemistry, Imperial College, London SW7 2AZ, UK

17.00 NEURONAL DEVELOPMENT IN DISCRETE AREAS OF RAT BRAIN DURING NEONATAL THYROID DEFICIENCY
R. N. Kalaria, A. M. Kotas, A. K. Prince and **R. Reynolds,** University of London King's College, London, UK

17.15 POSTNATAL ACTION OF GROWTH AND THYROID HORMONES ON THE RETARDED CEREBRAL MYELINOGENESIS OF SNELL DWARF MICE (dw)
T. Noguchi, T. Sugisaki and **Y. Tsukada,** Department of Physiology, School of Medicine, Keio University, Shinanomachi, Tokyo-160, Japan

17.30 EFFECTS OF PSYCHOTROPIC DRUGS ON THE DEVELOPMENT OF NEUROTRANSMITTER SYSTEMS IN RAT BRAIN
B. E. Leonard*, E. Dalitz, V. Bigl, E. Kunert and **D. Biesold,** Paul-Flechsig Institut für Hirnforschung, Abteilung für Neurochemie, Karl-Marx-Universität, Leipzig, FRG and *Department of Pharmacology, University College, Galway, Ireland

17.45 EFFECT OF NEONATAL SEX STEROID ADMINISTRATION ON CENTRAL CATECHOLAMINERGIC NEURONS INVOLVED IN GONADOTROPIN RELEASE
R. Ghraf and **Ch. Hiemke,** Instiut für Physiologische Chemie, Universitätsklinikum Essen, D-4300 Essen, FRG

TUESDAY, SEPTEMBER 8, 1981

16.30–18.00 **Lecture Theatre LT3**

ORAL COMMUNICATIONS OC5

AMINO-ACID TRANSMITTERS AND NEURON-GLIA INTERACTIONS

Chairman: **H. F. Bradford** (UK)

16.30 EFFECTS OF K^+ RICH MEDIUM ON GLUTAMINE SYNTHETASE ACTIVITY IN RAT BRAIN CORTEX SLICES
T. Kanamatsu, H. Asou, Y. Takagi and **S. Hirano,** 2nd Department of Physiology, Toho University of Medicine, Ohmori, Tokyo 143, Japan

16.45 HIPPOCAMPAL GLUTAMATE AUTORECEPTORS
P. J. Roberts and **G. J. McBean,** Department of Physiology and Pharmacology, School of Biochemical and Physiological Sciences, University of Southampton, Southampton, SO9 3TU, UK

17.00 BINDING OF [^{3}H] AMPA TO GLUTAMATE RECEPTORS FROM RAT BRAINS
T. Honoré, J. Lauridsen and **P. Krogsgaard-Larsen,** Royal Danish School of Pharmacy, Department of Chemistry BC, DK-2100 Copenhagen, Denmark

17.15 DEVELOPMENT OF EXCITATORY AMINO ACID BINDING SITES IN THE CHICK OPTIC TECTUM
G. Ramirez, J. Gómez-Barriocanal, A. Batuecas, A. Barat, S. Fernández-Quero and **E. Escudero,** Centro de Biología Molecular, Universidad Autónoma, Canto Blanco, Madrid-34, Spain

17.30 HIGH AFFINITY GABA-RECEPTORS HIGHLY ENRICHED IN CULTURES OF CEREBELLAR INTERNEURONES
E. Meier and **A. Schousboe,** Department of Biochemistry A, Panum Institute University of Copenhagen, Blegdamsvej 3C, DK-2200 Copenhagen N, Denmark

17.45 GLIAL VERSUS NEURONAL UPTAKE OF GLUTAMATE: CEREBELLAR GRANULE NEURONS IN DEFINED CELL CULTURE DO NOT ACCUMULATE GLUTAMATE
D. N. Currie, Department of Pharmacology, St, George's Hospital Medical School, Cranmer Terrace, Tooting, London SW17 0RE, UK

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113 MODULATION OF RAT HIPPOCAMPAL α-ADRENOCEPTOR POPULATION BY LESION OF THE SEROTONERGIC RAPHE-HIPPOCAMPAL PATHWAY
H. Ladinsky, S. Consolo, G. Forloni and **P. Grombi,** Istituto di Ricerche Farmacologiche 'Mario Negri', Milan, Italy

114 ECT AND DOPAMINE RECEPTOR SENSITIVITY
J. Bannet, B. Lerer, R. P. Ebstein and **R. H. Belmaker,** Jerusalem Mental Health Center—Ezrat Nashim, P.O. Box 140, Jerusalem, Israel

115 PROLACTIN RECEPTORS IN THE RABBIT HYPOTHALAMUS: MODIFICATIONS INDUCED BY PHYSIOLOGICAL AND PHARMACOLOGICAL VARIATIONS OF PROLACTIN SERUM LEVELS
R. Di Carlo and **G. Muccioli,** Institute of Pharmacology (2nd Chair), University of Turin, Turin, Italy

116 ALTERATIONS IN HIGH AFFINITY RECEPTOR BINDING SITES OF SOME NEURO-MODULATORS IN ATAXIC MUTANT MOUSE—ROLLING MOUSE NAGOYA
T. Yamaguchi and **K. Hayashi,** Department of Biochemistry, Tokyo Women's Medical College.
S. Maruyama and **H. Murakami,** Department of Neurology, Tokyo Women's Medical College, 10-Kawada-cho, Shinjuku-ku, Tokyo, Japan

117 ALPHA-RECEPTOR MEDIATED MODULATION OF ^{3}H-NORADRENALINE AND ^{3}H-SEROTONIN RELEASE FROM RAT BRAIN TISSUE AFTER LONG-TERM DESIPRAMINE TREATMENT
A. N. M. Schoffelmeer, P. C. Baart and **A. H. Mulder,** Department of Pharmacology, Free University, Amsterdam, The Netherlands

118 THE MODULATION OF OPIATE RECEPTOR LEVELS IN THE NEUROBLASTOMA X GLIOMA HYBRID CELL LINE, 108CC15
M. A. Moses and **C. R. Snell,** MRC Neuroendocrinology Unit, Newcastle General Hospital, Newcastle upon Tyne NE4 6BE, UK

119 ACETYLCHOLINE RECEPTOR CONCENTRATION IN THE MIMIC MUSCULATURE OF THE RAT FOLLOWING DENERVATION AND REINNERVATION
C. Arglebe, R. Chilla, M. Opaitz and **M. Schröder,** Universitäts-HNO-Klinik, Göttingen, and **V. Witzemann,** Abteilung Neurochemie, Max-Planck-Institut für Biophysikalische Chemie, Postfach 968, D-3400 Göttingen (FRG)

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NEWER ASPECTS OF NEUROTRANSMITTER RECEPTORS

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120 PROLONGED LITHIUM TREATMENT DECREASES HIGH-AFFINITY BINDING OF ^{3}H-SPIPERONE BUT INCREASES THE LEVELS OF GLYCINE AND POTASSIUM IN THE BRAIN
M. Banay-Schwartz, I. J. Wajda, I. Manigault and **A. Lajtha,** Center for Neurochemistry, Rockland Research Institute, Ward's Island, New York 10035, USA

121 HIPPOCAMPAL 5HT RECEPTOR BINDING ACTIVITY AFTER SEPTAL LESIONS IN RATS: EFFECT OF GANGLIOSIDES
J. Skangiel-Kramska, M. Wojcik and **B. Oderfeld-Nowak,** Nencki Institute of Experimental Biology, Warsaw, Poland

122 AGE RELATED CHANGES OF MEMBRANE PROPERTIES
A. C. Bonetti, A. Battistella, S. Teolato, G. Calderini and **G. Toffano,** Fidia Research Laboratories, Department of Biochemistry, Abano Terme, Italy

123 EFFECTS OF NORADRENERGIC DENERVATION ON MUSCARINIC RECEPTORS OF SMOOTH MUSCLE
T. Lot,* T. Bennett* and **P. G. Strange,†** *Department of Physiology and Pharmacology and †Department of Biochemistry, The Medical School, Queen's Medical Centre, Nottingham, NG7 2UH, UK

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MYELINOGENESIS—B

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124 ISOLATION OF PLASMA MEMBRANE FROM GLIAL CELLS BY PERCOLL GRADIENT
S. L. Miller and **N. Martin,** The Wistar Institute, Philadelphia, PA, USA

125 COMPARISON BETWEEN SOLUBLE CNPASE FROM SERUM AND MYELIN ASSOCIATED CNPASE
H. Suda and **Y. Tsukada,** Department of Physiology, School of Medicine, Keio University, Shinanomachi 35, Shinjuku-ku, Tokyo 160, Japan

126 NONENZYMATIC GLYCOSYLATION OF MYELIN BASIC PROTEIN BY D-GALACTOSE, N-ACETYLMANNOSAMINE, 2-DEOXY-D-GLUCOSE, L-FUCOSE, D-MANNOSE, D-GLUCOSE AND N-ACETYLNEURAMINIC ACID
J. A. Dain, M. Cohenford, J. B. Hitz, R. A. McKinney, D. C. Shepard, and **J. C. Urbanowski,** Department of Biochemistry and Biophysics, University of Rhode Island, Kingston, Rhode Island, USA

127 2'3'-CYCLIC NUCLEOTIDE 3'-PHOSPHODIESTERASE ASSAY METHOD
A. S. L. Pitkänen, T. O. Halonen, H. O. Kilpeläinen and **P. J. Riekkinen,** Department of Neurology, University of Kuopio, P.O. Box 138, SF-70101 Kuopio 10, Finland

128 MYELIN LIPID SYNTHESIZING ENZYMES IN MOUSE SCHWANN CELLS CULTURED *IN VITRO*
E. Constantino-Ceccarini, I. Georgieff, J.-M. Matthieu and **C. Ceccarini,** Albert Einstein College of Medicine, Bronx, New York, USA., Hunter College CUNY, New York, USA, Istituto Internazionale Genetica Biofisica and Laboratorio Embriologia Molecolare, Napoli, Italy

129 DYSMYELINATION OF THE *SHIVERER* MUTANT MICE: NEUROCHEMICAL AND IMMUNOHISTOCHEMICAL STUDIES
K. Mikoshiba, K. Takamatsu, K. Nagaike and **Y. Tsukada,** Department of Physiology, Keio University School of Medicine, Shinano-machi, Shinjuku-ku, Tokyo, Japan

130 BIOSYNTHESIS OF MYELIN PROTEINS IN DEMYELINATION AND REMYELINATION AFTER LYSOLECITHIN TREATMENT IN THE SCIATIC NERVE
M. E. Smith, J. D. Kocsis and **S. G. Waxman,** Department of Neurology, Veterans Administration Medical Center and Stanford University School of Medicine, Palo Alto, California, USA 94304

131 SOME ASPECTS OF ETHER PHOSPHOLIPID METABOLISM IN CULTURED GLIA CELLS
B. Witter, K. H. Illig, J. Gunawan and **H. Debuch,** Institut für Physiologische Chemie, Lehrstuhl 11, University Köln, FRG

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132 INVESTIGATIONS ON MYELINATION *IN VITRO.* IV. EXISTENCE OF MYELINIC STRUCTURES IN CULTURES OF DISSOCIATED BRAIN CELLS FROM EMBRYONIC MICE
L. L. Sarlieve,[1] **M. Fabre,** [2] **G. Rebel,**[1] **G. Vincendon**[1] and **J. M. Matthieu,**[3]
[1]Unité 44 de l'INSERM and Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France
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[3]Service de Pédiatrie, Institut de Physiologie, Université, Lausanne, Suisse.

133 CULTURING OF BULK-ISOLATED RODENT OLIGODENDROGLIA
J. A. Chapman, F. M. Cocker, S.-W. Chao and **M. G. Rumsby,** Department of Biology, University of York, York, YO1 5DD, UK

134 ACTION OF PHOSPHOLIPASE C. (*B. CEREUS*) AND SPHINGOMYELINASE (*S. AUREUS*) ON ISOLATED CENTRAL NERVE MYELIN
K. Ghwarsha, C. Little*, M. G. Rumsby, Department of Biology, University of York, Heslington, York, YO1 5DD
*University of Tromso, Institute of Medical Biology, 9001 Tromso, Norway

135 CEREBROSIDE SYNTHESIS IN RAT BRAIN OLIGODENDROCYTES DURING MYELINATION
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BIOSYNTHESIS AND METABOLISM OF PEPTIDES

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136 REGULATORY FUNCTION OF POLYAMINES DURING BRAIN PEPTIDE SYNTHESIS
B. Goertz, C. & O. Vogt-Institut für Hirnforschung der Universität, Moorenstrasse 5, 4000 Düsseldorf, FRG

137 SYNAPTOSOMAL LOCALIZATION OF ISORENIN IN RAT BRAIN
A. Husain, R. R. Smeby and **R. C. Speth,** Research Division, Cleveland Clinic Foundation, Cleveland, Ohio, USA

138 TAURINE PEPTIDES IN CNS: OCCURRENCE AND BIOSYNTHESIS
P. Lähdesmäki, Department of Biochemistry, University of Oulu, SF-90570 Oulu 57, Finland

139 THE USE OF ISOLATED DORSAL ROOT GANGLION CELLS TO STUDY THE SYNTHESIS OF TRANSMITTER-RELATED PEPTIDES
F. Spears, C. Gilbert, J. G. Schofield and **P. Keen,** Department of Pharmacology, University of Bristol, Bristol BS8 1TD, UK

140 RADIOIMMUNOASSAY FOR DETECTING MET-ENKEPHALIN PRECURSORS IN TISSUE EXTRACTS
A. Cupo, P. A. Pontarotti, J. Barbet, M. Delaage, Centre d'Immunologie, Marseille, France
G. Gacel, B. P. Roques, Faculté de Pharmacie, Paris, France

141 CO-STORAGE OF LEU- AND MET-ENKEPHALIN WITHIN ADRENALINE-SYNTHESIZING CELLS IN THE BOVINE ADRENAL MEDULLA
B. G. Livett, R. Day, P. R. C. Howe* and **R. P. Elde,**** Division of Neurology, The Montreal General Hospital, Montreal, Canada
*Developmental Biology Program, CSIRO, Division of Human Nutrition, Adelaide, Australia
**Department of Anatomy, University of Minnesota, Minneapolis, USA

142 BREAKDOWN OF PROTEINS AND PEPTIDES BY PURIFIED CALF BRAIN CATHEPSIN B
A. Suhar and **V. Turk,** Department of Biochemistry, J. Stefan Institute, University Edvard Kardelj, 61000 Ljubljana, Yugoslavia

143 PURIFICATION AND CHARACTERIZATION OF PARTICULATE AMINOPEPTIDASE FOR ENKEPHALIN DEGRADATION
K.-S. Hui, Y.-J. Wang and **A. Lajtha,** Center for Neurochemistry, Rockland Research Institute, Ward's Island, New York 10035, USA

144 PROTEOLYTIC ACTIVATION OF NEUROPEPTIDES ENCLOSED IN THE β-ENDORPHIN STRUCTURE
J. P. H. Burbach, Rudolph Magnus Institute for Pharmacology, University of Utrecht, Vondellaan 6, 3521 GD Utrecht, The Netherlands

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145 TRH DEGRADING ACTIVITY IN RAT RETINA
A. Langeland, Neurochemical Laboratory, The Oslo University, Oslo 3, Norway

146 PROTEOLYTIC DEGRADATION OF SP, TRH, LHRH, BRADYKININ AND NEUROTENSIN BY SYNAPTOSOMES
H. Ch. Buniatian, A. A. Arzumanyan, A. A. Arutunyan and **T. N. Akopyan,** Institute of Biochemistry, Sevag str. 5/I, 375044, Yerevan, USSR

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147 FORMATION AND FUNCTION OF ADENOSINE IN THE CNS
II. EXTRACELLULAR PRODUCTION VIA 5'-NUCLEOTIDASE ACTIVITY
M. Reddington and **G. W. Kreutzberg,** Max-Planck-Institute for Psychiatry, Munich, FRG

148 EVIDENCE FOR THE RELEASE OF ADENOSINE IN BRAIN NERVE ENDINGS
C. Barberis, Laboratoire de Physiologie Générale 1, Université Nancy 1, 54037 Nancy, France

149 CHARACTERIZATION OF THE MEMBRANE BOUND RECEPTORS FOR ADENOSINE IN THE CENTRAL NERVOUS SYSTEM
P. H. Snell and **C. R. Snell,** MRC Neuroendocrinolgy Unit, Newcastle General Hospital, Newcastle upon Tyne, NE4 6BE, UK

150 EFFECT OF INHIBITION OF PURINE ENZYMES ON BENZODIAZEPINE BINDING IN HUMAN BRAIN
I. F. Norstrand, A. F. Debons, R. M. Libbin and **W. R. Slade, Jr.,** Brooklyn VA Medical Center, Brooklyn, New York, USA

151 ADENOSINE-DEPENDENT PHOSPHORYLATION OF PROTEIN 1, A NEURONAL PHOSPHOPROTEIN ASSOCIATED WITH SYNAPTIC VESICLES
A. Dolphin and **P. Greengard,** Department of Pharmacology, Yale University Medical School, New Haven, CT, USA

152 PALMITOYL CoA BINDING TO CHOLINERGIC SYNAPTIC VESICLES—EVIDENCE FOR THE PRESENCE OF A NUCLEOTIDE CARRIER
E. M. Fenwick and **H. Stadler,** Abteilung Neurochemie, Max-Planck-Institut für Biophysikalische Chemie, Postfach 968, D-3400 Göttingen, FRG

153 INHIBITION OF NUCLEOTIDE UPTAKE INTO ISOLATED CHOLINERGIC SYNAPTIC VESICLES BY A FATTY ACYL CoA
Y. A. Luqmani, Abteilung Neurochemie, Max-Planck-Institut für Biophysikalische Chemie, Postfach 968, D-3400 Göttingen, FRG

154 THE EFFECT OF CATIONS ON ATP TRANSPORT INTO PURELY CHOLINERGIC SYNAPTIC VESICLES ISOLATED FROM *TORPEDO MARMORATA*
Y. A. Luqmani, Abteilung Neurochemie, Max-Planck-Institut für Biophysikalische Chemie, Postfach 968, D-3400 Göttingen, FRG

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AMINO-ACID TRANSMITTERS AND NEURON-GLIA INTERACTIONS

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155 GLUTAMATE UPTAKE AND RELEASE IN CULTURED CEREBELLAR GRANULE CELLS VERSUS ASTROCYTES CULTURED FROM DIFFERENT BRAIN REGIONS
J. Drejer,[1] **I. Divac,**[2] **O. M. Larsson**[1] and **A. Schousboe,**[3]
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[2]Institute of Neurophysiology, University of Copenhagen, Denmark,
[3]Department of Biochemistry A, University of Copenhagen, Denmark

156 GLUTAMATE TRANSPORT IN THE AMERICAN COCKROACH *PERIPLANETA AMERICANA*
J. F. Collins, City of London Polytechnic, Jewry Street, London EC3N 2EY, UK
C. Potter, R. G. Wilson and **R. A. Wright,** The Wellcome Research Laboratories, Berkhamsted, Herts. HP4 2QE, UK

157 GLUTAMINE UPTAKE BY RAT BRAIN NEURONS AND GLIAL CELLS IN PRIMARY CULTURES
J. Mark, J. Borg, N. Ramaharobandro and **P. Mandel,** Centre de Neurochimie, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

158 THE DEVELOPMENT OF GLUTAMATE DEHYDROGENASE (NAD^+) (E.C.1.4.1.3) IN REGIONS OF THE RAT BRAIN
S. F. Leong and **J. B. Clark,** Biochemistry Department, St. Bartholomew's Hospital Medical College, University of London, Charterhouse Square, London EC1M 6BQ, UK

159 INDUCTION BY GLUCOCORTICOIDS OF GLUTAMINE SYNTHETASE IN DEVELOPING RAT BRAIN *IN VIVO*
A. J. Patel, A. Hunt and **C. S. M. Tahourdin,** MRC Developmental Neurobiology Unit, Institute of Neurology, 33 St. John's Mews, London WC1N 2NS, UK

160 METABOLIC FATE OF [U-^{14}C]- OR [1-^{14}C]-GLUTAMATE IN ASTROCYTES IN PRIMARY CULTURE
L. Hertz,[1] **A. Yu,**[1] **R. L. Potter,**[1] **W. J. Nicklas**[2] and **A. Schousboe,**[3]
[1]Department of Pharmacology, University of Saskatchewan, Saskatoon, Canada
[2]Departments of Neurology and Pharmacology, Rutgers Medical School, Piscataway, New Jersey, USA
[3]Department of Biochemistry, University of Copenhagen, Denmark

161 EFFECTS OF VARIOUS ANTIEPILEPTIC DRUGS ON THE GABA TURNOVER RATE
R. Bernasconi, L. Maitre, P. Martin and **M. Schmutz,** Research Department, Pharmaceuticals Division, CIBA-GEIGY Ltd. CH-4002 Basel, Switzerland

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162 EFFECT OF CHANGES IN THE IONIC CONTENT OF SYNAPTOSOMES ON [^{3}H]-GABA RELEASE
M. E. Sandoval, M. Covarrubias and **G. Avila,** Centro de Investigaciones en Fisiología Celular; Universidad Nacional Autónoma de México, México 20, D.F., México

163 EFFECTS OF TETANUS TOXIN ON THE RELEASE OF GABA FROM CEREBRAL CORTEX SLICES OF THE RAT
J. Heredero, E. R. Korpi and **S. S. Oja,** Department of Biomedical Sciences, University of Tampere, Tampere, Finland

164 SPECIFIC INHIBITION OF GABA-TRANSAMINASE IN RAT BRAIN INCREASES THE NEURONAL POOL OF GABA RELEASED BY POTASSIUM ION STIMULATION
C. R. Gardner, M. H. Richards and **J. Grove,** Centre de Recherche Merrell International, 16 rue d'Ankara, 67084 Strasbourg Cedex, France

165 CHARACTERIZATION OF A PRESYNAPTIC GABA RECEPTOR REGULATING GLUTAMATE RELEASE FROM THE CEREBELLUM *IN VITRO*
V. Gallo and **G. Levi,** Istituto di Biologia Cellulare del CNR, Via G. Romagnosi 18/A, 00196 Roma, Italy

166 A NOVEL TYPE OF BICUCULLINE-SENSITIVE GABA RECEPTOR
R. Mitchell, MRC Brain Metabolism Unit, 1 George Square, Edinburgh, EH8 9JZ, UK

167 METABOLIC FATE OF [^{14}C]-GLUTAMINE IN NEURONS AND ASTROCYTES IN PRIMARY CULTURE
A. Schousboe,[1] **A. Yu,**[1] **E. Hertz,**[1] **G. Svenneby**[2] and **E. Kvamme,**[2]
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[2]Neurochemical Laboratory, The Oslo University Psychiatric Clinic, Norway

168 PROPERTIES OF PHOSPHATE-ACTIVATED GLUTAMINASE IN ASTROCYTES CULTURED FROM MOUSE BRAIN
G. Svenneby,[1] **L. Hertz,**[2] **A. Schousboe**[3] and **E. Kvamme,**[1]
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169 A NEW METHOD TO STUDY THE RELEASE OF RADIOLABELED GABA AND GLUTAMATE
Th. de Boer, J. C. Stoof and **H. van Duyn,** Department of Neurology, Medical Faculty, Free University, Amsterdam, The Netherlands

170 SOME CHARACTERISTICS OF THE DEVELOPING γ-AMINOBUTYRIC ACID (GABA) SYNAPSE
U. Jönsson, M. Lundström, A. Sellström, National Defence Research Institute Umea, Sweden
B. Ehinger, Department of Oftamology, Lund, Sweden

171 SUCCINIC SEMIALDEHYDE AS A PRECURSOR FOR GABA SYNTHESIS
F. J. van Bemmelen and **J. Bruinvels,** Department of Pharmacology, Medical Faculty, Erasmus University, P.O. Box 1738 Rotterdam, The Netherlands

172 ON GABA SYNTHESIS AND DEGRADATION IN THE BRAIN
C. J. Van den Berg, M. Nijenmanting and **R. Bruntink,** Studygroup Inborn Errors and Brain, Department of Psychiatry, Faculty of Medicine, University of Groningen, Groningen, The Netherlands

173 KINETIC STUDIES OF THE EFFECTS OF SELECTED GABA ANALOGUES ON GABA UPTAKE IN CULTURED NEURONS AND ASTROCYTES
O. M. Larsson,[1] **P. Krogsgaard-Larsen**[2] and **A. Schousboe,**[3]
[1]Department of Biochemistry, Royal Danish School of Pharmacy, Denmark
[2]Department of Chemistry BC, Royal Danish School of Pharmacy, Denmark
[3]Department of Biochemistry A, University of Copenhagen, Denmark

174 THE SPECIFICITY OF PHOSPHOLIPID ACTION ON GABA AND GLYCINE TRANSPORT IN CEREBRAL CORTEX
M. Giesing and **U. Gerken,** Laboratory for Nerve Tissue Culture, Institute for Physiological Chemistry, 5300 Bonn, FRG

175 γ-HYDROXYBUTYRATE SYNTHESIS *IN VITRO*
J. F. Rumigny, C. D. Cash, M. Maitre and **P. Mandel,** Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg, Cedex, France

176 KINETIC CHARACTERIZATION OF GABA-TRANSAMINASE IN CULTURED ASTROCYTES
O. M. Larsson[1] and **A, Schousboe,**[2]
[1]Department of Biochemistry, Royal Danish School of Pharmacy, Denmark
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177 PRESENCE OF GABA BYPASS IN ADRENAL MEDULLARY CELLS
M. Fernandez-Ramil and **M. P. González,** Departamento de Bioquímica (Centro Coordinado del C.S.I.C.) Facultad de Farmacia, Madrid-3, Spain

178 GLUTAMINE AS A GLUTAMATE PRECURSOR
H. K. Ward and **H. F. Bradford,** Imperial College, London, SW7, UK

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179 ISOLATION OF A 'MITOCHONDRIAL' MEMBRANE BOUND ASPARTATE AMINOTRANSFERASE ISOENZYME
R. Benezra, M. Recasens, P. Mandel and **G. Vincendon,** Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

180 ASPARTATE BINDING IN THE RAT CEREBRAL CORTEX AT DIFFERENT AGES DURING DEVELOPMENT
C. Sanderson, Department of Biochemistry, University of Leeds, Leeds, West Yorkshire, UK
S. Murphy, Brain Research Group, Open University, Milton Keynes, Buckinghamshire, UK

181 SYNTHESIS OF ALANINE IN THE NERVOUS TISSUE OF LOCUST *(SCHISTOCERCA AMERICANA GREGARIA)*
A. Jabbar and **R. H. C. Strang,** Department of Biochemistry, University of Glasgow, Glasgow, G12 8QQ, Scotland, UK

182 CALCIUM-DEPENDENT RELEASE OF SPERMIDINE FROM RAT CEREBRAL CORTEX SLICES EVOKED BY POTASSIUM
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183 γ-HYDROXYBUTYRATE UPTAKE IN CNS
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184 GLYCINE AS A PUTATIVE NEUROTRANSMITTER IN THE RAT CEREBRAL CORTEX
G. Levi, G. Bernardi, E. Cherubini, V. Gallo, M. G. Marciani and **P. Stanzione,** Istituto di Biologia Cellulare, CNR, Via Romagnosi 18/A, 00196 Roma, and 2ª Clinica delle Malattie Nervose e Mentali, Università degli Studi di Roma, 00185 Roma, Italy

185 CYSTEINE SULFINIC ACID: A NEUROTRANSMITTER?
M. Recasens, J. Benavides, V. Varga, M. Maitre and **G. Vincendon,** Unité de Neurochimie Normale et Pathologique, U44 INSERM, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

186 THE DETERMINATION OF THE SYNAPTOSOMAL LEVELS OF AMINO ACIDS BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY
G. Svenneby and **K. Lenda,** Neurochemical Laboratory, The Oslo University, Oslo 3, Norway

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187 PHYSICAL PROPERTIES OF THE S-100 PROTEIN SOLUBILIZED BINDING SITES FROM SYNAPTOSOMAL PARTICULATE FRACTIONS (SYN.)
R. Donato, Department of Anatomy, Università Cattolica, 00168 Roma, Italy

188 FACTORS INFLUENCING THE BINDING BEHAVIOR OF S-100 PROTEIN BINDING SITES OF SYNAPTOSOMAL PARTICULATE FRACTIONS (SYN)
R. Donato, Department of Anatomy, Università Cattolica, 00168 Roma, Italy

189 OSMOTIC AND IONIC INFLUENCES UPON METABOLISM OF AMINO ACIDS IN TISSUES OF AMPHIBIAN NERVOUS SYSTEM: A COMPARATIVE STUDY
C. F. Baxter, R. A. Baldwin and **K. H. Tachiki,** Neurochemistry Laboratories, V.A. Medical Center, Sepulveda, California 91343 USA

190 EFFECTS OF (MORPHOLINO-2-ETHYL-AMINO)-3 METHYL-4 PHENYL-6 PYRIDAZINE ON SEROTONIN LEVELS AND METABOLISM IN CNS
C. Goniot, E. Kempf, G. Mack and **P. Mandel,** Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

191 ENDO- AND EXOCYTOSIS AT THE NERVE TERMINAL
E. Lidén, L. Estborn, L. Johansson, U. Jönsson and **A. Sellström,** National Defence Research Institute, Umea, Sweden

192 CYSTEINE SULPHINIC ACID DECARBOXYLASE AND TAURINE IN FETAL CALF BRAIN
R. S. Piha, E. Nikula and **H. Voltti,** Department of Biochemistry, University of Oulu, Oulu, Finland

193 REGIONAL CHANGES IN TAURINE CONCENTRATION DURING POST-NATAL DEVELOPMENT OF CALF BRAIN
R. S. Piha, R. Palo, R. Marila and **H. Voltti,** Department of Biochemistry, University of Oulu, Oulu, Finland

194 TAURINE EFFLUX FROM BRAIN SLICES AS MODIFIED BY CALCIUM-BINDING AGENTS AND AMINO ACIDS
E. R. Korpi, Department of Biomedical Sciences, University of Tampere, Tampere, Finland

195 MOLECULAR SEPARATION OF TAURINE AND GABA SYNTHESIZING DECARBOXYLASES FROM CALF BRAIN
A. A. Heinämäki, S. I. Malila, K. M. Tolonen and **R. S. Piha,** Department of Biochemistry, University of Oulu, SF-90570 Oulu 57, Finland

TUESDAY, SEPTEMBER 8, 1981

11.30–12.30 **Floor C**

POSTER COMMUNICATIONS PC2 (Continued)

AMINO-ACID TRANSMITTERS AND NEURON-GLIA INTERACTIONS

Poster No.

196 EFFECTS OF SODIUM AND POTASSIUM ON HYPOTAURINE, TAURINE AND GABA UPTAKE IN BRAIN SLICES
P. Kontro and **S. S. Oja,** Department of Biomedical Sciences, University of Tampere, Tampere, Finland

197 EFFECT OF ELECTROCONVULSIVE SHOCK ON TRANSMITTER RELEASE FROM RAT BRAIN SLICES
M. C. W. Minchin, MRC Unit of Clinical Pharmacology, Oxford, UK

198 CHARACTERISTICS OF OUABAIN INHIBITION OF Na^+-K^+ ATPase OF ISOLATED CELL TYPES FROM RAT CEREBELLUM
C. K. Atterwill, I. Bako and **R. Balazs,** MRC Developmental Neurobiolgical Unit, 33 John's Mews, London, WC1N 2NS, UK

199 GLIAL CONTAMINATION OF SYNAPTOSOME PREPARATIONS
P. R. Dodd, Medical Research Council, Neuroendocrinology Unit, Newcastle General Hospital, Westgate Road, Newcastle upon Tyne, UK
J. A. Hardy, Medical Research Council, Neuroendocrinology Unit, Newcastle General Hospital, Westgate Road, Newcastle upon Tyne, UK

200 THE DEVELOPING HIPPOCAMPUS IN CULTURE: NEURON-GLIA INTERACTION
W. Seifert, B. Ranscht, N. Buckley, H. J. Fink, H. W. Müller and **F. Förster,** Friedrich-Miescher-Laboratorium, Laboratory of Molecular Neurobiology, Max-Planck-Institute, 74 Tübingen, FRG

201 ON THE MECHANISM OF ACTION OF SODIUM VALPROATE *IN VIVO*
L. Ciesielski, S. Simler, M. Klein and **P. Mandel,** Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

POSTER COMMUNICATIONS PC2 (Continued)

HISTORY OF NEUROCHEMISTRY

Poster No.

202 NINETEENTH-CENTURY MOLECULAR CONCEPTS OF THE WORKING OF THE BRAIN
H. McIlwain, Department of Biochemistry, St. Thomas's Hospital Medical School, London, SE1 7EH, UK

RAPID TRANSPORT OF LIPIDS AND GLYCOPROTEINS

Poster No.

203 RETROGRADE AXONAL TRANSPORT OF COVALENTLY RADIOLABELLED PROTEINS IN MOTOR FIBRES OF STREPTOZOTOCIN DIABETIC RATS
K. F. Meiri and **W. G. McLean,** Department of Pharmacology and Therapeutics, University of Liverpool, Liverpool, UK

204 EFFECTS OF PHENOTHIAZINES AND CHEMICALLY RELATED DRUGS ON AXONAL TRANSPORT AND MICROTUBULE ASSEMBLY *IN VITRO*
P. Ekström, J.-E. Bergquist, Department of Zoophysiology, University of Lund, Helgonavägen 3 B, S-223 62 Lund, Sweden

205 GALACTOSYL TRANSFERASE OF GOLGI FRACTION FROM ISOLATED NEURONS OF RAT BRAIN
D. S. Deshmukh, A. Vorbrodt, W. D. Bear and **S. Kuizon,** Institute for Basic Research in Mental Retardation, Staten Island, New York 10314, USA

206 AXOPLASMIC TRANSPORT OF 4S RNA
L. Austin, N. Howe and **J. Scheffer,** Department of Biochemistry, Monash University, Clayton, Victoria 3168, Australia

POSTER COMMUNICATIONS PC2 (Continued)

ADRENAL PARANEURONS AND PC12 CELLS AS MODELS FOR NEURAL FUNCTION

Poster No.

207 DYNORPHIN IN BOVINE ADRENAL MEDULLA: ISOLATION, IDENTIFICATION AND SECRETION
S. Lemaire, D. Denis and **R. Day,** Department de Pharmacologie, Faculté de Médecine, Université de Sherbrooke, Sherbrooke, Quebec, Canada J1H 5N4

208 THE SELECTIVE RELEASE OF HEAVY MOLECULAR FORMS OF ACETYLCHOLINESTERASE FROM PC12 CELLS
C. A. Lucas and **G. W. Kreutzberg,** Nerve Cell Biology Section, Max-Planck-Institute for Psychiatry, Munich, FRG

209 A HORMONE-SUPPLEMENTED SERUM-FREE MEDIUM SELECTS NERVE GROWTH FACTOR-RESPONSIVENESS OF NEUROTRANSMITTER BIOSYNTHESIS IN A RAT PHEOCHROMOCYTOMA CELL LINE
H. Hatanaka, Department of Neurochemistry, Mitsubishi-Kasei Institute of Life Sciences, 11 Minamiooya, Machida-shi, Tokyo 194, Japan

210 STUDIES ON THE MICROTUBULE ASSOCIATED PROTEINS IN A PHEOCHROMOCYTOMA CELL LINE (PC12) UNDER NGF ACTION
A. Cattaneo, S. Biocca and **P. Calissano,** Institute of Cell Biology, CNR, Rome, Italy

211 THE RESPONSE OF BOVINE ADRENAL MEDULLARY CELLS TO NGF DEPENDS ON THEIR DEVELOPMENTAL STAGE
K. Naujoks, S. Korsching and **H. Thoenen,** Max-Planck-Institute for Psychiatry, Department of Neurochemistry, D-8033 Martinsried, FRG

212 EXTRACTION AND PARTIAL PURIFICATION OF PUTATIVE NGF—RECEPTORS FROM PHEOCHROMOCYTOMA CELLS (PC12)
S. Biocca, A. Cattaneo and **P. Calissano,** Institute of Cell Biology, CNR, Roma, Italy

213 EFFECTS OF POTASSIUM, NON-NEURONAL CELLS, NGF AND EXTRACTS FROM BOVINE SEMINAL VESICLES ON SHAPE AND PROCESS EXTENSION OF CULTURED BOVINE ADRENAL CHROMAFFIN CELLS
K. Unsicker, H. D. Hofmann, W. Lorenz and **H. Reichert,** Department of Anatomy and Cell Biology, University of Marburg, D-3550 Marburg, FRG

214 MORPHOLOGICAL CHARACTERIZATION AND IMMUNOCYTOCHEMICAL STUDIES OF CHROMAFFIN CELLS IN CULTURE
D. Aunis, M. F. Bader, J. E. Hesketh* and **J. Ciesielski-Treska,** Unité INSERM U-44, Centre de Neurochimie, 5 rue Blaise Pascal, F-67084 Strasbourg, France and *The Rowett Research Institute, Experimental Pathology Department, Bucksburn, Aberdeen AB2 9SB, Scotland, UK

POSTER COMMUNICATIONS PC2 (Continued)

MISCELLANEOUS TOPICS

Poster No.

215 EFFECTS OF CHRONIC LITHIUM TREATMENT ON THE 5-HT CONTENTS OF SOLUBLE, PARTICULATE AND CRUDE VESICULAR FRACTIONS FROM RAT BRAIN
C. K. Atterwill and **A. Tordoff,** MRC and University Department of Clinical Pharmacology, Radcliffe Infirmary, Woodstock Road, Oxford, UK

216 CHANGES IN THE HIPPOCAMPAL SLICES METABOLISM FOLLOWING STIMULATION AND POTENTIATION OF SCHAFFER COLLATERALS NERVE ENDINGS
A. Wieraszko, Nencki Institute of Experimental Biology, Pasteur str. 3, Warsaw, Poland

217 THE EFFECTS OF SUPIDIMIDE ON THE RELEASE OF SEROTONIN AND NOREPINEPHRINE IN RAT BRAIN
R. Ashkenazi and **M. B. H. Youdim,** Department of Pharmacology, Faculty of Medicine, Technion, Haifa, Israel

218

219 PHYSIOLOGICAL STRESS AND INSECTICIDE POISONING BOTH CAUSE THE ACCUMULATION OF AN AMINO-COMPOUND IN THE HAEMOLYMPH OF INSECTS
A. Jabbar and **R. H. C. Strang,** Department of Biochemistry, University of Glasgow, Glasgow G12 8QQ, Scotland, UK

220 MECHANISMS OF CARRIER-MEDIATED MONOAMINE TRANSPORT
M. D. Wood, J. Pheysey, M. G. Wyllie, Wyeth Institute of Medical Research, Huntercombe Lane South, Taplow, Maidenhead, Berkshire, UK

221 SURFACE PROPERTIES OF CEREBELLAR INTERNEURONES IN CULTURE
P. Annunziata, C. M. Regan, E. Meier and **R. Balázs** MRC Developmental Neurobiology Unit, Institute of Neurology, 33 Johns Mews, London, UK

222 FURTHER STUDIES ON THE EFFECT OF S-100 PROTEIN ON THE PHYSICAL STATE OF SYNAPTOSOMAL MEMBRANES
L. Mazzanti,* G. Curatola,* A. M. Falcioni* and **R. Donato,****
*Department of Biochemistry, Medical School, Ancona,
**Department of Anatomy, Università Cattolica, Roma, Italy

POSTER COMMUNICATIONS PC2 (Continued)

MISCELLANEOUS TOPICS

Poster No.

223 THE OXYGEN CONSUMPTION OF CULTURED NEURONAL CELLS, MEASURED IN AN *IN DISCO* PERFUSION SYSTEM
A. Peterson and **E. Walum,** University of Stockholm, Unit of Neurochemistry and Neurotoxicology, Enköpingsvägen 126, S-172 46 Sundbyberg, Sweden

224 COMPUTER ASSISTED ANALYSIS OF TWO-DIMENSIONAL (IEF, PAGE) ELECTROPHORESES OF PROTEINS FROM BRAIN CELL LINES
K. Wikgren, H. Frey, Medical Research Council, Academy of Finland, University of Turku, Finland

225 NEURAL AND NON-NEURAL PLASMA MEMBRANE PROTEOLIPIDS
V. S. Sapirstein, M. T. Tosteson, J. Babitch and **J. Gilbert** (Sponsor: **L. Irwin**), The E. K. Shriver Center, Waltham, Massachusetts, Department of Physiology, Harvard Medical School, Boston, Massachusetts, Mailman Research Centre, McLean Hospital, Belmont, Massachusetts and Department of Chemistry Texas Christian University, Fort Worth, Texas, USA

226 'OUABAIN LIKE' COMPOUND IN SHEEP BRAIN
D. Lichtstein and **S. Samuelov,** Department of Physiology, Hebrew University, Hadassah Medical School, Jerusalem, Israel

227 ULTRASTRUCTURAL DEMONSTRATION OF ADENYLATE CYCLASE (AC) IN CELLULAR MEMBRANES
L. Rechardt, H. Hervonen and **P. Panula,** Department of Anatomy, University of Helsinki, Helsinki, Finland

228 CREATINE KINASE AND ADENYLATE KINASE FROM BOVINE ADRENAL MEDULLA
M. T. Miras-Portugal, A. Orera and **A. Millaruelo,** Departamento de Bioquímica, Facultad de Medicina, Universidad Autónoma de Madrid, Spain

229 PURIFICATION OF SUBUNITS AND FORMS OF S-100 PROTEIN
B. W. Moore and **W. Joy,** Washington University School of Medicine, Department of Psychiatry, St. Louis, Missouri 63110, USA

230 DIFFERENCES IN GLYCOPROTEIN COMPOSITION OF RAT BRAIN SYNAPTIC PLASMA MEMBRANES AND SYNAPTIC VESICLES
M. Popoli and **B. W. Moore,** Washington University School of Medicine, Department of Psychiatry, St. Louis, Missouri 63110, USA

231 *IN VIVO* RELEASE OF NEWLY SYNTHESIZED ^{3}H-SEROTONIN IN RAPHE NUCLEI OF THE CAT
F. Hery and **M. Faudon,** INSERM U6 and CNRS GR45, 280 Boulevard Ste-Marguerite, 13009, Marseille, France

POSTER COMMUNICATIONS PC2 (Continued)

MISCELLANEOUS TOPICS

Poster No.

232 MODIFICATIONS OF RAT INTESTINAL AMINES CONTENTS: CORRELATIONS WITH CHANGES OF CHOLINE ACETYL TRANSFERASE ACTIVITY
J. P. Ternaux, C. Legay, M. C. Barrit and **M. Faudon,** INSERM U6 and CNRS GR45, 280 Boulevard Ste-Marguerite, 13009 Marseille, France

233 INTERACTION OF CORTICOTROPHIN (ACTH) $_{11-24}$ WITH Mg^{2+}/SPERMINE SITES INVOLVED IN CELL-FREE BRAIN PROTEIN SYNTHESIS
L. H. Schrama and **P. Schotman,** Division of Molecular Neurobiology, Institute of Molecular Biology, Laboratory for Physiological Chemistry and Rudolf Magnus Institute for Pharmacology, University of Utrecht, P.O. Box 80.063, 3508 TB Utrecht, The Netherlands

234 MESSENGER RNA CODING 14-3-2 PROTEIN FROM RAT BRAIN
Y. Takahashi and **K. Sakimura,** Department of Neuropharmacology, Brain Research Institute, Niigata University, Niigata 951, Japan

235 EFFECTS OF ISCHEMIA ON PROTEIN DISTRIBUTION IN BRAIN SUBCELLULAR FRACTIONS OF MONGOLIAN GERBIL
S. I. Pylova,* **U. Rafalowska** and **J. W. Lazarewicz,** Department of Neurochemistry, Medical Research Centre, Polish Academy of Sciences, Warsaw, Poland and
*Research Laboratory of General Reanimatology, Academy of Medical Sciences, Moscow, USSR

236 PROTEIN DEGRADATION IN THE RAT BRAIN UNDER HYPOXIA
T. Zalewska, Department of Neurochemistry, Medical Research Centre, Polish Academy of Sciences, Warsaw, Poland

237 ANALGESIA INDUCED BY CENTRAL INJECTION OF CALCITONIN INTO MICE
R. M. Eglen, R. F. L. Bates and **G. A. Buckley,** Trent Polytechnic, Nottingham, UK

238 WITHDRAWAL HYPERALGESIA FOLLOWING CHRONIC SUBCUTANEOUS INJECTION OF CALCITONIN
R. M. Eglen, R. F. L. Bates and **G. A. Buckley,** Trent Polytechnic, Nottingham UK

239 CELLULAR STRUCTURE OF LIVING BRAIN AND SPINAL CORD
A. Hillman, Unity Laboratory, Department of Human Biology, University of Surrey, Guildford, Surrey, GU2 5XH, UK

TUESDAY, SEPTEMBER 8, 1981

11.30–12.30 **Floor C**

POSTER COMMUNICATIONS PC2 (Continued)

MISCELLANEOUS TOPICS

Poster No.

240 *IN VITRO* CEREBRAL TRANSPORT OF AMINO ACIDS: EFFECT OF ANTIEPILEPTIC DRUGS
M. A. Gabana, M. Saladini, F. Bracco, F. Maggioni, G. Zanchin and **L. Battistin,** Department of Neurology and Psychiatry, University of Padova Medical School, Padova, Italy

241 ASPECTS OF MORPHINE ABSTINENCE
J. Zeuchner, L. Rosengren, A. Wroński and **L. Rönnbäck,** Institute of Neurobiology, University of Göteborg, S-400 33, Göteborg, Sweden

242 EFFECT OF MORPHINE ON VENOUS REACTIVITY AND ENDOGENOUS NOREPINEPHRINE (NE) RELEASE IN CANINE SAPHENOUS VEINS
S. M. Muldoon, J. Otto and **W. Freas,** Uniformed Services, University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Maryland 20012, USA

243 EFFECT OF HYDROGEN GRADIENT ON SEROTONIN TRANSPORT BY SYNAPTOSOMES
M. S. V. Santos and **A. P. Carvalho,** Centro de Biologia Celular, Departamento de Zoologia, Universidade de Coimbra, Coimbra, Portugal

244 TRANSPORT OF L-LYSINE IN BRAIN CAPILLARIES
P. P. Milosević, Biochemijski Institut, Medicinski Fakultet, 11001 Beograd 7, Yugoslavia

245 EFFECTS OF L-DOPA ON EPINEPHRINE LEVELS IN RAT BRAIN
A. Sauter and **S. Suter,** Preclinical Research, Sandoz Ltd., Basel, Switzerland

246 AMINE METABOLISM AND THE PREDICTION OF RESPONSE TO DOTHIEPIN AND OTHER ANTIDEPRESSANT MEDICATIONS
A. P. Ridges, Fazakerley Hospital, Liverpool, UK

247 HYALURONECTIN IN NERVE TISSUE
B. Delpech, A. Delpech and **N. Girard,** Centre H. Becquerel rue d'Amiens, F-76000 Rouen, France

WEDNESDAY, SEPTEMBER 9, 1981

09.00–11.00 **Lecture Theatre LT3**

COLLOQUIUM C2

CURRENT CONCEPTS OF THE NEUROCHEMICAL ROLE AND REGULATION OF CALCIUM

Organiser: **B. W. Agranoff** (USA)

09.00 CALCIUM AND THE CONTROL OF NEUROSECRETION
P. F. Baker and **D. E. Knight,** Department of Physiology, King's College, Strand, London WC2R 2LS, UK

09.30 CALCIUM ENTRY, ACETYLCHOLINE RELEASE AND COMPARTMENTATION
M. Israël, Département de Neurochimie, Laboratoire de Neurobiologie Cellulaire, CNRS, 91190 Gif sur Yvette, France

10.00 THE ROLE OF CALMODULIN IN THE NERVOUS SYSTEM
S. Kakiuchi, Department of Neurochemistry and Neuropharmacology, Institute of Higher Nervous Activity, Osaka University Medical School, Nakanoshima, Kita-ku, Osaka 530, Japan

10.30 CALCIUM REGULATION AND ITS ROLE IN AXOPLASMIC TRANSPORT
S. Ochs, Department of Physiology, Indiana University Medical Center, Indianapolis, IN 46223, USA

WEDNESDAY, SEPTEMBER 9, 1981

09.00–11.00 **Lecture Theatre LT4**

COLLOQUIUM C3

ESSENTIAL FATTY ACIDS AND PROSTAGLANDINS

Organisers: **L. A. Horrocks** (USA)
C. Galli (Italy)

09.00 COMPARISON OF THE METABOLISM OF ARACHIDONATE, 20:4 (n-6), AND ADRENATE, 22:4 (n-6)
L. A. Horrocks, H. W. Harder, M. Van Rollins and **M. I. Aveldano de Caldironi,** Department of Physiological Chemistry, The Ohio State University, Columbus, Ohio 43210, USA

09.20 UPTAKE OF ARACHIDONIC ACID BY BRAIN MEMBRANE PHOSPHOLIPIDS
G. Y. Sun, W. Tang, L. C. Foudin and **J. Strosznajder,** Sinclair Research Farm and Biochemistry Department, University of Missouri, Columbia MO 65201, USA and Medical Research Centre, Polish Academy of Sciences, Warsaw, Poland

09.40 FREE ARACHIDONIC ACID AND ARACHIDONOYL DIGLYCERIDES IN BRAIN EDEMA AND IN EPILEPTIC SEIZURES
N. G. Bazan, Instituto de Investigaciones Bioquimicas, Chiclana 508, 8000 Bahia Blanca, Argentina

10.00 LIPOXYGENASE PRODUCTS IN THE CNS
C. Galli, S. Nicosia and **G. Galli,** Institute of Pharmacology and Pharmacognosy, University of Milan, Italy

10.20 EVIDENCE FOR A COMPARTMENTALIZATION OF BRAIN PROSTAGLANDIN BIOSYNTHESIS
E. Änggård, Department of Alcohol and Drug Addiction Research, Karolinska Institutet, 104 01 Stockholm 60, Sweden

10.40 ARACHIDONIC ACID METABOLITES IN BRAIN AND CEREBROVASCULAR HOMEOSTASIS
L. S. Wolfe and **H. M. Pappius,** Montreal Neurological Institute, McGill University, Montreal, Quebec, Canada H3A 2B4

WEDNESDAY, SEPTEMBER 9, 1981

09.00–11.00 **Lecture Theatre LT1**

COLLOQUIUM C4

MECHANISMS OF NEUROTOXIC DISEASE

Organisers: **E. Heilbronn** (Sweden)
P. S. Spencer (USA)

09.00 Introduction

09.05 NEUROTOXICITY OF AN ARTIFICIAL FOOD COLOR (ERYTHROSIN B): METHODS FOR RAPID TESTING
E. K. Silbergeld, S. M. Anderson, M. De Ryck, B. M. Chronwall* and **S. J. Morris,** Neurotoxicology Section and
*Neurosurgery Branch, NINCDS, NIH, Bethesda, Maryland 20205, USA

09.30 MECHANISM OF ACTION OF NEUROTOXIC PYRETHROIDS
J. van den Bercken, Department of Veterinary Pharmacology, Pharmacy and Toxicology, University of Utrecht, Utrecht, The Netherlands

09.55 PRIMARY DEMYELINATION IN RESPONSE TO TOXIC AGENTS
W. Cammer, Albert Einstein College of Medicine, Bronx, New York, USA

10.20 DEFECTS IN THE ORGANIZATION AND TRANSPORT OF THE AXONAL CYTOSKELETON PRODUCED BY CHEMICAL NEUROTOXINS
J. W. Griffin, P. N. Hoffman, K. Fahnestock and **D. L. Price,** Johns Hopkins University School of Medicine, Baltimore, Maryland 21205,USA

10.45 Discussion

WEDNESDAY, SEPTEMBER 9, 1981

09.00–11.00 **Lecture Theatre C50**

COLLOQUIUM C5

THE USE OF HPLC IN NEUROCHEMISTRY

Organisers: **J. J. Warsh** (Canada)
M. H. Joseph (UK)

09.00 THE DETERMINATION OF BIOGENIC AMINES AND THEIR METABOLITES USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC)
G. M. Anderson, Department of Laboratory Medicine and the Child Study Center, Yale University School of Medicine, New Haven, Connecticut 06510, USA

09.30 HPLC DETERMINATION OF AMINO ACIDS
M. H. Joseph, Division of Psychiatry, MRC Clinical Research Centre, Harrow, UK

10.00 RESOLUTION OF β-ENDORPHIN RELATED PEPTIDES BY ION EXCHANGE CHROMATOGRAPHY AND HIGH PRESSURE LIQUID CHROMATOGRAPHY (HPLC)
A. F. Bradbury and **D. G. Smyth,** Laboratory of Peptide Chemistry, National Institute for Medical Research, Mill Hill, London, UK

10.30 CROSS-VALIDATION OF HPLC ASSAYS FOR BIOGENIC AMINES AND METABOLITES
J. J. Warsh, Clarke Institute of Psychiatry, University of Toronto, Toronto, Ontario, Canada

10.50 Discussion

WEDNESDAY, SEPTEMBER 9, 1981

09.00–11.00 **Seminar Room B128**

COLLOQUIUM C6

CON A AND NEURORECEPTORS

Chairman: **P. N. R. Usherwood** (UK)

09.00 CHAIRMAN'S INTRODUCTION
P. N. R. Usherwood, Zoology Department, University Park, Nottingham NG7 2RD, UK

09.05 IDENTIFICATION AND CHARACTERISATION OF CON A BINDING PROTEINS ASSOCIATED WITH CNS SYNAPTIC JUNCTIONS
J. W. Gurd, T. F. Cruz and **S. Chun-Fu,** Scarborough College, University of Toronto, West Hill, Ontario, Canada M1C 1A4

09.30 DISTRIBUTION OF CON A BINDING SITES ON INSECT MUSCLE AND THE EFFECTS OF CON A ON GLUTAMATE CYTOTOXICITY
I. R. Duce, Zoology Department, Nottingham University, University Park, Nottingham NG7 2RD, UK

09.50 MOBILITY AND LOCALIZATION OF ACETYLCHOLINE RECEPTORS IN EMBRYONIC MUSCLE CELL MEMBRANE
M.-M. Poo, Department of Physiology and Biophysics, University of California, Irvine, California, USA

10.15 LECTIN INTERACTIONS WITH ARTHROPOD MUSCLE
M. Evans, Department of Zoology, Nottingham University, University Park, Nottingham NG7 2RD, UK

10.35 CONCANAVALIN A EFFECTS ON NEURONAL AND GLIAL CELLS *IN VIVO* AND *IN VITRO*
K. Meller, Ruhr-Universität, Institut für Anatomie, 4630 Bochum, FRG

THURSDAY, SEPTEMBER 10, 1981

09.00–11.00 **Lecture Theatre LT3**
14.00–16.00

SYMPOSIUM S8

MONOAMINE OXIDASE: CLINICAL AND FUNDAMENTAL PROBLEMS

Organisers: **R. J. Mayer** (UK)
S. G. Potkin (USA)

09.00 INTRODUCTION
R. J. Mayer, Department of Biochemistry, University Hospital and Medical School, Nottingham NG7 2UH, UK

09.10 MONOAMINE OXIDASE STUDIES: CLINICAL PROBLEMS
S. G. Potkin, T. P. Bridge, B. Phelps, D. V. Jeste, L. DeLisi and **R. J. Wyatt,** Adult Psychiatry Branch, National Institute of Mental Health, Saint Elizabeths Hospital, Washington, D.C., USA

09.45 CLINICAL AND LABORATORY STUDIES OF SELECTIVE MAO-A AND MAO-B INHIBITORS
D. L. Murphy, N. A. Garrick, R. M. Cohen, L. J. Siever, D. Pickar, B. F. Roy and **I. C. Campbell,** National institute of Mental Health, Bethesda, Maryland 20205, USA

10.20 WHICH CONNECTIONS ARE THERE BETWEEN PLATELET MONOAMINE OXIDASE ACTIVITY AND MONOAMINE TURNOVER IN THE BRAIN?
L. Oreland, L. von Knorring,* **M. Åsberg,**† Department of Pharmacology, University of Umeå, 901 87 Umeå, Sweden,
*Department of Psychiatry, University of Umeå, 901 87 Umeå, Sweden,
†Department of Psychiatry, Karolinska Institute (Karolinska Hospital), 104 01 Stockholm, Sweden

11.00 Coffee

11.30 Poster Presentations

14.00 INHERITED VARIATIONS IN MONOAMINE OXIDASE
X. O. Breakefield, R. M. Cawthon, S. B. Edelstein, J. E. Pinter and **C. M. Castiglione,** Yale University School of Medicine, New Haven, Connecticut, USA

14.35 SOME MOLECULAR ASPECTS OF MONOAMINE OXIDASE AND OXIDATIVE DEAMINATION
P. H. Yu, Psychiatric Research Division, University Hospital, Saskatoon, Saskatchewan, S7N OXO, Canada

THURSDAY, SEPTEMBER 10, 1981

09.00–11.00
14.00–16.00

Lecture Theatre LT3

SYMPOSIUM S8 (Continued)

MONOAMINE OXIDASE: CLINICAL AND FUNDAMENTAL PROBLEMS

15.10 ROLE OF MAO A AND B IN POTENTIATION OF INDIRECTLY ACTING SYPATHOMIMETIC AMINES
J. P. M. Finberg, M. Tenne and **M. B. H. Youdim,** Department of Pharmacology, Faculty of Medicine, Technion, Haifa, Israel

15.25 REACTION OF MONOAMINE OXIDASE (MAO) WITH PHENAZINE METHOSULFATE (PMS)
R. W. Von Korff, Michigan Molecular Institute, Midland, Michigan 48640, USA

15.40 MONOAMINE OXIDASE ACTIVITY AND RELEASE OF CALCIUM FROM RAT LIVER MITOCHONDRIA
L. Demisch and **P. Gebhart,** Department of Psychiatry, Clinical Biochemistry Laboratory, Hospital of the University, D-6000 Frankfurt, FRG

THURSDAY, SEPTEMBER 10, 1981

09.00–11.00 **Lecture Theatre LT4**
14.00–16.00

SYMPOSIUM S9

TRANSMITTER INTERACTIONS IN BASAL GANGLIA

Organisers: **F. Fonnum** (Norway)
J. Glowinski (France)

09.00 OPENING REMARKS
J. Glowinski

09.05 ORGANIZATION OF THE AFFERENT AND EFFERENT CONNECTIONS OF THE STRIATUM IN RELATION TO HISTOCHEMICALLY DISTINCT COMPARTMENTS
A. M. Graybiel, Department of Psychology and Brain Science, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, USA

09.35 AMINO ACID TRANSMITTERS AND PHOSPHORYLATED PROTEINS IN THE BASAL GANGLIA
I. Walaas, Yale University School of Medicine, New Haven 06510, Connecticut, USA

10.00 THE SOMATO DENDRITIC AND AXONAL FEATURES OF THE RAT SUBSTANTIA NIGRA PARS RETICULATA PROJECTION NEURONS. FUNCTIONAL IMPLICATION FOR THE TRANSMISSION OF STRIATAL OUTPUT INFORMATION
J. M. Deniau and **I. Grofova,** Laboratoire de Physiologie des Centres Nerveux, Univ. P. et M. Curie, Paris, France and Department of Anatomy, Univ. of Oslo, Norway

10.30 SYMMETRICAL AND ASYMMETRICAL REGULATIONS OF DA RELEASE FROM TERMINALS AND DENDRITES OF THE TWO NIGROSTRIATAL DOPAMINERGIC PATHWAYS
A. Chéramy, V. Leviel, M. F. Chesselet and **J. Glowinski,** Groupe NB, INSERM U114, College de France, 11 Place Marcelin Berthelot, Paris 5e, France

11.00 Coffee

11.30 Poster Presentations

14.00 BIOCHEMICAL AND BEHAVIOURAL CHARACTERISATION OF THREE CLASSES OF STRIATAL DOPAMINE RECEPTOR
P. Sokoloff,* M. P. Martres,* J. C. Schwartz,* P. Protais and **J. Costentin,** *Unité 109 de Neurobiologie INSERM 2 ter, rue d'Alésia 75014, Paris, France and U.E.R. de Médecine et de Pharmacie, 49 rue Maulevrier 76000 Rouen, France

THURSDAY, SEPTEMBER 10, 1981

09.00–11.00 **Lecture Theatre LT4**
14.00–16.00

SYMPOSIUM S9 (Continued)

TRANSMITTER INTERACTIONS IN BASAL GANGLIA

14.30 CHARACTERIZATION OF THE INHIBITORY DOPAMINE AUTORECEPTOR MODULATING ELECTRICALLY-EVOKED RELEASE OF ^{3}H-DOPAMINE IN CAT CAUDATE SLICES
J. Lehmann and **S. Z. Langer,** Laboratoires d'Etudes et de Recherches Synthélabo, 58 rue de la Glacière, 75013 Paris, France

14.45 LESION-INDUCED MODIFICATIONS OF STRIATAL GLUTAMATE FUNCTION
P. J. Roberts, N. A. Sharif and **G. J. McBean,** Department of Physiology and Pharmacology, School of Biochemical and Physiological Sciences, University of Southampton, Southampton S09 3TU, UK

15.00 OUT-PUT PATHWAYS FOR BASAL GANGLIA BEHAVIOURAL FUNCTIONS
G. Di Chiara, Institute of Pharmacology, University of Cagliari, Italy

15.30 Discussion, including Poster Discussion

THURSDAY, SEPTEMBER 10, 1981

09.00–11.00 **Lecture Theatre LT1**
14.00–16.00

SYMPOSIUM S10

IMMUNE RESPONSE TO NERVOUS SYSTEM PROTEINS IN NEUROLOGIC DISEASES

Organisers: **E. L. Hogan** (USA)
P. R. Carnegie (Australia)

09.00 STRUCTURAL STUDIES ON BOVINE AND HUMAN P2 PROTEIN
K. Uyemura, K. Horie, K. Kitamura and **M. Suzuki,** Department of Physiology, Saitama Medical School, 38 Morohongo, Moroyama Irumagun, Saitama 350-04, Japan

09.20 Discussion

09.25 NEURITOGENIC CHARACTERISTICS OF BOVINE P2 PROTEIN
S. W. Brostoff, Medical University of South Carolina, Charleston, South Carolina, USA

09.45 DISTRIBUTION OF THE NEURITOGENIC MYELIN PROTEIN, P2, IN THE HUMAN, RAT, RABBIT AND GUINEA-PIG
M. Kadlubowski and **R. A. C. Hughes,** Department of Medicine, 4th Floor Hunt's House, Guy's Hospital Medical School, London Bridge, London SE1 9RT, UK

09.55 Discussion

10.00 EXPERIMENTAL MYASTHENIA IN RABBITS, RATS AND MICE
E. Heilbronn, University of Stockholm Unit of Neurochemistry and Neurotoxicology, Enköpingsvägen 126, S-172 46 Sundbyberg, Sweden

10.25 Discussion

10.30 GLIAL FIBRILLARY ACIDIC PROTEIN IN HUMAN AND EXPERIMENTAL NEUROLOGIC DISEASES
L. F. Eng, Department of Pathology, Veterans Administration Medical Center, Palo Alto, California and Stanford University School of Medicine, Stanford, California 94305, USA

10.55 Discussion

11.00 Coffee

11.30– Poster Communications
12.30

THURSDAY, SEPTEMBER 10, 1981

09.00–11.00 **Lecture Theatre LT1**
14.00–16.00

SYMPOSIUM S10 (Continued)

IMMUNE RESPONSE TO NERVOUS SYSTEM PROTEINS IN NEUROLOGIC DISEASES

14.00 ANTIBODIES TO MYELIN BASIC PROTEIN AND VIRUSES IN MULTIPLE SCLEROSIS AND HAIRY SHAKER DISEASE OF LAMBS
P. R. Carnegie and **C. C. A. Bernard,** Brain-Behaviour Research Institute, La Trobe University, Bundoora, Victoria 3083, Australia

14.25 REACTIVITY OF IMMUNOGLOBIN-G ANTIBODIES WITH BRAIN PROTEINS IN DEMYELINATING DISEASE
J. Newcombe, P. Glynn and **M. L. Cuzner,** Multiple Sclerosis Society Laboratory, Department of Neurochemistry, Institute of Neurology, 33 John's Mews, London WC1N 2NS, UK

14.35 Discussion

14.40 THE ROLE OF MACROPHAGE SECRETION PRODUCTS IN INFLAMMATORY DEMYELINATION
W. T. Norton, W. Cammer,* **C. F. Brosnan**† and **B. R. Bloom,**‡ Departments of Neurology, *Neuroscience, †Pathology and ‡Microbiology and Immunology, Albert Einstein College of Medicine, Bronx, New York 10461, USA

15.05 Discussion

15.15 ASPECTS OF CHRONIC RELAPSING EXPERIMENTAL ALLERGIC ENCEPHALOMYELITIS
A. J. Suckling and **M. G. Rumsby,** *Department of Biology,* University of York, Heslington, York YO1 5DD, UK

15.40 SERUM ANTIBODIES AGAINST CNS-ANTIGENS IN CHRONIC RELAPSING EXPERIMENTAL ALLERGIC ENCEPHALOMYELITIS
B. Schwerer, H. Lassmann and **H. Bernheimer,** Neurological Institute of the University, Vienna, Austria

15.50 Discussion

THURSDAY, SEPTEMBER 10, 1981

09.00–11.00 **Lecture Theatre C50**

COLLOQUIUM C7

PROTEIN PHOSPHORYLATION AND PHOSPHOINOSITIDE METABOLISM IN SYNAPTIC TRANSMISSION

IN MEMORY OF JORDI FOLCH-PI

Organisers: **J. N. Hawthorne** (UK)
R. Rodnight (UK)

09.00 POLYPHOSPHOINOSITIDES AND THE MOBILIZATION OF Ca^{2+} IN THE CYTOSOL
R. H. Michell, C. P. Downes, J. A. Creba and **C. J. Kirk,** Department of Biochemistry, University of Birmingham, P.O. Box 363, Birmingham B15 2TT, UK

09.20 CATIONS AND THE NEUROTRANSMITTER-STIMULATED PHOSPHOINOSITIDE AND PHOSPHOPROTEIN PHOSPHATE TURNOVER IN THE RABBIT IRIS SMOOTH MUSCLE
A. A. Abdel-Latif, R. A. Akhtar and **W. C. Taft, Jr.,** Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, Georgia 30912, USA

09.40 PHOSPHATIDYLINOSITOL TURNOVER AS A SIGNAL IN RECEPTOR CASCADE MECHANISM FOR CONTROLING PROTEIN PHOSPHORYLATION
Y. Nishizuka, Department of Biochemistry, Kobe University School of Medicine, Kobe 650, and Department of Cell Biology, National Institute for Basic Biology, Okazaki 444, Japan

10.00 STUDIES ON THE MODULATION OF SYNAPTIC MEMBRANE PROTEIN PHOSPHORYLATION BY PHOSPOLIPIDS
R. Rodnight and **A. Dosemeci,** Department of Biochemistry, Institute of Psychiatry, De Crespigny Park, London SE5 8AF, UK

10.20 Discussion

10.30 B-50 PROTEIN AND A CALCIUM/CALMODULIN SENSITIVE PROTEIN KINASE MAY AFFECT (POLY)PHOSPHOINOSITIDE METABOLISM
W. H. Gispen, J. Jolles, P. Schotman and **H. Zwiers,** Division of Molecular Neurobiology, Institute of Molecular Biology, Laboratory for Physiological Chemistry, and Rudolf Magnus Institute for Pharmacology, University of Utrecht, P.O. Box 80.063, 3508 TB Utrecht, The Netherlands

10.40 B-50 PROTEIN KINASE AND (POLY)PHOSPHOINOSITIDE METABOLISM IN RAT BRAIN MEMBRANES: MODULATION BY ACTH
J. Jolles, H. Zwiers and **W. H. Gispen,** Division of Neurobiology, Institute of Molecular Biology and Rudolf Magnus Institute for Pharmacology, University of Utrecht, P.O. Box 80.063, 3508 TB Utrecht, The Netherlands

10.50 Discussion

THURSDAY, SEPTEMBER 10, 1981

14.00–16.00 **Lecture Theatre C50**

COLLOQUIUM C8

NOVEL NEUROTOXINS

Organiser: **R. Schwarcz** (USA)

14.00 KAINIC AND IBOTENIC ACID NEUROTOXICITY: METHODOLOGICAL AND MECHANISTIC CONSIDERATIONS
C. Köhler, R. Schwarcz,* Astra Research Laboratories, Södertälje, Sweden and *Maryland Psychiatric Research Center, Baltimore, Maryland, USA

14.25 ABLATION OF SELECTED NEURONS IN IMMATURE ANIMALS USING METHYLAZOXYMETHANOL ACETATE
M. V. Johnston, J. T. Coyle,* University of Michigan Medical Center, Departments of Pediatrics and Neurology, and Center for Human Growth and Development, Ann Arbor, Michigan 48109 and *Department of Neuroscience, Johns Hopkins University School of Medicine, Baltimore, Maryland 21205, USA

14.50 DSP4 (N-2-CHLOROETHYL-N-ETHYL-2-BROMOBENZYLAMINE)— A NOVEL NORADRENALINE NEUROTOXIN
G. Jonsson, H. Hallman and **E. Sundström,** Department of Histology, Karolinska Institutet, S-10401 Stockholm, Sweden

15.15 SELECTIVE DESTRUCTION OF CERTAIN NEURONAL POPULATIONS BY COLCHICINE AND OTHER TUBULIN BINDING AGENTS
O. Steward and **R. B. Goldschmidt,** University of Virginia School of Medicine, Charlottesville, Virginia, USA

15.40 CAPSAICIN: A NEUROTOXIN OF SENSORY GANGLION NEURONES
J. I. Nagy, S. P. Hunt, L. L. Iversen and **P. C. Emson,** MRC Neurochemical Pharmacology Unit, Medical Research Council Centre, Medical School, Hills Road, Cambridge CB2 2QH, UK

THURSDAY, SEPTEMBER 10, 1981

16.30–18.00 **Lecture Theatre C50**

ROUND TABLE R8

PROBLEMS ENCOUNTERED IN THE NEUROCHEMISTRY OF POST-MORTEM HUMAN BRAIN

In recent years there has been an increasing interest in neurochemical studies of post-mortem human brain. Although these have provided important insights into the pathophysiology of certain neurological and psychiatric disorders there are limitations imposed by the large number of uncontrollable factors involved in tissue collection. Particular difficulties are the long autopsy delays, drug therapy and the mode of death.

The problems to be addressed will include:

(a) The post-mortem stability of neuropeptides, neurotransmitters and ligand binding sites.

(b) The effect on post-mortem biochemistry of agonal state and drug therpay.

(c) The problems in collection, storage and distribution of human post-mortem tissue.

Organisers: **M. Rossor** (UK)
P. Emson (UK)

Participants: **M. Rossor** (UK)
P. Emson (UK)
E. Perry (UK)
H. Schoemaker (USA)

THURSDAY, SEPTEMBER 10, 1981

16.30–18.00 **Seminar Room B128**

ROUND TABLE R9

STRUCTURE AND BIOCHEMICAL ORGANISATION OF CHROMAFFIN GRANULES

Organiser: **S. J. Morris** (USA)

Adrenal medullary chromaffin granules are the best characterised of the transmitter storage granules. The round table will stress new findings and will consist of a series of brief expositions followed by as much general discussion as time permits.

Participants:

I. Granule membranes: new proteins, catecholamine and ATP transport, asymmetry of membrane glycolipids and proteins, fluid mosaic nature of the membrane, membrane-bound receptors:

J. H. Phillips (UK)
D. K. Apps (UK)
E. W. Westhead (USA)
H. Winkler (Austria)
S. J. Morris (USA)

II. Core structure and storage materials:

(a) Extended order and interactions among the chromogranins, ATP and catecholamines

A. J. Daniels (USA)
R. R. Sharp (USA)

(b) New storage materials: bioactive peptides

O. H. Viveros (USA)

THURSDAY, SEPTEMBER 10, 1981

16.30–18.00 **Seminar Room D96**

ROUND TABLE R10

CONTROL MECHANISMS AT THE CHOLINERGIC SYNAPSE

Cholinergic synapses have a number of characteristic biochemical features which are now well established. Apart from some lingering doubts on the exact mechanism of acetylcholine release there is otherwise broad consensus on the organisation of these biochemical components. However, little is known about the biochemical basis for homeostasis at cholinergic synapses. The round table will focus attention on possible biochemical mechanisms which may operate to regulate activity at cholinergic synapses. Three areas for discussion are identified as (1) control of intraterminal acetylcholine concentrations, (2) control of acetylcholine release and (3) control of the acetylcholine response. It is anticipated that each participant will discuss one or more of these questions from the state-of-the-art point of view.

Organiser: **M. J. Dowdall** (Nottingham)

Participants: **S. Tucek** (Czechoslovakia)
R. Marchbanks (UK)
M. Israel (France)
D. Michaelson (Israel)
T. Bartfai (Sweden)
P. G. Strange (UK)
H. Zimmermann (FRG)
M. J. Dowdall (UK)

THURSDAY, SEPTEMBER 10, 1981

16.30–18.00 **Lecture Theatre LT1**

ORAL COMMUNICATIONS OC6

IMMUNE RESPONSE TO NERVOUS SYSTEM PROTEINS IN NEUROLOGIC DISEASES

Chairman: **W. T. Norton** (USA)

16.30 PREDICTED STRUCTURE OF THE P2 PROTEIN OF PERIPHERAL NERVOUS SYSTEM MYELIN
R. E. Martenson, National Institute of Mental Health, Bethesda, Maryland 20205, USA

16.45 INDUCTION AND SUPRESSION OF EXPERIMENTAL ALLERGIC ENCEPHALOMYELITIS (EAE) WITH MYELIN BASIC PROTEIN (BP) AND BP FRAGMENTS
M. W. Kies, B. F. Driscoll and **E. C. Alvord, Jr.,** National Institute of Mental Health, Bethesda, Maryland 20205, and the Department of Pathology, University of Washington School of Medicine, Seattle, Washington 98195, USA

17.00 IMMUNOLOGICAL ACTIVITIES OF PEPTIDES OF THE ANTI-ENCEPHALITOGENIC BOVINE SPINAL CORD PROTEIN (BSCP)
C. F. C. MacPherson and **K. G. Weir,** University of Western Ontario, London, Ontario, Canada

17.15 PROTEOLYTIC ENZYME ACTIVITY OF SERUM IN MULTIPLE SCLEROSIS
M. I. Sabri, *__S. Moore__ and *__A. N. Davison,__ Albert Einstein College of Medicine, Bronx, New York 10461, USA and
*Institute of Neurology, Queen Square, London, UK

17.30 ACETYLCHOLINE IN MYASTHENIC SYNDROME
P. C. Molenaar and **A. Vincent,** Leiden University Medical Centre, Department of Pharmacology, Wassenaarseweg 72, 2333 AL Leiden, The Netherlands and Royal Free Hospital, Department of Neurological Science, Pond Street, London NW3 2QG, UK

17.45 CHOLESTEROL ESTERASE ACTIVITY IN CSF IN VARIOUS NEUROLOGICAL DISEASES
H. O. Kilpeläinen, T. O. Halonen, A. S. L. Pitkänen and **P. J. Riekkinen,** Department of Neurology, University of Kuopio, P.O. Box 138, SF-70101, Kuopio 10, Finland

THURSDAY, SEPTEMBER 10, 1981

16.30–18.00 **Lecture Theatre LT3**

ORAL COMMUNICATIONS OC7

NEUROCHEMICAL CORRELATES OF BEHAVIOUR

Chairman: **S. P. R. Rose** *(UK)*

16.30 STRESS INDUCED INCREASES IN 5HT RELEASE, MEASURED *IN VIVO*, DEPEND UPON INCREASED TRYPTOPHAN AVAILABILITY IN THE RAT
M. H. Joseph and **G. A. Kennett,** Division of Psychiatry, MRC Clinical Research Centre, Harrow, Middlesex, UK

16.45 MODIFICATION OF MESSENGER RNA METABOLISM IN RABBIT CEREBRAL CORTEX AS A CONSEQUENCE OF CONVULSIONS
A. Cupello, F. Ferrillo, M. V. Rapallino and **G. Rosadini,** Centro di Neurofisiopatologia Cerebrale, CNR, Genova, Italy

17.00 IMPRINTING IMPAIRMENT IN DUCKLING AFTER BRAIN LESION OR CYCLOHEXIMIDE INJECTION ON FOREBRAIN ROOF
Y. Tsukada and **K. Takamatsu,** Department of Physiology, Keio University School of Medicine, 35 Shinanomanchi, Shinjuku-ku, Tokyo-160, Japan

17.15 PARALLEL CHANGES IN SERUM TRYPTOPHAN AND MOOD IN PERI- AND POST- MENOPAUSAL WOMEN DURING OESTROGEN REPLACEMENT THERAPY
D. A. Bender, O. W. Hill,* L. Papadaki† and **M. Pugh,‡** Courtauld Institute of Biochemistry, *Department of Psychiatry, †School of Pathology, Middlesex Hospital Medical School, London W1P 7PN, UK and ‡The Hospital for Women, London W1V 6VB, UK

17.30 ROLE OF MONOAMINE INNERVATION OF THE AMYGDALA IN AVOIDANCE BEHAVIOUR
M. Rodriguez, F. Lorenzo, G. Hernandez, F. Moujir, and **M. Mas,** Department of Physiology, University of La Laguna Medical School, Tenerife, Canary Islands, Spain

17.45 *EX VIVO* FLUNITRAZEPAM BINDING IS INHIBITED BY BEHAVIOURALLY ACTIVE DOSES OF ETHYL β-CARBOLINE
A. Doble, I. L. Martin, S. P. Watson and **L. L. Iversen,** MRC Neurochemical Pharmacology Unit, MRC Centre, Medical School, Hills Road, Cambridge, UK

THURSDAY, SEPTEMBER 10, 1981

16.30–18.00 **Lecture Theatre LT4**

ORAL COMMUNICATIONS OC8

TRANSMITTER INTERACTIONS IN THE BASAL GANGLIA

Chairman: **P. J. Roberts** (UK)

16.30 INCUBATION OF STRIATAL SLICES MIMICS THE EFFECTS OF THE ADMINISTRATION OF γ-HYDROXYBUTYROLACTONE (GBL) ON DOPAMINE (DA) LEVELS IN RAT STRIATUM
L. E. Dyck and **C. Kazakoff,** Psychiatric Research Division, University Hospital, Saskatoon, Saskatchewan, S7N OXO, Canada

16.45 *IN VITRO* RELEASE OF STRIATAL m-TYRAMINE (mTA) AND p-TYRAMINE (pTA) FROM PHENELZINE-TREATED RATS
L. E. Dyck, Psychiatric Research Division, University Hospital, Saskatoon, Saskatchewan, S7N OXO, Canada

17.00 ROLES OF DOPAMINE AND 5-HYDROXYTRYPTAMINE IN BEHAVIOURAL EFFECTS OF HIGH DOSE AMPHETAMINE: LESION EXPERIMENTS
C. D. Andrews, J. C. R. Fernando and **G. Curzon,** Institute of Neurology, London, UK

17.15 GABA MEDIATES DOPAMINERGIC FUNCTIONS
J. Scheel-Krüger and **G. Magelund,** Psychopharmacological Research Laboratory, E, St. Hans Mental Hospital, DK-4000 Roskilde, Denmark

17.30 DRUG-INDUCED MODIFICATIONS OF MOUSE STRIATAL HYDROXYPHENYLACETIC ACIDS
P. S. McQuade and **A. V. Juorio,** Psychiatric Research Division, University Hospital, Saskatoon, Saskatchewan, S7N OXO, Canada

17.45 UNSTIMULATED AND AMPHETAMINE-STIMULATED RELEASE OF ENDOGENOUS NORADRENALINE AND DOPAMINE FROM RAT BRAIN *IN VIVO*
S. R. Philips, A. M. Robson and **A. A. Boulton,** Psychiatric Research Division, University Hospital, Saskatoon, Saskatchewan, S7N OXO, Canada

THURSDAY, SEPTEMBER 10, 1981

11.30–12.30 **Floor C**

POSTER COMMUNICATIONS PC3

MONOAMINE OXIDASE

Poster No.

248 EFFECTS OF PHENELZINE ON 2-PHENYLETHYLAMINE IN THE CENTRAL NERVOUS SYSTEM
G. B. Baker, R. T. Coutts and **D. F. LeGatt,** Neurochemical Research Unit, Department of Psychiatry and Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta, Edmonton, Alberta, Canada

249 OUTPUT OF ENDOGENOUS URINARY MONOAMINE OXIDASE INHIBITOR IS RAISED DURING STRESS
V. Glover, S. K. Bhattacharya and **M. Sandler,** Bernhard Baron Memorial Research Laboratories and Institute of Obstetrics and Gynaecology, Queen Charlotte's Hospital, Goldhawk Road, London W6 0XG, UK

250 1,1,2,2-TETRADEUTERO-2-PHENYL-ETHYLHYDRAZINE (d_4PEH) IS A MORE POTENT DRUG THAN 2-PHENYL-ETHYLHYDRAZINE (PEH)
L. E. Dyck, D. A. Durden and **A. A. Boulton,** Psychiatric Research Division, Saskatoon, Saskatchewan, S7N OXO, Canada

251 DIFFERENTIAL MODIFICATION BY ESTRADIOL OF TYPES A AND B MAO IN SPECIFIC AREAS OF THE RAT BRAIN
C. Chevillard, N. Barden and **J. M. Saavedra,** Laboratory of Clinical Science, National Institute of Mental Health, Bethesda, Maryland 2025, USA

252 QUANTUM CHEMICAL SAR ON CHARACTERISTIC A AND B MAO INHIBITORS: CLORGYLINE AND DEPRENYL
J. Castro,* **M. Unzeta,*** **M. Martín**** and **F. Sanz,****
*Departamento de Bioquímica, **Departamento de Bioestadística, Facultad de Medicina, Universidad Autónoma de Barcelona, Sardañola, Barcelona, Spain

253 ENZYME ACTIVITY LEVELS OF AN AMINE OXIDASE RESISTANT TO PARGYLINE IN SPONTANEOUSLY HYPERTENSIVE RATS
J. A. Fuentes and **M. C. Urdín,** Department of Pharmacology, Institute of Medicinal Chemistry, CSIC, Juan de la Cierva, 3, Madrid-6, Spain

254 MONOAMINE OXIDASE IN SYNAPTIC AND NON-SYNAPTIC MITOCHONDRIA FROM BRAIN REGIONS
J. C. K. Lai,* **T. K. C. Leung** and **L. Lim,** *Neurology Department, Albert Einstein College of Medicine, Bronx, New York, NY 10461, USA and Neurochemistry Department, Institute of Neurology, Queen Square, London WC1, UK

255 5-HYDROXYTRYPTAMINE UPTAKE AND MONOAMINE OXIDASE ACTIVITY IN PLATELETS IN ALZHEIMER'S DISEASE AND MULTI-INFARCT DEMENTIA
M. H. Wicks and **R. J. Mayer,** Department of Biochemistry, University of Nottingham Medical School, Queen's Medical Centre, Clifton Boulevard, Nottingham NG7 2UH, UK

POSTER COMMUNICATIONS PC3 (Continued)

TRANSMITTER INTERACTIONS IN THE BASAL GANGLIA

Poster No.

256 STUDIES ON NEUROTRANSMITTER RECEPTORS IN BOVINE CAUDATE NUCLEUS
R. M. Withy, S. Lancaster and **P. G. Strange,** Department of Biochemistry, The Medical School, Queen's Medical Centre, Clifton Boulevard, Nottingham NG7 2UH, UK

257 MODULATION OF DOPAMINERGIC ACTIVITY IN THE NUCLEUS ACCUMBENS BY OXOTREMORINE
J. de Belleroche, I. Gardiner, L. J. Herberg,* P. Winn,* E. Murzi* and **S. Williams,** Departments of Biochemistry and Neurology, Charing Cross Hospital and Medical School, London W6 8RF, UK
*Department of Experimental Psychology, Institute of Neurology, London WC1, UK

258 [^{3}H] SPIPERONE LABELS NON-CYCLASE LINKED DOPAMINE RECEPTORS IN THE RAT VENTRAL TEGMENTUM
A. L. Gundlach and **P. M. Beart,** University of Melbourne, Clinical Pharmacology and Theurapeutics Unit, Austin Hospital, Heldelberg, Victoria, Australia

259 ROLE OF DOPAMINE AND ACETYLCHOLINE IN THE MYOCLONUS PRODUCED BY INTRASTRIATAL PICROTOXIN IN THE RAT
P. Slater and **S. L. Dickinson,** Department of Physiology, University of Manchester, Manchester M13 9PT, UK

260 EFFECT ON INTRASTRIATAL GLUTAMIC ACID INJECTION ON RAT CEREBELLAR cGMP LEVELS
J. C. Kouyoumdjian, J. P. Lautié, M. Haidamous, C. Lacombe, L. Grignon and **P. Gonnard,** Département de Biochimie, C.H.U. Henri-Mondor 94010 CRETEIL Cedex, France

261 DOPAMINE REQUIREMENT BY BROMOCRIPTINE TO INCREASE RAT STRIATAL ACETYLCHOLINE CONTENT
S. Consolo, H. Ladinsky, K. Kolasa and **R. Fusi,** Istituto di Ricerche Farmacologiche 'Mario Negri', Milan, Italy

262 THE CATECHOLAMINE CONTENT OF RAT CAROTID BODY AND ITS MODIFICATION BY HYPOXIA
A. K. Mir, K. Al-Neamy,* S. R. Nahorski and **D. J. Pallot,*** Departments of Pharmacology and Anatomy,* Medical Sciences Building, University of Leicester, University Road, Leicester LE1 7RH, UK

POSTER COMMUNICATIONS PC3 (Continued)

TRANSMITTER INTERACTIONS IN THE BASAL GANGLIA

Poster No.

263 COMPARATIVE EFFECT OF CHRONIC HALOPERIDOL AND SULPIRIDE TREATMENT ON NIGRAL AND STRIATAL GABA CONTENT
F. Nicoletti, F. Patti,* D. F. Condorelli,* L. Rampello, G. Giammona,* P. L. Canonico** and **R. M. Di Giorgio,**** Departments of Pharmacology and Neurology,* University of Catania and Institute of Biochemistry,** University of Messina, Italy

264 ALTERATION OF DOPAMINE SENSITIVE ADENYLATE CYCLASE ACTIVITY IN MOUSE CAUDATE
L. C. Tang, Department of the Army, Walter Reed Army Institute of Research, Walter Reed Army Medical Center, Washington, D.C. 20012, USA

POSTER COMMUNICATIONS PC3 (Continued)

IMMUNE RESPONSE TO NERVOUS SYSTEM PROTEINS IN NEUROLOGIC DISEASE

Poster No.

265 PARTIALLY PURIFIED α-BUNGAROTOXIN BINDING COMPONENT FROM RAT BRAIN SHOWS IMMUNOLOGICAL CROSS-REACTIVITY WITH RAT MUSCLE AND *TORPEDO* nAChR
S. Wonnacott, R. Harrison and **G. G. Lunt,** Department of Biochemistry, University of Bath, Bath BA2 7AY, UK

266 MULTI-SIALO BRAIN GANGLIOSIDES ARE POWERFUL STIMULATORS OF ACTIVE E-ROSETTING LYMPHOCYTES FROM MULTIPLE SCLEROSIS PATIENTS
H. Offner, G. Konat and **B. Sela,** The Neurochemical Institute, 58 Radmandsgade, 2200 Copenhagen N, Denmark and Department of Biophysics, The Weizmann Institute of Science, Rehovot, Israel.

267 IMMUNOLOGICAL FINDINGS IN SERUM, CEREBROSPINAL FLUID AND BRAIN OF A PATIENT AFFECTED WITH MULTIPLE SCLEROSIS
F. Bollengier, Laboratorium voor Fysiopathologie van het Zenuwstelsel, Vrije Universiteit Brussel, Laarbeeklaan, 103, B-1090 Brussel, Belgium

268 A BLIND STUDY ON THE PRESENCE OF MS ANTIGENS IN AUTOPSY BRAINS OF MS AND NON-MS BRAINS
J. Clausen and **S. Rastogi,** The Neurochemical Institute, 58 Radmandsgade, 2200 Copenhagen, Denmark. **W. W. Tourtelotte,** Human Neurospecimen Bank, Veterans Administration, Wadsworth Hospital Center, Wilshire and Sawtelle Boulevards, Los Angeles, California 90073, USA

269 COMPARISON OF SERUM LIPOPROTEINS IN ACUTE AND CHRONIC EXPERIMENTAL ALLERGIC ENCEPHALOMYELITIS (EAE)
L. Krzalić and **D. Cupić,** Institute of Pathologic Physiology, Belgrade University Medical School, Belgrade, Yugoslavia

270 CEREBROSPINAL FLUID (CSF) CREATINE KINASE (CK) AND ITS ISOENZYMES WITH SPECIAL REFERENCE TO CEREBROVASCULAR DISORDERS AND DEMYELINATION
H. Frey, T. Halonen, V. Näntö and **T. Lövgren,** Departments of Neurology and Clinical Chemistry, University of Turku and Wallac Biochemical Laboratory, Turku, Finland

271 LECTIN-REACTIVE COMPONENTS IN HUMAN BRAIN WHITE MATTER MEMBRANES OF NORMAL AND MULTIPLE SCLEROSIS BRAINS
V. Hukkanen and **H. Frey,** Departments of Virology and Neurology, University of Turku, Turku, Finland

POSTER COMMUNICATIONS PC3 (Continued)

IMMUNE RESPONSE TO NERVOUS SYSTEM PROTEINS IN NEUROLOGICAL DISEASE

Poster No.

272 CONTENTS OF FREE AMINO ACIDS AND INCORPORATION OF [^{3}H]AMINO ACIDS INTO PROTEINS IN THE DORSAL ROOT GANGLIA OF RABBITS WITH EXPERIMENTAL ALLERGIC NEURITIS
G. K. Molnár, E. R. Korpi, P. J. Riekkienen and **S. S. Oja,** Department of Neurology, University of Turku, Turku, Department of Neurology, University of Kuopio, Kuopio and Department of Biomedical Sciences, University of Tampere, Tampere, Finland

273 PATHOGENESIS OF AUTONOMIC DYSFUNCTION IN A DEMYELINATING DISEASE. A BIOCHEMICAL AND FUNCTIONAL STUDY ON RABBITS WITH EXPERIMENTAL ALLERGIC NEURITIS
M. Saksa,* **G. K. Molnár** and **P. J. Riekkinen,***
*Department of Neurology, University of Kuopio, Kuopio and Department of Neurology, University of Turku, Turku, Finland

274 ANALYSIS OF IMMUNOGLOBULIN G IN BRAIN AND CEREBROSPINAL FLUID BY ISOELECTRIC FOCUSING
P. Glynn, H. Gilbert, J. Newcombe and **L. Cuzner,** Department of Neurochemistry, Institute of Neurology, London WC1N 2NS, UK

275 ALBUMIN ELIMINATION PRIOR TO CSF PROTEIN SEPARATIONS
K. G. Kjellin and **L. B. Hallander,** Department of Neurology, Karolinska Hospital, S-104 01 Stockholm, Sweden

276 HIGH VOLTAGE ISOELECTRIC FOCUSING IN ULTRATHIN GELS FOR INVESTIGATION OF CSF PROTEINS
K. G. Kjellin and **L. B. Hallander,** Department of Neurology, Karolinska Hospital, S-104 01 Stockholm, Sweden

277 DETERMINATION OF CHOLESTEROL ESTERASE ACTIVITY IN HUMAN CSF
T. O. Halonen, A. S. L. Pitkänen, H. O. Kilpeläinen and **P. J. Riekkinen,** Department of Neurology, University of Kuopio, P.O. Box 138, SF-70101 Kuopio 10, Finland

278 COMPARISON OF THE COAT COMPOSITION OF SEMLIKI FOREST VIRUS GROWN IN CHICK FIBROBLASTS AND MOUSE BRAIN
F. M. Cocker, J. A. Chapman and **M. G. Rumsby,** Department of Biology, University of York, Heslington, York YO1 5DD, UK

279 EXPERIMENTAL ALLERGIC ENCEPHALOMYELITIS: CAN THE CHRONIC DISEASE BE INDUCED BY THE INOCULATION OF MUTANT MOUSE SHIVERER CENTRAL NERVOUS TISSUE?
A. J. Suckling and **M. G. Rumsby,** Department of Biology, University of York, Heslington, York YO1 5DD, UK

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IMMUNE RESPONSE TO NERVOUS SYSTEM PROTEINS IN NEUROLOGIC DISEASE

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280 IMMUNOLOGICAL STUDIES ON CHRONIC RELAPSING EXPERIMENTAL ALLERGIC ENCEPHALOMYELITIS
J. A. Kirby, A. J. Suckling and **M. G. Rumsby,** Department of Biology, University of York, Heslington, York YO1 5DD, UK

281 COMPARISON OF THE POLYPEPTIDE COMPOSITION OF PLAQUE TISSUE IN CHRONIC RELAPSING EXPERIMENTAL ALLERGIC ENCEPHALOMYELITIS AND MULTIPLE SCLEROSIS
M. G. Rumsby, A. J. Suckling and **T. V. Waehneldt,** Forschungsstelle Neurochemie, Max-Planck-Institut für Experimentelle Medizin, D-3400, Göttingen, FRG; Department of Biology, University of York, York YO1 5DD, UK

282 RADIOIMMUNOASSAY OF MYELIN BASIC PROTEIN IN SPINAL FLUID AND BRAIN TISSUE: METHODS FOR SEPARATION OF ANTIGEN AND ANTIGEN-ANTIBODY COMPLEX
B. Karlsson and **C. Alling,** Department of Psychiatry and Neurochemistry, University of Göteborg, Sweden

283 COMPARATIVE STUDIES OF PERCHLORIC ACID SOLUBLE PROTEINS EXTRACTED FROM NERVOUS AND NON-NERVOUS TISSUE OF RAT
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NEUROCHEMICAL ROLE AND REGULATION OF CALCIUM

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284 CALCIUM UPTAKE BY SYNAPTOSOMES AND MEMBRANE FRACTIONS ISOLATED FROM SHEEP BRAIN
O. P. Coutinho and **C. M. Carvalho,** Centro de Biologia Celular, Departamento de Zoologia, Universidade de Coimbra, Coimbra, Portugal

285 BINDING OF LANTHANUM AND RUTHENIUM RED TO SYNAPTOSOMES AND ITS CORRELATION WITH TRANSMITTER RELEASE
R. Tapia and **C. Arias,** Departamento de Neurociencias, Centro de Investigaciones en Fisiologiá Celular, Universidad Nacional Autónoma de México, México 20, D.F. México

286 DISTRIBUTION OF CALMODULIN IN SECRETORY GRANULES ISOLATED FROM BOVINE NEUROHYPOPHYSES UNDER ISOSMOLAR CONDITIONS
S. F. Olsen, M. Treiman and **N. A. Thorn,** Department of Medical Physiology C, Panum Institute, University of Copenhagen, Blegdamsvej 3 C, 2200 Copenhagen, Denmark

287 BRAIN COATED VESICLES: MOLECULAR RELATIONSHIPS BETWEEN ITS PROTEINS
S. Puszkin, N. Moskowitz and **W. Schook,** Division of Molecular Pathology, Department of Pathology, Mount Sinai School of Medicine of the City University of New York, NY 10029, USA

288 PURIFICATION AND MODE OF ACTION OF SYNEXIN, A PROTEIN THAT ENHANCES Ca^{++}-INDUCED MEMBRANE AGGREGATION
J. M. X. Hughes, S. J. Morris and **V. P. Whittaker,** Abteilung Neurochemie, Max-Planck-Institut für Biophysikalische Chemie, Postfach 968, D-3400 Göttingen, FRG

289 SOLUBILIZATION AND RECONSTITUTION OF THE Na^{+}-Ca^{2+} EXCHANGE CARRIER FROM BRAIN
G. D. Schellenberg and **P. D. Swanson,** Division of Neurology, School of Medicine, University of Washington, Seattle, Washington 98195, USA

290 EFFECTS OF Ca^{2+} ON AXONAL TRANSPORT IN THE FROG SCIATIC NERVE
M. Kanje and **A. Edström,** Department of Zoophysiology, University of Lund, Lund, Sweden

291 FAST AXOPLASMIC TRANSPORT OF A POLYPEPTIDE RELATED TO CALMODULIN
T. Tashiro and **M. Kurokawa,** Department of Biochemistry, Institute for Brain Research, Tokyo University Faculty of Medicine, Tokyo, Japan

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NEUROCHEMICAL ROLE AND REGULATION OF CALCIUM

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292 CYCLIC AMP PHOSPHODIESTERASE AND CALMODULIN ACTIVITIES IN DIFFERENT REGIONS OF THE RAT NERVOUS SYSTEM DURING POSTNATAL DEVELOPMENT
M. J. Toro, M. Salinas Fando and **E. Montoya,** Departamento de Investigación, Centro Ramón y Cajal, Madrid, Spain

293 EFFECT OF PHOSPHOLIPASE A_2 ON CALCIUM TRANSPORT IN BRAIN SYNAPTOSOMES
K. Noremberg and **J. W. Lazarewics,** Department of Neurochemistry, Medical Research Centre, Polish Academy of Sciences, Warsaw, Poland

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ESSENTIAL FATTY ACIDS AND PROSTAGLANDINS

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294 TESTOSTERONE-INDUCED ACTIVATION OF THE LYSOSOMAL SYSTEM. ROLE OF CALCIUM, PROSTAGLANDINS AND POLYAMINES
H. Koenig, C. Y. Lu and **A. Goldstone,** Neurology Service, VA Lakeside Medical Center and Department of Neurology, Northwestern University Medical School, Chicago, Illinois, USA

295 POLYAMINES REGULATE LYSOSOMAL FUNCTION IN DENERVATED MUSCLE. STUDIES WITH α-DIFLUOROMETHYLORNITHINE, ASPIRIN AND DEXAMETHASONE
H. Koenig, A. Goldstone and **C. Y. Lu,** Neurology Service, VA Lakeside Medical Center and Department of Neurology, Northwestern University Medical School, Chicago, Illinois, USA

296 TOPOGRAPHIC LOCALIZATION OF PHOSPHOLIPID SYNTHESIS ON BRAIN MICROSOMES
M. Butler and **P. Morell,** University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27514, USA

297 MONOGLYCERIDE TRANSACYLASE IN BRAIN
F. J. Doherty, K. F. Daish, P. A. Hunt and **C. E. Rowe,** Department of Biochemistry, The University of Birmingham, P.O. Box 363, Birmingham B15 2TT, UK

298 VERY LONG CHAIN FATTY ACIDS IN ADRENOLEUKODYSTROPHY BRAIN, FIBROBLAST AND LEUCOCYTE LIPIDS
B. Molzer,[1] **H. Bernheimer,**[1] **K. Toifl,**[2] **M. Vetterlein**[3] and **J. Ulrich,**[4]
[1]Department of Neurochemistry, Neurology Institute,
[2]Neuropsychiatric Clinic for Children and Adolescents,
[3]Institute for Cancer Research, University of Vienna, Austria and
[4]Institute of Pathology, University of Basle, Switzerland

299 UPTAKE AND METABOLIC UTILIZATION OF FLUORESCENT FATTY ACIDS BY CULTURED NEUROBLASTOMA AND GLIOMA CELLS
O. Morand, A. Dagan, G. Korner,* U. Bachrach* and **S. Gatt,** Laboratory of Neurochemistry, Department of Biochemistry and Department of Molecular Biology,* Hebrew University-Hadassah Medical School, Jerusalem, Israel

300 EFFECTS OF BSA WASHING AND HYPOXIA ON INCORPORATION OF ARACHIDONATE INTO SYNAPTOSOMAL PHOSPHOLIPIDS
J. Strosznajder, L. C. Foudin and **G. Y. Sun,** Sinclair Research Farm, University of Missouri, Columbia, Missouri 65201, USA and Medical Research Center, Polish Academy of Sciences, Warsaw, Poland

301 USE OF A SENSITIVE ENZYMIC PROCEDURE FOR DETERMINATION OF 1-ACYL-GLYCEROPHOSPHOCHOLINE CONTENT IN BRAIN
G. Y. Sun and **D. W. Hallett,** Sinclair Research Farm and Biochemistry Department, University of Missouri, Columbia, Missouri 65211, USA

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ESSENTIAL FATTY ACIDS AND PROSTAGLANDINS

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301A METABOLISM OF LONG-CHAIN HIGHLY UNSATURATED FATTY ACIDS IN THE RAT RETINA *IN VIVO*
H. E. Pascaul de Bazán, M. M. Careaga, H. Sprecher and **N. G. Bazán,** Instituto de Investigaciones Bioquiumicas, UNS-CONICET, Corriti 43, 8000 Bahía Blanca, Argentina and Ohio State University, Department of Physiological Chemistry, Columbus, Ohio, USA

301B CHANGES IN FREE FATTY ACIDS AND DIACYLGLYCEROL AND METABOLISM OF ACYL GROUPS OF PHOSPHOLIPIDS DURING SUBCELLULAR FRACTIONATION OF CEREBAL CORTEX AND CEREBELLUM
Maria F. Pediconi, Elena B. Rodríguez de Turco, and **Nicolás G. Bazán,** Instituto de Investigaciones Bioquímicas, UNS-CONICET, Corriti 43, 8000 Bahía Blanca, Argentina

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PROTEIN PHOSPHORYLATION

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302 PHOSPHORYLATION OF MYELIN BASIC PROTEIN IN RAT OPTIC NERVE
N. Murray and **A. J. Steck,** Department of Virology, ISREC, 1066 Epalinges, and Department of Neurology, CHUV, 1011 Lausanne, Switzerland

303 PREINCUBATION OF SUBCELLULAR FRACTIONS FROM BRAIN INACTIVATES PROTEIN PHOSPHORYLATION
P. R. Dunkley and **P. J. Robinson,** Faculty of Medicine, The University of Newcastle, New South Wales, Australia 2308

304 GTP-DEPENDENT PHOSPHORYLATION OF PROTEINS IN A CELL-FREE SYSTEM FROM RAT BRAIN AFFECTED BY CORTICOTROPHIN (ACTH)-LIKE PEPTIDES
P. Schotman, A. M. A. Van Dijk and **L. H. Schrama,** Division of Molecular Neurobiology, Institute of Molecular Biology, Laboratory for Psychological Chemistry, and Rudolf Magnus Institute for Pharmacology, University of Utrecht, P.O. Box 80.063, 3508 TB Utrecht, The Netherlands

305 *IN VIVO* PHOSPHORYLATION OF B-50 PROTEIN IN INFANT RAT CEREBRAL CORTICAL MEMBRANES
A. B. Oestreicher, H. Zwiers and **W. H. Gispen,** Institute of Molecular Biology, State University of Utrecht, Padualaan 8, 3508 TB Utrecht, The Netherlands

306 PROPERTIES OF TWO HIPPOCAMPAL PHOSPHOPROTEINS RESPONSIVE TO TETANIC STIMULATION
P. R. Bär, M. Boelen and **W. H. Gispen,** Department of Molecular Neurobiology, Rudolf Magnus Institute for Pharmacology and Laboratory for Physiological Chemistry, Medical Faculty and Institute of Molecular Biology, State University of Utrecht, Padualaan 8, 3508 TB Utrecht, The Netherlands

307 cAMP- AND Ca^{++}-REGULATED PHOSPHORYLATION OF *APLYSIA* NERVOUS SYSTEM PROTEINS
I. Novak-Hofer and **I. B. Levitan,** Friedrich Miescher-Institut, P.O. Box 273, CH-4002 Basel, Switzerland

308 EFFECTS OF SAXITOXIN, CYCLIC AMP AND CALMODULIN ON THE PHOSPHORYLATION OF NERVE PROTEINS
B. Szabo, G. Dandrifosse, J. Bontemps, L. Meijer and **E. Schoffeniels,** Laboratoire de Biochimie générale et comparée, Université de Liège, Belgium. Station Biologique de Roscoff, France

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PROTEIN PHOSPHORYLATION

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309 ENDOGENOUS PROTEIN PHOSPHORYLATION ACTIVITY IN BOVINE CHROMAFFIN GRANULES PURIFIED ON A PERCOLL GRADIENT (TENTATIVE IDENTIFICATION OF A MAJOR GRANULE MEMBRANE PHOSPHOPROTEIN AS A SUBUNIT OF TYROSINE HYDROXYLASE)
N. Treiman[1] and **M. Gratzl,**[2] [1]Institute of Medical Physiology C, University of Copenhagen, Denmark and [2]Department of Physiological Chemistry, University of Saarland, D-665 Homburg, FRG

310 INCREASED CYTOSOLIC PHOSPHORYLATING ACTIVITY AFTER DENERVATION IN DIFFERENT TYPES OF SKELETAL MUSCLE
I. R. Held, J. A. McLane and **S. P. Squinto,** Loyola University and Hines Veterans Administration Hospital, Maywood, Illinois, USA

311 PROTEIN PHOSPHORYLATION AS A MEDIATOR OF OPIATE-REGULATED ADENYLATE CYCLASE ACTIVITY
Y. H. Ehrlich, S. R. Whittemore, M. K. Garfield and **R. H. Lenox,** University of Vermont College of Medicine, Burlington, Vermont 05405, USA

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PHOSPHOINOSITIDE METABOLISM

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312 PARTIAL PURIFICATION AND PROPERTIES OF CDP-DIACYLGLYCEROL: INOSITOL PHOSPHATIDYLTRANSFERASE FROM RAT BRAIN
J. Eichberg and **A. Ghalayini,** Department of Biophysical Sciences, University of Houston, Houston, Texas 77004, USA

313 RELATIONSHIP BETWEEN THE EFFECTS OF PROPRANOLOL AND CALCIUM ON PHOSPHOINOSITIDE METABOLISM IN RAT CEREBRAL CORTEX MINCE
A. S. Pappu and **G. Hauser,** Harvard Medical School, McLean Hospital, Belmont, Massachusetts 02178, USA

314 EFFECTS OF NEUROTRANSMITTERS AND DEPOLARIZING AGENTS ON PHOSPHOLIPID METABOLISM IN RAT CEREBRAL CORTEX MINCE
M. D. Majewska and **G. Hauser,** Harvard Medical School, McLean Hospital, Belmont, Massachusetts 02178, USA

315 ACTIVATION OF RAT BRAIN MICROSOMAL PHOSPHOLIPASE D BY FREE FATTY ACIDS
R. J. Chalifour and **J. N. Kanfer,** University of Manitoba, Winnipeg, Manitoba, Canada

316 METABOLISM OF PHOSPHATIDYLINOSITOL IN PRIMARY NEURONAL AND GLIAL CELL CULTURES
A. D. Edgar and **L. Freysz,** Centre de Neurochimie du CNRS, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

317 LIGHT STIMULATES PHOSPHATIDYLINOSITOL SYNTHESIS IN THE RETINA
R. E. Anderson, M. E. Rayborn and **J. G. Hollyfield,** Cullen Eye Institute, Baylor College of Medicine, Houston, Texas 77030, USA

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NOVEL NEUROTOXINS

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318 β-SCORPION TOXIN, A NEW TYPE OF NEUROTOXIN ACTING ON THE ACTION POTENTIAL-SODIUM CHANNEL
F. Couraud, E. Jover, J. M. Dubois* and **H. Rochat,** Laboratoire de Biochimie et INSERM U172, Faculté Médecine Nord, Marseille, France
*Laboratoire de Neurobiologie, Ecole Normale Supérieure, Rue d'Ulm, Paris, France

319 INHIBITION OF AXOPLASMIC TRANSPORT OF SUBSTANCE P AND SOMATOSTATIN BY CAPSAICIN
R. Gamse, U. Petsche and **F. Lembeck,** Department of Experimental and Clinical Pharmacology, Graz, Austria

320 DISTRIBUTION OF CAPSAICIN IN RAT TISSUE
A. Saria, G. Skofitsch and **F. Lembeck,** Department of Experimental and Clinical Pharmacology, Graz, Austria

321 NEUROTRANSMITTER AMINO ACIDS RELEASED FROM RAT BRAIN DURING TREMORS INDUCED BY THE CENTRAL ADMINISTRATION OF THE MYCOTOXIN, VERRUCULOGEN
D. W. Peterson, H. F. Bradford and **P. Mantle,** Imperial College, London SW7 2AZ, UK

322 PARASICYONIS TOXIN: A NOVEL SEA ANEMONE TOXIN TO CRUSTACEAN SODIUM CHANNEL
M. Satake, S. Fujita and **A. Warashina,** Brain Research Institute and School of Medicine, Niigata University, Niigata, Japan 951

323 NEUROTOXICITY OF KAINIC ACID, A GLUTAMATE ANALOGUE: EFFECT ON NEUROTRANSMITTER MARKERS
D. Malthe-Sørenssen and **D. Heggli,** Norwegian Defence Research Establishment, Division for Toxicology, N-2007 Kjeller, Norway

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NEUROCHEMISTRY OF POST-MORTEM HUMAN BRAIN

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324 GANGLIOSIDE, DNA, LIPID AND PROTEIN LEVELS IN DENERVATION ATROPHY OF HUMAN SKELETAL MUSCLE
M. R. Higatsberger, E. Auff and **H. Bernheimer,** Institute of Brain Research of the Austrian Academy of Sciences and Neurological Institute of the University, Vienna, Austria

325 PROTECTION OF NEOCORTICAL TISSUE PRISMS FROM FREEZE-THAW INJURY BY DIMETHYLSULPHOXIDE
E. A. Haan, D. M. Bowen and **S. Benton,** Miriam Marks Department of Neurochemistry, Institute of Neurology, 33 John's Mews, London WC1N 2NS, UK

326 BIOCHEMICAL CHANGES IN CORTICAL BRAIN BIOPSIES AND CEREBROSPINAL FLUID FROM DEMENTED PATIENTS INCLUDING SOME WITH ALZHEIMER'S DISEASE (AD)
D. M. Bowen, S. Benton, G. Curzon, A. N. Davison, N. R. Sims, C. C. T. Smith, J. A. Spillane and **P. White,** Miriam Marks Department of Neurochemistry, Institute of Neurology, Queen Square, London WC1N 2NS, UK

327 ACETYLCHOLINE SYNTHESIS AND GLUCOSE METABOLISM IN NEOCORTEX IN ALZHEIMER'S DISEASE AND NORMAL AGEING
N. R. Sims, D. M. Bowen and **A. N. Davison,** Miriam Marks Department of Neurochemistry, Institute of Neurology, 33 John's Mews, London WC1N 2NS, UK

328 THE PERIMORTEM VARIATION OF GLUTAMATE DECARBOXYLASE AND CREATINE KINASE IN HUMAN BRAIN
H. S. Maker, C. Weiss, S. Weissbarth and **D. J. Silides,** Department of Neurology, Mount Sinai School of Medicine, New York, New York 10029 and the Veterans Administration Hospital, Bronx, New York 10468, USA

329 STUDY OF PROTEIN KINASES IN SUBCELLULAR FRACTIONS OF HUMAN CORTEX AND GLIOMA
L. Frattola,* M. Trabucchi, G. C. Tonon,** C. Tonini*** and **N. Canal,***
*Department of Neurology, University of Milan, Italy; **Department of Pharmacology, University of Padua, Italy

330 MICRODIALYSIS IN POLYACRYLAMIDE GELS—A SUITABLE TECHNIQUE PRECEDING PROTEIN EXAMINATIONS IN SMALL CSF SAMPLES
K. G. Kjellin and **L. B. Hallander,** Department of Neurology, Karolinska Hospital, S-104 01 Stockholm, Sweden

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NEUROCHEMISTRY OF POST-MORTEM HUMAN BRAIN

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331 ISOTACHOPHORESIS IN POLYACRYLAMIDE GEL SLABS FOR INVESTIGATION OF CSF PROTEINS ESPECIALLY XANTHOCHROMIC COMPOUNDS
K. G. Kjellin and **L. B. Hallander,** Department of Neurology, Karolinska Hospital, S-104 01 Stockholm, Sweden

332 5-HT BINDING IN HUMAN BRAIN: METHODOLOGICAL ASPECTS, DISTRIBUTION AND EFFECT OF AGE
E. Dehlin, C. Fowler, J. Marcusson and **B. Winblad,** Department of Pathology, University of Umea, S-901 87 Umea, Sweden

333 THE CONCENTRATION OF TAURINE IN HUMAN MUSCLE BIOPSIES
E. M. Airaksinen and **J. Partanen,** Departments of Pharmacology, Clinical Neurophysiology and Pediatrics, University of Kuopio, P.O. Box 138, SF-70101 Kuopio 10, Finland

334 PURIFICATION OF LYSOSOMAL ACID PROTEINASES FROM HUMAN BRAIN
K. Marnela and **S. S. Oja,** Department of Biomedical Sciences, University of Tampere, Tampere, Finland

335 BLOOD LEVELS OF SEROTONIN AND CERULOPLASMIN IN UNTREATED PETIT-MAL EPILEPTICS AND INFLUENCE OF EFFICIENT TREATMENT WITH ETHOSUXIMID OR VALPROATE
D. Volanschi, N. Luca, D. Hategan and **G. Ionescu,** Institute of Neurology and Psychiatry, Bucharest, Romania

336 PHENYLACETIC ACID IN POST-MORTEM BRAIN FROM SCHIZOPHRENIC PATIENTS
G. P. Reynolds and **M. Sandler,** Queen Charlotte's Hospital, Goldhawk Road, London W6 0XG, UK;
P. Riederer and **K. Jellinger,** Boltzmann Institute for Clinical Neurobiology, Lainz Hospital, 1130 Vienna, Austria;
R. Gabriel, Baumgartner Psychiatric Hospital, 1140 Vienna, Austria

337 METABOLICALLY ACTIVE SYNAPTOSOMES CAN BE ISOLATED FROM FROZEN HOMOGENATES OF HUMAN BRAIN
J. A. Hardy, P. R. Dodd, A. E. Oakley, R. H. Perry, and **J. A. Edwardson,** MRC Neuroendocrinology Unit, Newcastle General Hospital, Newcastle upon Tyne NE4 6BE, UK

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NEUROCHEMISTRY OF POST-MORTEM HUMAN BRAIN

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338 THE BRAIN SPECIFIC ALPHA$_2$-GLYCOPROTEIN. BIOLOGICAL AND IMMUNOCHEMICAL STUDIES
K. Warecka, Neurological Department, Medical High School, D-2400 Lübeck, FRG
M. S. Ghandour, O. K. Langley, G. Gombos and **G. Vincendon,** Institut de Chimie Biologique de la Faculté de Médecine and Centre de Neurochimie du CNRS, 67000 Strasbourg, France

339 GLYCINE RECEPTORS AS DEFINED BY ^{3}H-STRYCHNINE BINDING IN THE HUMAN BRAIN: POSSIBLE ALTERATIONS IN PATHOLOGICAL STATES
K. G. Lloyd, F. Thuret, L.E.R.S. Bagneux, France; **G. de Montis,** University of Cagliari, Cagliari, Italy; **Y Agid, F. Javoy,** Pitié-Salpêtrière, Paris, France; **A. Löwenthal,** University of Antwerp, Antwerp, Belgium; **G. Constandinidis,** Clinique Bel Air, Geneva, Switzerland

340 EFFECT OF DIAZEPAM ON GABA LEVELS IN CEREBROSPINAL FLUID OF NEUROLOGICAL PATIENTS
A. W. Teelken,* **R. Zimmer,**** **B. G. Wolthers***** and **J. P. W. F. Lakke,***
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**Psychiatric Hospital, University of Munich, München, Germany
***Department of Clinical Chemistry, University Hospital, Groningen, The Netherlands

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342 DOLICHOLS AS COMPONENTS OF STORAGE MATERIALS IN BATTEN DISEASE
N. M. K. NG Ying Kin and **L. S. Wolfe,** Montreal Neurological Institute, McGill University, Montreal, Quebec, Canada, H3A 2B4

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STRUCTURAL AND BIOCHEMICAL ORGANISATION OF CHROMAFFIN GRANULES

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343 A23187-INDUCED DIVALENT METAL ION UPTAKE BY CHROMAFFIN GRANULES
R. Sen and **R. R. Sharp,** Department of Chemistry, University of Michigan, Ann Arbor, Michigan 48104, USA

344 IDENTIFICATION OF NICOTINIC ACETYLCHOLINE RECEPTORS IN ADRENAL CHROMAFFIN GRANULES
D. Martıńez-Munoz, M. Hernández and **R. Tarrab-Hazdai,*** Departamento de Neurociencias del Centro de Investigación y Estudios Avanzados del I.P.N., México 14, D.F., Mexico and *The Weizmann Institute, Rehovot, Israel.
*On sabbatical leave at the Instituto de Investigaciones Biomedicas, U.N.A.M., México 20, D.F., México

345 STRUCTURAL ORGANIZATION OF CHROMAFFIN GRANULE MEMBRANE PROTEINS, WITH SPECIAL REFERENCE TO ALPHA-ACTININ
M. F. Bader and **D. Aunis,** Unité INSERM U44, Centre de Neurochimie, 5 rue Blaise Pascal, F-67084 Strasbourg, France

346 THE SURFACE MEMBRANE OF ADRENAL MEDULLARY CELLS AND EXOCYTOSIS
E. M. Fenwick, Biochemistry Department, Monash University, Australia

347 PROTEASE-SENSITIVE 10 nm PARTICLES ON THE SURFACE OF CHROMAFFIN GRANULES: THE PRESUMABLE EQUIVALENT OF THE PROTON-TRANSLOCATING ATPase
W. Schmidt,* **H. Winkler*** and **H. Plattner,****
Department of Pharmacology, University of Innsbruch, A-6020 Innsbruch, Austria
**Faculty of Biology, University of Konstanz, D-7750 Konstanz, FRG

348 CALCIUM-DEPENDENT BINDING OF CYTOSOLIC PROTEINS AND ^{125}I-CALMODULIN TO ADRENAL CHROMAFFIN GRANULE MEMBRANES
M. J. Geisow and **R. D. Burgoyne,** National Institute for Medical Research, The Ridgeway, Mill Hill, London NW7 1AA, UK

349 KINETICS AND MORPHOLOGY OF CHROMAFFIN GRANULE MEMBRANE FUSION
S. J. Morris,* **T. C. Südhof,**** **M. J. Costello,***** **J. D. Robertson***** and **D. H. Haynes******
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STRUCTURAL AND BIOCHEMICAL ORGANISATION OF CHROMAFFIN GRANULES

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350 SUBCELLULAR LOCALIZATION OF THE PHOSPHATIDYLINOSITOL EFFECT IN BOVINE ADRENAL MEDULLA
N. Azila and **J. N. Hawthorne,** Department of Biochemistry, University Hospital and Medical School, Nottingham NG7 2UH, UK

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CONTROL MECHANISMS AT THE CHOLINERGIC SYNAPSE

Poster No.

352 EFFECTS OF NONIONIC DETERGENT TRITON X-100 AND NON-SPECIFIC PROTEIN ON ACTIVITY AND ELECTROPHORETIC MOBILITY OF ChE IN RAT SCG
B. Klinar, L. Kamaric and **M. Brzin,** Institute of Pathophysiology, School of Medicine, University of E. Kardelji, 61105 Ljubljana, Yugoslavia

353 THE ULTRASTRUCTURAL LOCALIZATION OF AChE IN THE RAT DIAPHRAGM REGENERATED AFTER IRREVERSIBLE INHIBITION *IN VIVO*
T. Kiauta and **M. Brzin,** Institute of Pathophysiology, 61105 Ljubljana, Yugoslavia

354 THE SIZE OF THE CYTOSOLIC POOL OF ACETYLCHOLINE IN RESTING ELECTROMOTOR NERVE TERMINALS
M. Weiler, I. Roed and **V. P. Whittaker,** Abteilung Neurochemie, Max-Planck-Institut für Biophysikalische Chemie, Postfach 968, D-3400 Göttingen, FRG

355 MULTIPLE MOLECULAR FORMS OF ACETYLCHOLINESTERASE IN THE ELECTRIC ORGAN AND VARIOUS NERVOUS TISSUES FROM *TORPEDO MARMORATA*
V. Witzemann and **C. Boustead,** Abteilung Neurochemie, Max-Planck-Institut für Biophysikalische Chemie, Postfach 968, D-3400 Göttingen, FRG

356 IMMUNOLYSIS OF CHOLINERGIC SYNAPTOSOMES
P. J. Richardson, Abteilung Neurochemie, Max-Planck-Institut für Biophysikalische Chemie, Postfach 968, D-3400 Göttingen, FRG

357 STUDIES ON *TORPEDO* CHOLINE ACETYLTRANSFERASE
Y. A. Luqmani and **P. J. Richardson,** Abteilung Neurochemie, Max-Planck-Institut für Biophysikalische Chemie, Postfach 968, D-3400 Göttingen, FRG

358 THE CHOLINE TRANSPORT SYSTEM: ITS SOLUBILISATION, PARTIAL PURIFICATION AND RECONSTITUTION INTO LIPOSOMES
R. G. King and **R. M. Marchbanks,** Department of Biochemistry, Institute of Psychiatry, De Crespigny Park, London SE5 8AF, UK

359 EFFECT OF OUABAIN ON THE RELEASE OF ACETYLCHOLINE AND OTHER SUBSTANCES
S. Vyas and **R. M. Marchbanks,** Department of Biochemistry, Institute of Psychiatry, De Crespigny Park, London SE5 8AF, UK

360 THE TURN-OVER OF ACETYLCHOLINE IN LIGATED SCIATIC NERVES
A. Dahlström, S. Bööj, P.-A. Larsson and **W. G. McLean,*** Institute of Neurobiology, University of Göteborg, Sweden and
*Department of Pharmacology and Therapy, University of Liverpool, UK

POSTER COMMUNICATIONS PC3 (Continued)

CONTROL MECHANISMS AT THE CHOLINERGIC SYNAPSE

Poster No.

361 VASOACTIVE INTESTINAL POLYPEPTIDE (VIP) ENHANCES MUSCARINIC LIGAND BINDING TO MEMBRANES FROM THE CAT SALIVARY GLAND
B. Hedlund, J. M. Lundberg** and **T. Bartfai,***
*Department of Biochemistry, University of Stockholm, S-106 91 Stockholm, Sweden
**Department of Histology and Pharmacology, Karolinska Institute, S-104 01 Stockholm, Sweden

362 EFFLUX OF CHOLINE FROM NEURONAL AND GLIAL CELLS IN CULTURE
D. Hoffman, T. Y. Wong, J. C. Louis, H. Dreyfus, F. Dainous, S. Harth and **R. Massarelli,** Centre de Neurochimie du CNRS, and Unité 44 INSERM, Group of Neurodifferentiation, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

363 *DE NOVO* SYNTHESIS OF CHOLINE IN EXCLUSIVELY NEURONAL AND IN GLIAL CELL CULTURES
R. Avola, F. Dainous, D. Hoffman, J. C. Louis, H. Dreyfus, G. Vincendon and **R. Massarelli,** Unité INSERM 44 and Centre of Neurochemistry of the CNRS, Group of Neurodifferentiation, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France

364 PRECURSOR CHOLINE FOR ACETYLCHOLINE SYNTHESIS
F. Flentge and **C. J. Van den Berg,** Department of Biological Psychiatry, University of Groningen, Groningen, The Netherlands

365 INSECT SYNAPTOSOMES—ISOLATION AND CHARACTERIZATION
H. Breer and **G. Jeserich,** Universität Osnabrück, Zoophysiologie/Zellphysiologie, 4500 Osnabrück, FRG

366 CHOLINERGIC TELENCEPHALIC NEURONS IN SERUM-FREE CULTURES ARE RESPONSIVE TO NERVE GROWTH FACTOR (NGF)
P. Honegger and **D. Lenoir,** Institute of Physiology, Lausanne, Switzerland

367 ENZYMATIC MICRODETERMINATION METHOD FOR CHOLINE ACETYLTRANSFERASE (E.C. 2.3.1.6)
T. Kato, Department of Biochemistry, Institute of Brain Research, Faculty of Medicine, University of Tokyo, Tokyo, Japan

368 THE EFFECTS OF BOTULINUM TOXIN ON THE CALCIUM INFLUX, AND ACETYLCHOLINE AND ATP RELEASE FROM DEPOLARIZED PURE CHOLINERGIC SYNAPTOSOMES FROM *TORPEDO* ELECTRIC ORGAN
J. Marsal, J. Tomas, J. E. Esquerda and **C. Solsona,** Universitat de Barcelona, Facultat de Medicina, Laboratori d'Histologia, Departamento Anatomia Patologica, C.S. 'principes de España', Hospitalet de Llobregat, Barcelona, Spain

POSTER COMMUNICATIONS PC3 (Continued)

CONTROL MECHANISMS AT THE CHOLINERGIC SYNAPSE

Poster No.

369 ACETYLCHOLINE SYNTHESIS IN RAT SKELETAL MUSCLES
S. Tucek, Institute of Physiology, Czechoslovak Academy of Sciences, 14220 Prague, Czechoslovakia

370 THE EFFECT OF MUSCARINIC ACTIVATION ON CYCLIC AMP LEVELS AND ON ADENYLATE CYCLASE ACTIVITY OF *TORPEDO* SYNAPTOSOMES
B. Wertheim, I. Pinchasi and **D. M. Michaelson,** Department of Biochemistry, Tel-Aviv University, Ramat-Aviv, Israel

371 THE INVOLVEMENT OF PROSTAGLANDIN SYNTHESIS IN MUSCARINIC INHIBITION OF ACETYLCHOLINE RELEASE FROM *TORPEDO* NERVE ENDINGS
I. Pinchasi, M. Schwartzman, A. Raz and **D. M. Michaelson,** Department of Biochemistry, Tel-Aviv University, Ramat-Aviv, Israel

372 CHOLINE ACETYLTRANSFERASE ACTIVITY IN CEREBELLAR CULTURES
F. J. Seil, W. R. Woodward and **N. K. Blank,** Neurology and Research Services, V.A. Medical Center and Departments of Neurology, Biochemistry and Pathology, University of Oregon Health Sciences Center, Portland, Oregon, USA

373 SOLUBILIZATION OF COLLAGEN-TAILED ACETYLCHOLINESTERASE IN THE VERTEBRATE CENTRAL NERVOUS SYSTEM
G. Ramírez, C. Rodríguez-Borrajo, A. Barat, E. Escudero and **J. Gómez-Barriocanal,** Centro de Biología Molecular, Universidad Autónoma, Canto Blanco, Madrid-34, Spain

374 REGIONAL DISTRIBUTION OF CHOLINE ACETYLTRANSFERASE, ACETYLCHOLINESTERASE ACTIVITY AND MUSCARINIC ACETYLCHOLINE RECEPTORS IN HUMAN SPINAL CORD OF MOTOR NEURON DISEASE PATIENTS
Y. Nagata, N. Okuya and **M. Honda,*** Department of Physiology, School of Medicine, Fujita-Gakuen University, Toyoake, Aichi 470-11 and
*Department of Neurology, Yokohama City Hospital, Hodogaya-ku, Yokohama 240, Japan

375 GANGLIOSIDES PROMPT THE RECOVERY OF CHOLINERGIC MUSCARINIC RECEPTOR BINDING ACTIVITY IN THE PARTIALLY DENERVATED RAT HIPPOCAMPUS
B. Oderfeld-Nowak, J. Ulas, M. Wójcik and **M. Skup,** Nencki Institute of Experimental Biology, Warsaw, Poland

376 ACETYLCHOLINESTERASE ACTIVITY AND MOLECULAR FORMS DURING DENERVATION AND REINNERVATION IN *EXTENSOR DIGITORUM LONGUS* (EDL) MUSCLE OF THE RAT
M. I. Senni, S. Biagioni, P. Marini and **G. Scarsella,** Istituto di Fisiologia Generale, Università di Roma, Rome; Istituto di Istologia ed Analisi di Laboratorio, Università di Urbino, Urbino; FIDIA Research Laboratories, Abano Terme, Italy

POSTER COMMUNICATIONS PC3 (Continued)

CONTROL MECHANISMS AT THE CHOLINERGIC SYNAPSE

Poster No.

377 VARIABILITY OF THE PATTERN OF THE GLOBULAR MOLECULAR FORMS OF AChE IN THE SYMPATHETIC GANGLION OF THE RAT
J. Sketelj, B. Klinar and **M. Brzin,** Institute of Pathophysiology, School of Medicine, University of E. Kardelj, Ljubljana, Yugoslavia

378 DENERVATION-REINNERVATION PROCESS OF CHICKEN IRIS MUSCLE: A COMBINED STUDY OF BIOCHEMICAL AND ULTRASTRUCTURAL ASPECTS
F. Leone,* I. Mussini, P. Paggi, G. Scarsella** and **G. Toschi,** Istituto di Istologia ed Embriologia* and Istituto di Fisiologia Generale, Università di Roma, Rome, Italy; Centro CNR 'Biologia e Fisiopatologia Muscolare', c/o Istituto di Patologia Generale, Padova,** Italy

379 STUDIES ON THE INTERACTION OF PRESYNAPTIC NEUROTOXINS ON PURELY CHOLINERGIC SYNAPTOSOMES FROM *TORPEDO* ELECTRIC ORGAN
P. Fretten and **M. J. Dowdall,** Department of Biochemistry, University of Nottingham Medical School, Queen's Medical Centre, Nottingham NG7 2UH, UK

380 PURITY AND METABOLIC STATE OF *TORPEDO* CHOLINERGIC SYNAPTOSOMES
P. Fretten and **M. J. Dowdall,** Department of Biochemistry, University of Nottingham Medical School, Queen's Medical Centre, Nottingham NH7 2UH, UK

381 EFFECTS OF GUANINE NUCLEOTIDES ON LIGAND-BINDING TO MUSCARINIC ACETYLCHOLINE RECEPTORS IN *TORPEDO* ELECTRIC ORGAN
M. J. Dowdall, P. R. Golds and **P. G. Strange,** Department of Biochemistry, University of Nottingham Medical School, Queen's Medical Centre, Nottingham NG7 2UH, UK

382 A COMPONENT OF VERATRINE IS A MUSCARINIC ACETYLCHOLINE RECEPTOR LIGAND
G. Milligan and **P. G. Strange,** Department of Biochemistry, University of Nottingham Medical School, Queen's Medical Centre, Nottingham NG7 2UH, UK

383 INCREASED RESPONSIVENESS OF NEUROBLASTOMA N1E 115 CELLS TO MUSCARINIC CHOLINERGIC STIMULATION AFTER LONG PERIODS IN CULTURE
P. R. M. Dobson and **P. G. Strange,** Department of Biochemistry, University of Nottingham Medical School, Queen's Medical Centre, Nottingham NG7 2UH, UK

384 REGULATION OF AChE IN CULTURED QUAIL EMBRYO MUSCLE BY NUTRITION AND ORGANOPHOSPHATE AChE INHIBITORS
B. W. Wilson, J. E. Bulger, W. F. Randall, G. T. Patterson and **P. S. Nieberg,** University of California at Davis, Davis, California, USA 95616

FRIDAY, SEPTEMBER 11, 1981

09.00–11.00 **Lecture Theatre LT3**
14.00–16.00

SYMPOSIUM S11

VISUAL SYSTEM AS A MODEL FOR NEUROCHEMISTRY

Organisers: **M. Cuénod** (Switzerland)
R. Baughman (USA)

09.00– **Structure of the Visual System**
11.00

09.00 INTRODUCTION TO THE ORGANIZATION OF THE VISUAL PATHWAYS
R. W. Guillery, University of Chicago, Illinois, USA

09.30 Discussion

09.40 AMINO ACIDS AS NEUROTRANSMITTERS IN MAMMALIAN VISUAL PATHWAYS. HIGH AFFINITY UPTAKE STUDIES
F. Fonnum, I. Kvale and **R. Lund-Karlsen,** Norwegian Defence Research Establishment, Division for Toxicology, N-2007 Kjeller, Norway

10.00 Discussion

10.05 NEUROTRANSMITTERS IN THE AVIAN VISUAL SYSTEM. POOL AND *BINDING STUDIES*
H. Henke, Brain Research Institute, University of Zurich, CH-8029, Zurich, Switzerland

10.25 Discussion

10.30 AMINO ACIDS AS NEUROTRANSMITTERS IN MAMMALIAN VISUAL SYSTEM: RELEASE, AUTORADIOGRAPHIC LABELLING AND TISSUE SLICE BIOASSAY
R. Baughman, Department of Neurobiology, Harvard Medical School, Boston, Massachusetts 02115, USA

10.50 Discussion

14.00– **Function of the Visual System**
16.00

14.00 MORPHOLOGICAL BASIS OF VISUAL CORTICAL FUNCTION
T. Wiesel, Department of Neurobiology, Harvard Medical School, Boston, Massachusetts 02115, USA

FRIDAY, SEPTEMBER 11, 1981

09.00–11.00
14.00–16.00

Lecture Theatre LT3

SYMPOSIUM S11 (Continued)

VISUAL SYSTEM AS A MODEL FOR NEUROCHEMISTRY

14.30 Discussion

14.40 THE USE OF MICROIONTOPHORETIC TECHNIQUES TO EXAMINE THE FUNCTIONAL ROLE OF GABAERGIC INHIBITION IN THE CENTRAL VISUAL SYSTEM
A. M. Sillito, Department of Physiology, Medical School, Birmingham, UK

15.00 Discussion

15.05 NEUROCHEMISTRY OF PLASTICITY IN THE RAT VISUAL SYSTEM
S. P. R. Rose, Brain Research Group, Biology Department, Open University, Walton Hall, Milton Keynes MK7 6AA, UK

15.25 Discussion

15.30 Poster Discussion

FRIDAY, SEPTEMBER 11, 1981

09.00–11.00 **Lecture Theatre LT1**
14.00–16.00

SYMPOSIUM S12

NEUROCHEMICAL CORRELATES OF BEHAVIOUR

Organisers: **S. D. Iversen** (UK)
V. Shashoua (USA)

09.00 WHAT SHOULD A BIOCHEMISTRY OF LEARNING AND MEMORY BE ABOUT?
S. P. R. Rose, Brain Research Group, Open University, Milton Keynes MK7 6AA, UK

09.25 NEURAL PLASTICITY AND LEARNING
M. Baudry and **G. Lynch,** Department of Psychobiology, University of California, Irvine, California 92717, USA

09.50 THE ROLE OF SPECIFIC PROTEINS IN CNS INFORMATION PROCESSING
V. E. Shashoua, Ralph Lowell Laboratories, McLean Hospital, Belmont, Massachusetts 02178, USA

10.15 TRITIATED γ-AMINOBUTYRIC ACID (^{3}H GABA) BINDING TO CEREBRAL MEMBRANES PREPARED FROM MICE SUSCEPTIBLE AND RESISTANT TO AUDIOGENIC SEIZURES
R. W. Horton, S. A. Prestwich and **B. S. Meldrum,** Department of Pharmacology, St. George's Hospital Medical School, London SW17 and Department of Neurology, Institute of Psychiatry, De Crespigny Park, London SE5, UK

10.30 RADIOIMMUNOASSAY-ANALYSIS OF STRUCTURAL AND METABOLIC RELATIONSHIPS BETWEEN GOLDFISH BRAIN PROTEINS PARTICIPATING IN FUNCTIONAL PLASTICITY OF THE CENTRAL NERVOUS SYSTEM
R. Schmidt, Department of Anatomy and Cell Biology, University of Marburg, Robert-Koch-Strasse 6, D-3550 Marburg, FRG

10.45 PASSIVE AVOIDANCE IN THE YOUNG CHICK AFFECTS FOREBRAIN α-BUNGAROTOXIN AND SEROTONIN BINDING
N. Aleksidze, A. Potempska, S. Murphy and **S. P. R. Rose,** Brain Research Group, The Open University, Milton Keynes MK6 7AA, UK

14.00 BEHAVIOURAL FUNCTIONS OF THE FOREBRAIN DOPAMINE AND NORADRENALINE PATHWAYS
S. D. Iversen, Department of Experimental Psychology, Downing Street, Cambridge, UK

14.25 VOLTAMMETRY: A NOVEL METHOD FOR STUDYING THE RELATIONSHIP BETWEEN BRAIN CHEMISTRY AND BEHAVIOUR
C. A. Marsden, Department of Physiology and Pharmacology, Queen's Medical Centre, Clifton Boulevard, Nottingham NG7 2UH, UK

FRIDAY, SEPTEMBER 11, 1981

09.00–11.00 **Lecture Theatre LT1**
14.00–16.00

SYMPOSIUM S12 (Continued)

NEUROCHEMICAL CORRELATES OF BEHAVIOUR

14.50 NEUROPEPTIDES AND BEHAVIOUR
V. Wiegant, Rudolf Magnus Institut voor Farmacologie, Rijksuniversiteit Utrecht, Vondellaan 6, 3521 GD Utrecht, Holland

15.15 RELATIONSHIPS BETWEEN VOLTAMMETRIC AND BEHAVIOURAL EFFECTS OF AMPHETAMINE
C. D. Andrews, P. H. Hutson and **G. Curzon,** Institute of Neurology, London, UK

15.30 NEUROCHEMICAL CHANGES CORRELATED WITH CONDITIONED EMOTIONAL RESPONSE AND ITS CONDITIONING HISTORY
J. D. Lane and **J. E. Smith,** Psychiatry Research Unit, Department of Psychiatry, Louisiana State University School of Medicine, P.O. Box 33932, Shreveport, Louisiana 71130, USA

15.45 DOPAMINE SYNTHESIS IN FRONTAL CORTEX IS SELECTIVELY ACTIVATED BY FOOTSHOCK STRESS, ACTH AND VASOPRESSIN
A. J. Dunn, N. R. Kramarcy and **R. L. Delanoy,** Department of Neuroscience, University of Florida College of Medicine, Gainesville, Florida, USA

FRIDAY, SEPTEMBER 11, 1981

09.00–11.00
14.00–16.00

Lecture Theatre LT4

SYMPOSIUM S13

INHERITED AND ACQUIRED DISORDERS OF BRAIN CARBOHYDRATE METABOLISM

Organisers: **J. P. Blass** (USA)
L. Sokoloff (USA)

09.00 INTRODUCTION
J. P. Blass, Dementia Research Laboratory, The Burke Rehabilitation Center, 785 Mamaroneck Avenue, White Plains, New York 10605, USA

09.10 ACETYLCHOLINE AND AMINO ACID METABOLISM IN A MODEL METABOLIC ENCEPHALOPATHY AND AGING
G. E. Gibson, C. Peterson, J. Sansone and **C. J. Pelmas.** Cornell University Medical College, Burke Rehabilitation Center, White Plains, New York 10605, USA

09.30 HEREDITARY DISORDERS OF BRAIN CARBOHYDRATE METABOLISM
J. M. Land, Department of Medicine, John Radcliffe Hospital, Oxford, UK

09.50 POSITRON COMPUTED TOMOGRAPHY STUDIES OF CEREBRAL GLUCOSE METABOLISM IN AUDITORY STIMULATION AND PATIENTS WITH DEGENERATIVE DISORDERS
M. E. Phelps, J. C. Mazziotta, J. Engel, Jr., E. J. Hoffman, S. C. Huang, F. Benson, D. E. Kuhl, UCLA School of Medicine, Los Angeles, California 90024, USA

10.10 METABOLIC CHANGES DURING REGENERATION IN THE NERVOUS SYSTEM
C. B. Smith, Laboratory of Cerebral Metabolism, NIMH, Bethesda, Maryland 20205, USA

10.30 MAPPING OF LOCAL ACTIVITY IN THE BRAIN FROM NEUROPATHOLOGICAL MUTANT MICE WITH ^{14}C-DEOXYYGLUCOSE TECHNIQUE
Y. Tsukada, K. Mikoshiba and **K. Takamatsu,** Department of Physiology, Keio University School of Medicine, Shinanomachi, Tokyo, Japan

10.50 Discussion

11.00 Coffee

11.30 *Poster Presentations*

14.00 PANEL AND POSTER DISCUSSION
Panelists: **J. P. Blass,** Dementia Research Laboratory, The Burke Rehabilitation Center, 785 Mamaroneck Avenue, White Plains, New York 10605, USA; **J. E. Cremer,** MRC Toxicology Unit, MRC Laboratories, Carshalton, Surrey SM5 4EF, UK; **A. H. Gjedde,** Institute of Medical Physiology, Department A, University of Copenhagen, Blegdamsvej 3, 2200 Copenhagen, Denmark; **L. Sokoloff,** Laboratory of Cerebral Metabolism, National Institutes of Mental Health, Building 36, Room LA27, Bethesda, Maryland 20205, USA

FRIDAY, SEPTEMBER 11, 1981

09.00–11.10 **Lecture Theatre C50**

COLLOQUIUM C9

BRAIN-GUT PEPTIDES—LATEST DEVELOPMENTS

Organiser: **P. C. Emson** (UK)

Chairmen: **P. C. Emson** (UK)
J. F. Rehfeld (Denmark)

09.00 THE MOLECULAR NATURE OF NEURONAL CCK
J. F. Rehfeld, Institute of Medical Biochemistry, University of Aarhus, Denmark (from 1st August: Department of Clinical Chemistry, Righospitalet, 2100 Copenhagen, Denmark)

09.15 CHOLYSTOKININ-LIKE PEPTIDES AS TRANSMITTER CANDIDATES FOR CHARACTERISED NEURONES IN THE RAT CNS
P. D. Marley, MRC Neurochemical Pharmacology Unit, Medical Research Council Centre, Medical School, Hills Road, Cambridge CB2 2QH, UK

09.30 VASOACTIVE INTESTINAL POLYPEPTIDE AS NEUROTRANSMITTER: CURRENT STATUS
J. Fahrenkrug, Department of Clinical Chemistry, Glostrup Hospital, University of Copenhagen, Denmark

09.50 NEUROTENSIN—CHARACTERISATION AND POSSIBLE PHYSIOLOGICAL ROLES
M. Goedert and **P. C. Emson,** MRC Neurochemical Pharmacology Unit, Medical School, Hills Road, Cambridge CB2 2QH, UK

10.10 STATUS OF SUBSTANCE P AS A NEUROTRANSMITTER
A. C. Cuello, University Departments of Pharmacology and Human Anatomy, Oxford, UK

10.30 ISOLATION AND CHARACTERISATION OF NOVEL NEUROPEPTIDES AND HORMONES BY THE USE OF A NEW CHEMICAL ASSAY METHOD
K. Tatemoto, Department of Biochemistry, Karolinska Institute, Stockholm, Sweden

10.50 ENKEPHALIN BIOSYNTHESIS: THE SEARCH FOR A COMMON PRECURSOR
J.-P. Rossier, Institut de Physiologie Nerveuse du CNRS, 91190, Gif-sur-Yvette, France

FRIDAY, SEPTEMBER 11, 1981

11.30–12.30 **Floor C**

POSTER COMMUNICATIONS PC4

VISUAL SYSTEM AS A MODEL FOR NEUROCHEMISTRY

Poster No.

385 THE ROLE OF EXCITATORY AMINO ACIDS AND 5-HYDROXYTRYPTAMINE (5-HT) IN THE DORSAL LATERAL GENICULATE NUCLEUS (dLGN)
J. A. Kemp, A. Roberts and **A. M. Sillito,** Department of Physiology, Medical School, Birmingham, UK

386 NUCLEOSIDE METABOLISM IN THE GOLDFISH RETINA FOLLOWING OPTIC NERVE CRUSH
S. Kohsaka, A. I. Masyuk and **B. W. Agranoff,** Neuroscience Laboratory Building, University of Michigan, Ann Arbor, Michigan 48190, USA

387 CHARACTERISATION OF RETINAL CELL CULTURES
R. Beale and **N. N. Osborne,** Nuffield Laboratory of Ophthalmology, Oxford University, Walton Street, Oxford OX2 6AW, UK

388 TIME-COURSE OF EFFECTS OF INTRAOCULAR KAINIC ACID UPON CHICKEN RETINA
T. G. Morgan, P. G. Mundy and **C. A. Ingham,** Department of Behavioural Biology, Research School of Biological Sciences, P.O. Box 475, Canberra City, ACT 2601, Australia

389 RELEASE OF ENDOGENOUS β-ALANINE AND OTHER AMINO ACIDS FROM PIGEON TECTAL AND RAT CEREBELLAR SLICES
G. Toggenburger, H. Henke and **M. Cuénod,** Brain Research Institute, University of Zürich, August Forel-Strasse 1, CH-8029 Zürich, Switzerland

390 MODIFICATION OF CHOLINERGIC AND GABA-ERGIC ACTIVITY IN THE PIGEON VISUAL WULST AFTER EARLY MONOCULAR DEPRIVATION
P. Bagnoli, A. Burkhalter, H. Henke and **M. Cuénod,** Brain Research Institute, University of Zürich, August Forel-Strasse 1, CH-8029, Zürich, Switzerland

391 THE EFFECT OF DARK REARING AND LIGHT EXPOSURE ON β-ADRENERGIC RECEPTORS IN THE VISUAL AREAS OF RAT BRAIN
C. J. Wild and **M. G. Stewart,** Brain Research Group, Biology Department, The Open University, Walton Hall, Milton Keynes MK7 6AA, UK

392 PASSIVE AVOIDANCE TRAINING RESULTS IN REGION SPECIFIC CHANGES IN INCORPORATION OF ^{14}C-LEUCINE INTO CHICK FOREBRAIN TOTAL PROTEIN BUT NOT INTO ACTIN
P. J. Tillson and **S. P. R. Rose,** Brain Research Group, Biology Department, The Open University, Walton Hall, Milton Keynes MK7 6AA, UK

POSTER COMMUNICATIONS PC4 (Continued)

VISUAL SYSTEM AS A MODEL FOR NEUROCHEMISTRY

Poster No.

393 SIZE OF SYNAPTIC PROTEINS IN RETINAL GANGLION CELLS, EFFECTS OF BUFFER COMPOSITION AND ENZYMES
J.-O. Karlsson, Institute of Neurobiology, University of Göteborg, S-400 33 Göteborg, Sweden

394 ISOLATION AND CHARACTERISATION OF RAPIDLY TRANSPORTED GLYCOPROTEINS IN RETINAL GANGLION CELLS
C. Ohlson and **J.-O. Karlsson,** Institute of Neurobiology, University of Göteborg, S-400 33 Göteborg, Sweden

395 AMINO ACID TRANSMITTERS IN THE RABBIT SUPERIOR COLLICULUS
M. Sandberg, I. Jacobson and **A. Hamberger,** Institute of Neurobiology, S-400 33 Göteborg, Sweden

396 TUBULIN DISTRIBUTION IN SOLUBLE AND MEMBRANE FRACTIONS FROM CHICK RETINA
A. M. López-Colomé and **A. Casas,** Departamento de Neurociencias, Centro de Investigaciones en Fisiología Celular, Universidad Nacional Autónoma de México, México 20, DF, México

397 RAPID INTRA-AXONAL TRANSPORT OF INOSITOL PHOSPHOLIPIDS IN THE RABBIT OPTIC PATHWAY
M. Alberghina, J. O. Karlsson* and **A. M. Giuffrida,** Institute of Biochemistry, University of Catania, Catania, Italy and *Institute of Neurobiology, University of Göteborg, Göteborg, Sweden

398 A DISTINCTIVE STRYCHNINE BINDING SITE IN THE RETINAL EPITHELIUM
S. C. Bondy, J. M. Werdel and **G. L. Chader,*** National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina 27709, USA
*National Eye Institute, Bethesda, Maryland, USA

399 ROLE FOR GUANYLATE CYCLASE IN INHERITED PHOTORECEPTOR DEGENERATION OF *rd* MICE
R. N. Lolley and **E. Racz,** Laboratory of Developmental Neurology, V.A. Medical Center, Sepulveda, California 91343, USA

399A PHOSPHOLIPID METABOLISM IN THE CHICKEN VISUAL SYSTEM
L. Marcheselli, H. E. Pascaul de Bázan, and **N. G. Bázan,** Instituto de Investigaciones Bioquímicas, UNS-CONICET, Gorriti 43, 8000 Bahía Blanca, Argentina

POSTER COMMUNICATIONS PC4 (Continued)

VISUAL SYSTEM AS A MODEL FOR NEUROCHEMISTRY

Poster No.

399B EFFECTS OF NITROGENEOUS BASES, CALCIUM IONS AND DIFFERENT INCUBATION MEDIA ON GYLCEROLIPID METABOLISM IN RETINAL CELL-FREE PREPARATIONS
M. M. Careaga, H. E. Pascaul de Bázan, and **N. G. Bázan,** Instituto de Investigaciones Bioquímicas, UNS-CONICET, Gorriti 43, 8000 Bahía Blanca, Argentina

399C SYNTHESIS OF PHOSPHATIDIC ACID IN THE RETINA
M. C. Ilincheta de Boschero, N. M. Guisto, and **N. G. Bázan,** Instituto de Investigaciones Bioquímicas, UNS-CONICET, Gorriti 43, 8000 Bahía Blanca, Argentina

POSTER COMMUNICATIONS PC4 (Continued)

NEUROCHEMICAL CORRELATES OF BEHAVIOUR

Poster No.

400 CEREBRAL DNA SYNTHESIS DURING ACQUISITION OF AN ACTIVE AVOIDANCE TASK
R. Scaroni, M. V. Ambrosini, G. B. Principato, F. Federici, E. Giovannini and **A. Giuditta,** Institute of Biology (Medical Faculty) and Institute of Istology (Science Faculty) Perugia, Neurological Clinic, Terni, Italy

401 INTERACTIONS OF BEHAVIOURALLY ACTIVE 4-HYDROXYESTRADIOL WITH ESTROGEN RECEPTORS IN FEMALE RAT HYPOTHALAMUS
R. Ghraf and **J. Kirchhoff,** Institut für Physiologische Chemie, Universitätsklinikum Essen, D-4300 Essen, FRG

402 INVESTIGATIONS OF OPIATE REWARD MECHANISMS
J. E. Smith and **J. D. Lane,** Psychiatry Research Unit, Department of Psychiatry, Louisiana State University School of Medicine, P.O. Box 33932, Shreveport, Louisiana 71130, USA

403 THE CORRELATION BETWEEN NEUROCHEMICAL ALTERATION AND LEARNING ABILITY IN THE RATS TREATED WITH METHYLAZOXYMETHANOL AT DIFFERENT STAGES OF PRENATAL DEVELOPMENT
T. Matsutani, M. Nagayoshi, M. Tamaru, T. Nakahara, M. Nomura* and **Y. Tsukada,**** Department of Developmental Physiology Institute for Comprehensive Medical Sciences,
*Department of Physiology, Fujita-Gakuen University School of Medicine, Toyoake, Aichi 470–11,
**Department of Physiology Keio University School of Medicine, Tokyo, Japan

404 HIPPOCAMPAL LONG-TERM POTENTIATION INDUCES SECRETION OF NEWLY SYNTHESIZED PROTEINS
T. J. Teyler, N.E. Ohio University College of Medicine, Rootstown, Ohio USA
V. E. Shashoua, McLean Hospital, Harvard Medical School, Belmont, Massachusetts, USA

405 EFFECTS OF INTRACEREBRAL INJECTIONS OF 5,7-DIHYDROXYTRYPTAMINE ON SERUM LEVELS OF GONADOTROPHINS
M. Mas, S. Oaknin, C. Santana, M. C. Gonzalez, R. Castro and **C. López-Arias,** Department of Physiology, University of La Laguna Medical School, Tenerife, Canary Islands, Spain

406 BRAIN LARGE NEUTRAL AMINO ACID (LNAA) CONTENT, FOOD INTAKE AND GROWTH IN RATS FED ATYPICAL LNAA COMPETITIVE WITH HISTIDINE FOR TRANSPORT BY BRAIN SLICES *IN VITRO*
J. K. Tews and **A. E. Harper,** University of Wisconsin, Madison, Wisconsin 53706, USA

FRIDAY, SEPTEMBER 11, 1981

11.30–12.30 **Floor C**

POSTER COMMUNICATIONS PC4 (Continued)

NEUROCHEMICAL CORRELATES OF BEHAVIOUR

Poster No.

407 TWO DIFFERENT UPTAKES OF SEROTONIN BY PLATELETS. THE EFFECTS OF ANTIDEPRESSIVE DRUGS
J. Quintana, C. Fiol, B. J. Bravo, P. Planells and **A. Forgas,** 'Príncipes de Espana' Hospital, Clinical Biochemistry, Barcelona, Spain

408 NEUROCHEMICAL CORRELATES OF LEARNING BEHAVIOUR AND INDOLEAMINE METABOLISM
M. Nomura and **M. Ohtsuji,** Fujita-Gakuen University, School of Medicine, Department of Physiology, Toyoake, Aichi 470-11, Japan

409 PEPTIDE-CONTAINING ACTIVE FRACTIONS FROM PSYCHOTIC URINES
K. L. Reichelt and **P. D. Edminson,** The Peptide Group, Pediatric Research Institute Rikshospitalet (The University Hospital), Oslo 1, Norway

410 MEMBRANE PERTURBATION BY CHLORINATED COMPOUNDS
A. Y. Sun, Sinclair Comparative Medical Research Farm and Biochemistry Department, University of Missouri, Columbia, Missouri 65211, USA

411 5-METHYL-TETRAHYDROFOLATE: A PHENYLETHYLAMINE N-METHYLATING AGENT
O. H. Callaghan and **A. D. Mosnaim,** Departments of Biochemistry and Pharmacology, University of Health Sciences/The Chicago Medical School, 3333 Green Bay Road, North Chicago, Illinois 60064, USA

412 THE FATE OF RADIOACTIVE PHOSPHATIDYLSERINE IN MICE
S. Mazzari, S. Teolato, P. Orlando* and **G. Toffano,** Fidia Research Laboratories, Department of Biochemistry, Abano Terme, Italy
*Radiochemical Center, Università Cattolica, Roma, Italy

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INHERITED AND ACQUIRED DISORDERS OF BRAIN CARBOHYDRATE METABOLISM

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413 EFFECT OF GAMMA-BUTYROLACTONE ON RESPIRATORY ACTIVITY OF NEURONS IN MONGOLIAN GERBILS
M. Śmialek,* M. Spatz, M. Mossakowski,***Department of Neuropathology, Medical Research Centre, Polish Acadamy of Science, Warsaw, Poland, **NINCDS, The National Institutes of Health, Bethesda, Maryland, USA

414 AXONAL TRANSPORT OF PROTEIN, GLYCOPROTEIN AND NORADRENALINE IN CONDITIONS OF HIGH EXTRACELLULAR GLUCOSE
D. R. Tomlinson, Department of Physiology and Pharmacology, Medical School, Queen's Medical Centre, Clifton Boulevard, Nottingham NG7 2UH, UK

415 GLUCOSE UTILIZATION BY TISSUE SLICES AND ISOLATED CELLS FROM BOVINE ADRENAL MEDULLA
A. Millaruelo, M. R. de Sagarra and **M. T. Miras-Portugal,** Departamento de Bioquímica, Facultad de Medicina, Universidad Autónoma de Madrid, Spain

416 CONTROL OF BRAIN GLYCOGENOLYSIS: cAMP DEPENDENT AND INDEPENDENT MECHANISMS
D. Ververken, H. Carton and **H. De Wulf,*** laboratorium voor Neurochemie and Afdeling Biochemie,* Campus Gasthuisberg, K.U. Leuven, B-3000 Leuven, Belgium

417 IMMUNOLOGICAL AND ELECTROPHORETIC STUDIES OF LIPOAMIDE DEHYDROGENASE
D. Becker, P. Kark, R. Kelley, W. Knipprath and **C. Nissenson,** Reed Neurological Research Center, UCLA School of Medicine, Los Angeles, CA 90024, USA

418 OPTIMAL CONDITIONS FOR THE ASSAY OF HUMAN LIPOAMIDE DEHYDROGENASE IN TISSUE HOMOGENATES
S. Perlman, D. Becker, P. Kark and **W. Knipprath,** Reed Neurological Research Center, UCLA School of Medicine, Los Angeles, CA 90024, USA

419 HUMAN BRAIN HEXOSAMINIDASES: CHARACTERISTICS AND ISOENZYMES DISTRIBUTION IN NEURONAL AND GLIAL FRACTIONS
T. Pàmpols, M. Girós, D. Oliver, J. Sabater and **F. González-Sastre,** Institut de Bioquímica Clínica, Cerdanyola, Barcelona, Spain

420 REGIONAL AMINO ACID NEUROTRANSMITTER DISTRIBUTION IN THIAMINE DEFICIENCY
R. F. Butterworth, Laboratory of Neurochemistry, Clinical Research Institute of Montreal, Montreal, Quebec, Canada

POSTER COMMUNICATIONS PC4 (Continued)

INHERITED AND ACQUIRED DISORDERS OF BRAIN CARBOHYDRATE METABOLISM

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421 ANIMAL MODEL FOR THE DETERMINATION OF CEREBRAL REGIONAL GLUCOSE METABOLISM IN HUMANS *IN VIVO* USING SPECIFICALLY LABELLED ^{11}C-GLUCOSE AND POSITRON EMISSION TRANSVERSE TOMOGRAPHY (PETT)
W. Sacks, S. Sacks, A. Badalamenti and **A. Fleischer,** New York State Rockland Research Institute, Orangeburg, New York 10956, USA

422 CRABTREE EFFECT IN BRAIN *IN VIVO*
A. Gjedde,* **A. J. Hansen**** and **E. Siemkowicz,***** Departments of *Medical Physiology A, the PANUM Institute; **Anesthesia, University Hospitals (RIGSHOSPITALET); and ***Anesthesia, University Hospitals (HVIDOVRE), Copenhagen University, Blegdamsvej 3C, DK-2200 Copenhagen N, Denmark

423 APPLICATION OF A SPECTROPHOTOMETRIC ASSAY FOR THE PYRUVATE DEHYDROGENASE COMPLEX TO HUMAN TISSUES
S. Sorbi, H. Ksiezak-Reding, G. E. Gibson and **J. P. Blass,** Cornell University Medical College, Burke Rehabilitation Center, White Plains, New York, USA

424 CONTROL BY D-GLUCURONATE OF γ-HYDROXYBUTYRATE OXIDATION
E. E. Kaufman and **T. Nelson,** National Institute of Mental Health, Bethesda, Maryland 20205, USA

425 ENZYMATIC ACTIVITY AND EPILEPTIC REACTIVITY OF NEOCORTEX DURING POSTNATAL ONTOGENESIS
D. Hategan, J. Osiescu and **D. Volanschi,** Institute of Neurology and Psychiatry, Bucharest, Romania

POSTER COMMUNICATIONS PC4 (Continued)

MECHANISMS OF NEUROTOXIC DISEASE: METALS, ACRYLAMIDE, SOLVENTS

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426 SECTION OF FORNIX IN ANIMALS WITH COBALT AMYGDALOID EPILEPSY. LEVEL OF CEREBRAL AMINO ACIDS AND CORRELATIONS WITH EEG AND BEHAVIOURAL DATA
J. Ungher, N. Luca, S. Sirian and **V. Voiculescu,** Institute of Neurology and Psychiatry, Bucharest, Romania

427 THE EFFECT OF LIFE-LONG MANGANESE TREATMENT WITH DIFFERENT DOSES ON MANGANESE CONCENTRATIONS IN RAT BRAIN REGIONS
A. W. K. Chan, M. J. Minski, J. C. K. Lai,* L. Lim** *and* **A. N. Davison,**** University of London Reactor Centre, Silwood Park, Ascot, Berks. SL5 7PY, UK,
*Department of Neurology, Albert Einstein College of Medicine, Bronx, New York 10461, USA
**Institute of Neurology, Queen Square, London WC1N 3BG, UK

428 LEAD ION INHIBITION OF RAT BRAIN K^+-*p*NITROPHENYLPHOSPHATASE IS AGE RELATED
J. M. Bertoni, University of Texas Health Science Center, San Antonio, Texas, USA

429 MANGANESE CONCENTRATION IN RAT BRAIN REGIONS AFTER LIFE-LONG MANGANESE TREATMENT AT DIFFERENT LEVELS
A. W. K. Chan, M. J. Minski, J. C. K. Lai,* L. Lim** and **A. N. Davison,**** University of London Reactor Centre, Silwood Park, Ascot, Berks. SL5 7PY, UK
*Department of Neurology, Albert Einstein College of Medicine, Bronx, New York 10461, USA
**Institute of Neurology, Queen Square, London WC1N 3BG, UK

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431 BEHAVIOURAL AND ENZYMIC CHANGES IN *IN VIVO* ACRYLAMIDE-INTOXICATED RATS
E. P. Lapin, H. S. Maker,* S. Weissbarth, C. Weiss and **G. M. Lehrer,*** Mount Sinai School of Medicine, Department of Neurology, New York, USA
*Bronx Veterans Administration Hospital, New York, USA

432 INTERACTION OF ACRYLAMIDE WITH BRAIN GLUTATHIONE-S-TRANSFERASE (GST): A MECHANISM OF ITS NEUROTOXICITY
P. K. Seth, R. Dixit, H. Mukhtar and **S. S. Parmar,** Industrial Toxicology Research Centre, P.O. Box 80, Lucknow, India and Department of Physiology, School of Medicine, University of North Dakota, Grand Forks, North Dakota, 58202, USA

POSTER COMMUNICATIONS PC4 (Continued)

MECHANISMS OF NEUROTOXIC DISEASE: METALS, ACRYLAMIDE, SOLVENTS

Poster No.

433 TOXICITY OF ACRYLAMIDE TESTED IN CULTURED NEURONAL CELL LINES
E. Walum and **A. Peterson,** University of Stockholm, Unit of Neurochemistry and Neurotoxicology, Enköpingsvägen 126, S-172 46 Sundbyberg, Sweden

434 BIOCHEMICAL ALTERATIONS WITHIN THE CENTRAL NERVOUS SYSTEM DURING CHRONIC EXPOSURE TO ORGANIC SOLVENTS
K. G. Haglid, C. Alling,* C. Briving, A. Hamberger, P. Kjellstrand, T. Kyrklund, L. Rosengren** and **A. Wroński,** Department of Histology, University of Göteborg, Göteborg, Sweden,
*Department of Neurochemistry, S:t Jörgen's Hospital, Göteborg, Sweden and
**Department of Zoophysiology, University of Lund, Lund, Sweden

435 NEUROTOXIC METABOLITES OF N-HEXANE, ACUTE EFFECTS *IN VITRO* ON THE FUNCTIONAL ACTIVITY OF ISOLATED PREPARATIONS: SCIATIC NERVE AND SYMPATHETIC (SUPERIOR CERVICAL) GANGLION OF THE RAT
A. Rossi and **G. Toschi,** Istituto di Fisiologia Generale, Università di Roma, 00185 Roma, Italy

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MECHANISMS OF NEUROTOXIC DISEASE: DRUGS AND OTHER COMPOUNDS

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436 CHLOROQUINE-INDUCED LIPIDOSIS IN SKELETAL MUSCLE
O. Nilsson, P. Fredman, G. W. Klinghardt, H. Dreyfus and **L. Svennerholm,** Department of Psychiatry and Neurochemistry, University of Göteborg, Sweden and Max-Planck-Institute for Brain Research, Frankfurt am Main, FRG

437 GANGLIOSIDE ACCUMULATION IN NERVOUS TISSUES OF CHLOROQUINE INTOXICATED MINIATURE PIGS
P. Fredman, G. W. Klinghardt and **L. Svennerholm,** Department of Psychiatry and Neurochemistry, University of Göteborg, Sweden and Max-Planck-Institute for Brain Research, Frankfurt am Main, FRG

438 CHANGES IN CEREBELLAR CYCLIC GMP LEVELS DURING THE DELTAMETHRIN-INDUCED MOTOR SYNDROME
M. E. Brodie and **W. N. Aldridge,** MRC Toxicology Unit, Medical Research Council Laboratories, Woodmansterne Road, Carshalton, Surrey SM5 4EF, UK

439 AN *IN VITRO* PERFUSION TECHNIQUE FOR THE MEASUREMENT OF ACETYL-CHOLINE RELEASE FROM STIMULATED NERVE ENDINGS, APPLICATION TO THE STUDY TO TOXIC SUBSTANCES AND OF ANTIBODIES
J. Häggblad, B. Kubat and **E. Heilbronn,** Unit of Neurochemistry and Neurotoxicology, University of Stockholm, S-172 46 Sundbyberg, Sweden

440 AN INVESTIGATION OF THE POSSIBLE MECHANISM OF PORPHYRIN PRECURSOR NEUROTOXICITY
A. C. Neethling, V. A. Percy, B. W. McCarthy, M. Lamm, L. Truter and **J. J. F. Taljaard,** MRC Neurochemistry Research Group, Department of Chemical Pathology, University of Stellenbosch Medical School, Tygerberg 7505, South Africa

441 THE EFFECT OF 2,5-HEXANEDIONE ON THE AUTONOMIC NERVOUS SYSTEM: AN EXPERIMENTAL STUDY
A. Rossi, G. Toschi, A. Simonati,* G. di Iorio* and **N. Rizzuto,*** Istituto di Fisiologia Generale, Università di Roma, Rome, *Clinica delle Malattie Nervose e Mentali, Universitá di Padova, Sede di Verona, Verona, Italy

442 METRIZAMIDE COMPETITIVELY INHIBITS RAT BRAIN HEXOKINASE
J. M. Bertoni and **C. G. Steinman,** University of Texas Health Science Center, San Antonio, Texas, USA

443 EFFECT OF THIOACETAMIDE ON GLUTAMATE METABOLISM IN RAT BRAIN
M. Cascales, E. M. Robles-Chillida, P. Martin-Sanz and **A. Santos-Ruiz,** Departamento de Bioquímica, Facultad de Farmacia, Universidad Complutense, Madrid-3, Spain

POSTER COMMUNICATIONS PC4 (Continued)

MECHANISMS OF NEUROTOXIC DISEASE: DRUGS AND OTHER COMPOUNDS

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444 EFFECT OF 'TAM' INTOXICATION ON GABA BYPASS ENZYMES FROM RAT BRAIN
M. P. González, S. Cañadas, C. Cascales and **A. Santos-Ruiz,** Departamento de Bioquímica (Centro Coordinado del C.S.I.C.) Facultad de Farmacia, Madrid-3, Spain

445 EFFECT OF THIOACETAMIDE ON THE INCORPORATION OF ^{32}P ON RAT BRAIN PHOSPHOLIPIDS
E. Palacios, J. Osada, C. Arce, H. Aylagas, M. Cascales and **A. Santos-Ruiz,** Departamento de Bioquímica, Facultad de Farmacia, Universidad Complutense, Madrid-3, Spain

446 DSP4 (N-2-CHLOROETHYL-N-ETHYL-2-BROMOBENZYLAMINE)— A NOVEL NORADRENALINE NEUROTOXIN
G. Jonsson, H. Hallam and **E. Sundström,** Department of Histology, Karolinska Institutet, S-10401 Stockholm, Sweden

446A ELECTROPHORETIC IDENTIFICATION OF HEN BRAIN NEUROTOXIC ESTERASE LABELLED WITH [^{3}H]-DIISOPROPYL PHOSPHO FLUORIDATE
D. G. Williams and **M. K. Johnson,** MRC Toxicology Unit, MRC Laboratories, Woodmansterne Road, Carshalton, Surrey SM5 4EF, UK

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THE USE OF HPLC IN NEUROCHEMISTRY

Poster No.

447 RELEASE OF FREE AND CONJUGATED DOPAMINE FROM SLICES OF STRIATUM FROM BRAINS OF RATS
G. M. Tyce and **D. K. Rorie,** Mayo Clinic and Mayo Foundation, Rochester, Minnesota, USA

448 MEASUREMENT OF ENDOGENOUS AMINE RELEASE FROM BRAIN REGION SLICES BY HPLC WITH ELECTROCHEMICAL DETECTION
T. Sharp, J. F. Stolz, G. W. Bennett and **C. A. Marsden,** Department of Physiology and Pharmacology, Queen's Medical Centre, Clifton Boulevard, Nottingham NG7 2UH, UK

449 IDENTIFICATION OF NEUROPEPTIDES USING HPLC WITH ELECTROCHEMICAL DETECTION
G. W. Bennett and **C. A. Marsden,** Department of Physiology and Pharmacology, Queen's Medical Centre, Clifton Boulevard, Nottingham NG7 2UH, UK

450 DETERMINATION OF NEUROPEPTIDE LEVELS IN CSF USING HPLC AND RIA
J. R. McDermott, A. I. Smith, J. A. Biggins, D. Bateman and **J. A. Edwardson,** MRC Neuroendocrinology Unit, Newcastle General Hospital, Newcastle upon Tyne NE4 6BE, UK

451 REVERSED PHASE SEPARATION OF CATECHOLAMINES AND THEIR ACIDIC METABOLITES IN A SINGLE RUN WITH MINIMAL SAMPLE PRETREATMENT
C. F. M. Van Valkenburg, U. R. Tjaden, A. Van Der Leden and **J. A. Van Der Krogt,** Department of Pharmacology and Department of Analytical Chemistry and Pharmaceutical Analysis, University of Leiden, The Netherlands

452 SIMULTANEOUS ANALYSIS OF DOPAMINE SYNTHESIS AND BREAKDOWN IN RAT BRAIN BY HPLC-ECD AFTER INTRAVENOUSLY ADMINISTERED ^{3}H-TYROSINE
J. A. Van Der Krogt, C. F. M. Van Valkenburg and **A. Van Der Leden,** Department of Pharmacology, Leiden University Medical Centre, Leiden, The Netherlands

453 STABILITY OF MONOAMINE METABOLITES IN HUMAN CEREBROSPINAL FLUID
P. J. Langlais, E. D. Bird and **W. J. McEntee,*** Mailman Research Institute, Belmont, Maryland 02179, USA
*V.A. Medical Center, Providence, Rhode Island 02908, USA

FRIDAY, SEPTEMBER 11, 1981

11.30–12.30 **Floor C**

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BRAIN-GUT PEPTIDES: LATEST DEVELOPMENTS

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454 IMMUNOHISTOCHEMICAL DEMONSTRATION OF ENKEPHALINS, VIP AND SP IN ADRENAL MEDULLA
M. Pelto-Huikko and **A. Hervonen,** Department of Biomedical Sciences, University of Tampere, Tampere, Finland

455 NERVE ENDINGS OF THE HUMAN SYMPATHETIC GANGLIA: CORRELATION OF THE MORPHOLOGICAL TYPES WITH IMMUNOHISTOCHEMISTRY OF ENKEPHALIN AND VIP
P. Helen, M. Pelto-Huikko and **A. Hervonen,** Department of Biomedical Sciences, University of Tampere, Tampere, Finland

456 VIP AND ENKEPHALIN IMMUNOREACTIVE NERVES OF THE MALE GENITALS
A. Vaalasti, I. Linnoila, H. Tainio and **A. Hervonen,** Department of Biomedical Sciences, University of Tampere, Tampere, Finland and (I.L.) Endocrinology Group, Laboratory of Pulmonary Function and Toxicology, NIEHS, Research Triangle Park, North Carolina, USA

457 THE EFFECT OF THYROTROPIN-RELEASING HORMONE (TRH) ON THE CONTENT AND RELEASE OF ENDOGENOUS DOPAMINE IN THE NUCLEUS ACCUMBENS AND CORPUS STRIATUM *IN VITRO*
S. K. Burgess, C. B. Nemeroff and **A. J. Prange, Jr.,** Biological Sciences Research Center, University of North Carolina School of Medicine, Chapel Hill, North Carolina 27514, USA

458 THE EFFECT OF TRH ON THE RELEASE OF DOPAMINE FROM RAT NUCLEUS ACCUMBENS AND STRIATUM
D. Hedley and **P. F. T. Vaughan,** Biochemistry Department, Glasgow University, Glasgow G12 8QQ, UK

459 LHRH IS A POLYPEPTIDE WITH MULTIPLE FUNCTIONS
W. Wang, L. Jenq, I. Chiang and **N. Chien,** Biophysics Laboratory, Institute of Physics, Academia Sinica, Taipei, Republic of China

460 CHARACTERISATION OF SUBSTANCE P-CONTAINING NERVE TERMINALS IN THE RAT SPINAL CORD BY CONTINUOUS DENSITY GRADIENT CENTRIFUGATION
N. Mayer, A. Bucsics and **F. Lembeck,** Department of Experimental and Clinical Pharmacology, Graz, Austria

461 EFFECT OF BOMBESIN ON ADRENAL TYROSINE HYDROXYLASE ACTIVITY
B. K. Kiran, Y. Arslan, I. H. Ulus and **B. Kavakli,** Department of Pharmacology and Clinical Pharmacology, Bursa Medical School, University of Bursa, Bursa, Turkey

POSTER COMMUNICATIONS PC4 (Continued)

BRAIN-GUT PEPTIDES: LATEST DEVELOPMENTS

Poster No.

462 EFFECTS OF PRO-OPIOMELANOCORTIN FRAGMENTS ON CATECHOLAMINE RELEASE FROM ADRENAL MEDULLARY CELL CULTURES
P. Boksa, N. G. Seida and **B. G. Livett,** The Montreal General Hospital Research Institute and The Clinical Research Institute of Montreal, Quebec, Canada H3G 1A4

463 ACETYLCHOLINE (ACh) DEPRESSES THE POTASSIUM-INDUCED RELEASE OF CHOLECYSTOKININ OCTAPEPTIDE (CCK-8) FROM *RAT CORTEX SLICES*
P. R. Dodd and **J. A. Hardy,** Medical Research Council, Neuroendocrinology Unit, Newcastle General Hospital, Westgate Road, Newcastle upon Tyne, UK

464 ANALGESIA ENHANCEMENT BY PROTECTION *IN VIVO* OF MET-ENKEPHALIN (ME) SELECTIVELY AT LEUCINE-AMINOPEPTIDASE (LAP)-SENSITIVE SITES AND OF β-ENDORPHIN (βEND) AT TRYPSIN-SENSITIVE SITES
A. K. Dua, C. Pinsky and **F. S. LaBella,** Department of Pharmacology and Therapeutics, Faculty of Medicine, University of Manitoba, 770 Bannatyne Avenue, Winnipeg, Manitoba, Canada R3E OW3

465 NEUROPEPTIDES OF THE CEREBRAL CORTEX IN SENILE DEMENTIA OF ALZHEIMER TYPE
M. Rossor, P. Emson, C. Mountjoy,* M. Roth* and **L. Iversen,** MRC Neurochemical Pharmacology Unit, Cambridge, UK
*Department of Psychiatry, Addenbrooke's Hospital, Cambridge, UK

467 SOMATOSTATIN-28 RELEASE FROM OVINE STALK MEDIAN EMINENCE SYNAPTOSOMES
R. P. Millar, J. Michie and **C. F. Kewley,** *Department of Chemical Pathology,* University of Cape Town Medical School, Observatory, 7925, South Africa

日本神経化学会会則

昭和51年10月

日本神経化学会会則

（昭和４１年１０月　８日制定）
（昭和４５年１０月１７日改正）
（昭和５０年１１月１５日改正）
（昭和５１年１０月１６日改正）
（昭和５５年１１月１４日改正）
（昭和５６年１１月２７日改正）

第1章　総　　則

第１条　本会は日本神経化学会（The Japanese Neurochcmical Society）という。

第２条　本会の事務所を東京都新宿区信濃町３５番地慶応義塾大学医学部生理学教室内におく。

第３条　本会は理事会の議決を経て必要の地に支部をおくことができる。

第2章　目的および事業

第４条　本会は会員の研究発表，知識の交換ならびに会員相互間および国内外の関連機関との連絡提携の場として神経化学ならびに関連領域の発展を促しもって学術文化の進歩に寄与することを目的とする。

第５条　前条の目的を達成するために次の事業を行なう。

1. 研究発表および講演会の開催
2. 会誌，研究報告および資料の刊行
3. 国内外の関連機関との連絡および協力
4. その他目的を達するために必要な事業

第3章　会　　員

第６条　本会の会員は次のとおりとする。

1. 正 会 員：神経化学に関する学識または経験を有するもので本会の目的に賛同し，会費年額3,500円を納める者。
2. 名誉会員：本会に特に功労のあった正会員（外国人は正会員であることを要しない）のうちから総会の議決をもって推薦する者。ただし名誉会員は会費を納めることを必要としない。
3. 団体会員：本会の目的に賛同し会費年額3,500円を納める団体（図書館を含む）
4. 賛助会員：本会の事業を後援し，会費年額10,000円以上を納める者または団体
5. 学生会員：大学またはこれに準ずる学校（大学院を含まず）に在籍し，神経化学に関係ある学科を修める学生であって，本会の目的に賛同し会費年額1,500円を納める者。

第７条　会員になろうとする者は正会員の推薦により細則に示す様式に従い会費を添えて入会申込書を事務局に提出し理事長の承認を受けなければならない。

第８条　会員は毎年開かれる研究発表会に演題の申込みをすることができる。

第９条　会員は本会が刊行する機関誌「神経化学」および図書の優先的配付を受けることが出来る。

第１０条　会員は第６条に規定する会費を納入しなければならない。

第１１条　会員は次の事由によって資格を喪失する。

1. 退　　会
2. 死　　亡
3. 除　　名

第１２条　会員で退会しようとするものは，退会届を提出しなければならない。

第１３条　会員が次の各号の一に該当するときは，理事会の議決を経て除名される。

1. 会費を滞納したとき
2. 本会の名誉を傷つけ，また会員としての義務に反したとき

第１４条　既納の会費は，いかなる理由があってもこれを返還しない。

第4章　役員，評議員および職員

第１５条　本会に次の役員をおく

理　　事	15名
監　　事	2名

世話人代表　　1名

第16条　理事および監事は細則の定める方法に従って正会員から選出する。理事は互選で理事長1名，常務理事1名を定める。

第17条　理事長は本会の業務を総理し，本会を代表する。

2. 常務理事は理事長を補佐し，理事会の決議に基づき日常の業務に従事し，総会の決議した事項を処理する。

3. 常務理事は理事長事故のあるときはその職務を代行する。

第18条　理事は，理事会を組織し，会則に定めるもののほか，本会の総会の権限に属せしめられた事項以外の事項を議決し執行する。

第19条　監事は民法第59条に準じてその職務を行なう。

第20条　本会の役員の任期は4年として再任を妨げない。

2. 補欠による役員の任期は，前任者または現任者の残任期間とする。

3. 役員は，その任期満了後でも後任者が就任するまでは，なおその職務を行なう。

4. 役員は本会の役員としてふさわしくない行為のあった場合，または特別の事情のある場合には，その任期中であっても総会および理事会の議決により，理事長がこれを解任することができる。

第21条　本会に評議員をおく。

2. 評議員の定数は50名乃至150名とする。

3. 評議員は正会員中から総会において選任する。

4. 理事はその任期中は評議員となる。

第22条　評議員には第20条の規定を準用する。

第23条　評議員は評議員会を組織し，本会の運営上の重要事項について理事会の諮問に応ずるものとする。

第24条　本会の事務を処理するため職員をおく。

2. 職員は理事長が任免し理事会の承認をうける。

3. 職員は有給とすることが出来る。

第5章　会　　議

第25条　理事会は毎年二回理事長が招集する。ただし理事長が必要と認めた場合，或いは理事現在数の三分の一以上から会議の目的たる事項を示して請求のあったときは，理事長は臨時理事会を招集しなければならない。

第26条　理事会は理事現在数の五分の三以上出席しなければ議事を開き議決することは出来ない。ただし委任状を提出したものは出席者とみなす。

2. 理事会の議事は理事会の過半数をもって決し，可否同数のときは議長の決するところによる。

第27条　通常総会および研究発表会の相当機関（施設）は理事会において指定する。

2. 当該機関の会員は研究発表会の開催に関し，世話人会を組織する。世話人会の互選により世話人代表1名を指名する。

3. 世話人代表はその年度中理事となる。

第28条　通常総会は毎年一回研究発表会の際，理事長が招集する。

2. 臨時総会は理事会または監事が必要と認めたとき，いつでも招集することができる。

第29条　通常総会の議長は世話人代表とし，臨時総会の議長は会議のつど会員の互選で定める。

第30条　総会の招集は少なくとも10日以前にその会議すべき事項，日時および場所を記載した書面または会誌の広告をもって通知する。

第31条　次の事項は，通常総会に提出しその承認を受けなければならない。

1. 事業計画および収支予算についての事項
2. 事業報告および収支決算についての事項
3. その他理事会において必要と認めた事項

第32条　総会は，会員現在数の十分の一以上出席しなければその議事を開き議決することが出来ない。ただし当該議事につき委任状を提出したものは出席者とみなす。

第33条　総会の議事は出席者の過半数をもって決し，可否同数のときは議長の決するとこ

ろによる。

第３４条 総会の議事の要項および議決した事項は会員に通知する。

第３５条 評議員会は随時理事長が招集する。評議員会の議長は理事長がこれに当る。

第３６条 評議員会は評議員現在数の五分の一以上出席しなければ会議を開くことが出来ない。ただし委任状を提出したものは出席者とみなす。

第３７条 総会，理事会および評議員会の議事録は議長が作成し理事長が保管する。

第6章 会　　計

第３８条 本会の事業遂行に要する費用は，会費，事業に伴う収入をもって支弁する。

第３９条 本会の収支決算は毎年会計年度が終了後理事長が作成し，監事の意見をつけ理事会および総会の承認を受けなければならない。

第４０条 本会の会計年度は毎年１月１日に始まり１２月３１日迄とする。

第7章 会則の変更

第４１条 この会則は理事会および総会においておのおの三分の二以上の賛成決議を経て変更することが出来る。

第8章 補　　則

第４２条 この会則施行についての細則は，理事会および総会の議決を経て別に定める。

第9章 付　　則

第４３条 新総会発足以前の役員，評議員は現神経化学懇話会常任委員及び委員により代行される。

第４４条 現会員はそのまま本会の会員となる。

第４５条 会計年度の改訂は昭和５６年１月１日より実施する。

第４６条 昭和５５年度会費として納入したもの（昭和５４年９月１日～昭和５５年８月31日迄）は昭和５５年１２月３１日迄有効期限を延長する。

第４７条 昭和５６年度までの正会員及び団体会員の会費の年額は2,500円とする。

日本神経化学会細則

（昭和41年10月　8日制定）
（昭和51年10月16日改正）

第1章　会　　員

第1条　本会に会員として入会を希望する者は，入会申込書に次のことがらを記入して事務局に提出しなければならない。

1. 姓名（ローマ字読み方付）生年月日
2. 推薦者氏名印
3. 最終出身校，学科名および卒業年次，ただし学生会員は入学年月と卒業または終了年月，を記入しなければならない。
4. 勤務先とその所在地および勤務先での地位
5. 会員の現住所ならびに連絡先住所
6. 専門分野，専攻科名

第2章　役員，評議員

第2条　理事定数15名のうち12名は第3条及び第4条に定める方法に従い，会員の直接選挙により選出する。残り3名は評議員会の議を経て委嘱する。

第3条　理事の選挙に当って選挙管理委員会を設け理事長が委嘱する。選挙管理委員会は理事選挙要項に従い事務局の所在地で選挙事務を行う。

第4条　理事選挙要項は下記の如くする。

1. 選挙管理委員会は事前に会員名簿を作成して「神経化学」に掲載する。理事の選挙権及び被選挙権は投票締切日の6カ月以前に正会員となったものに限る。
2. 正会員で選挙事務に異議あるものは投票締切日の10日前までに選挙管理委員会に申し出なければならない。
3. 選挙管理委員会は正会員2名以上の推薦のあった正会員，および評議員をもって理事候補者名簿を作成し会員に配布し，投票の資料とする。
4. 投票は選挙管理委員会の定める投票用紙をもって行い無記名5名以内の連記とする。
5. 投票は原則として郵送をもって行う。
6. 当選者は得票数の多い上位から12名を決定する。同票の場合は年令順とする。但し各領域，各研究者層の意見が反映される様，専門別を考慮して次の規定を設ける。基礎（医・理・薬を含む）臨床各5名が含まれる得票数上位より決定する。
7. 当選者が辞退し，又は選挙終了後1年未満の期間内に理事に欠員を生じた場合は得票数及び専門別を考慮して理事会において補充を決定する。
8. 選挙後1年以上経過した後理事に欠員を生じた場合は補充を行なわない。但し3名以上の欠員を生じた場合は6ケ月以内に補充選挙を行うものとする。
9. 開票は選挙管理委員が会員の中から委嘱した立会人のもとに行う。ただし会員は誰でも開票に立会うことが出来る。

第5条　理事長，常務理事は理事会の互選により決める。

第6条　評議員は次の方法により選出する。理事会は正会員から推薦された評議員候補者について審査を行い適格者は総会において選任される。評議員の推薦にあたっては，研究歴満5年以上のもので地域別，専門別について考慮される。

第7条　監事の選出については理事会が理事以外の正会員の中から候補者を選び総会の承認を経て理事長が委嘱する。

第3章　事　　業

第8条　機関誌「神経化学」の編集委員は理事会の承認を得て理事長より委嘱する。

第9条　機関誌の英文名は「Bulletin of The Japanese Neurochemical Society」とする。

第10条　本会の目的を達成するため理事会が必要と認めた時会員の中から専門委員を委嘱することがある。

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