

BIOCHEMICAL/BIOBEHAVIORAL R&D

DEPARTMENT 771

BIOBEHAVIORAL RESEARCH DIVISION

1984-1987 BUDGET & ACTION PLAN

*6/25/87*  
DRAFT

*J. H. Reynolds*  
*08/16/84*

50283 8560

U.S. Ex.  
50,259

RW0154 4770

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# R.J.Reynolds Tobacco Company

1985-1987 PLAN

## ACTION PROGRAM SUMMARY

Planning Form 1

Relates to Key Issue CORE  
275

Dept. No. 771

Department BIOCHEMICAL/BIOBEHAVIORAL R&D (771)

### Program:

PROJECT: Biobehavioral R&D

NO: 7610

The Biobehavioral Research Project is multidisciplinary and is designed to yield knowledge about the physiological, psychological, behavioral and sensory aspects of tobacco use, with emphasis on smoking. It includes work units dealing with detailed smoking behavior, the physiology and pharmacology of nicotine, the psychological effects of smoking, and the basics of the sensory responses of smokers.

### Objective(s):

Develop knowledge about the physiological, psychological, sensory and behavioral aspects of tobacco product use, for the following purposes; 1) aid in the design and development of new or improved products which address consumer wants, 2) define aspects of tobacco product use which are consciously or unconsciously perceived as benefits by users, 3) aid in addressing external issues.

### Program Steps:

### Completion Dates

1. <u>Smoke Component Dose</u>	<u>12-31-85</u>
2. <u>Nicotine Receptor Pharmacology</u>	<u>12-31-85</u>
3. <u>Blood Chemistry</u>	<u>12-31-85</u>
4. <u>Psychophysiology of Smoking</u>	<u>12-31-85</u>
5. <u>Basic Sensory Research</u>	<u>12-31-85</u>

Impact (Details on Planning Form 1A)	Current Estimate	(\$ in Thousands)			
		1984	1985	1986	1987
• Headcount		<u>10</u>	<u>10</u>	<u>15</u>	<u>16</u>
• Operating Expense (Use inflation-adjusted costs)		<u>611</u>	<u>751</u>	<u>1174</u>	<u>1302</u>
• Capital Expenditures (Use inflation-adjusted costs)		<u>213</u>	<u>186</u>	<u>319</u>	<u>275</u>
• This Action Program was: (Check if applicable)	<input type="checkbox"/> Included in the 1984 Plan, but the timing and/or scope have changed as described on the reverse side.				

*W. M. Long*

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# R.J.Reynolds Tobacco Company

PLANNING FORM 1A

## 1985-1987 PLAN ACTION PROGRAM WORKSHEET (\$ in Thousands)

Department: Biochemical/Biobehavioral R&D  
Biobehavioral Research Div

Relates to Key Issue CORE, 2#5

Dept. No. 771

	Current Estimate		Plan	
	1984	1985	1986	1987
<u>Headcount Incr/(Decr)</u>				
# 1		—	4	1
# 3		—	1	
# 5				
# 6				
Other (Specify)				
Total			5	1

### Operating Expense Incr/(Decr)

#### Variable Product Cost

Leaf				
Casing				
Wrapping				
Labor (excl. Fringe)				
Other (Specify)				
Sub-Total				

#### General Operations Cost

Utilities				
Maintenance				
Mfg. Support				
Auto & Truck Fleet				
Other (Specify)				
Sub-Total				

#### Administrative Cost

(Specify)				
<u>SALARY &amp; FRINGE</u>		114	281	83
<u>OTHER OPERATING COST</u>		26	142	45
Sub-Total		140	423	128

Total Operating Expense 140 423 128

*W. King*

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5

## R.J.Reynolds Tobacco Company

Form 7

USX175 1207

DEPARTMENT Biobehavioral Div. of Biochemical/Biobehavioral, 771 1985 STAFFING LEVEL PROJECTIONS

REGULAR	HEADCOUNT BY PAYROLL		Current Auth'd. 12/31/84	Proposed Auth'd. 12/31/84	1985 OPERATING PLAN				CHANGES 12/31/84 to 12/31/85
					1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	
		Monthly (No. 1)	6	6	6	6	6	6	0
		Weekly (No. 3)	4	4	4	4	4	4	0
		Weekly (No. 5)							
		Hourly (No. 6)							
TOTAL - Regular									
NON-REGULAR		Temporary							
		Seasonal							
		Summer Students				2	2		
		Other							

Staffing Level Change Justification All proposed staffing level changes must be justified in this section. Justifications should be concise but thorough enough to fully demonstrate need. Staffing level change justification is not required for non regular employees.

DATE of CHANGE	ADDITIONS/DELETIONS		JUSTIFICATION
	STATUS AND PAYROLL	NUMBER OF PERSONS	
05/20/85	Summer Students	2	During the course of each year, backlogs of work, including data reduction & data entry and proofreading accumulate. It is extremely helpful for summer students to attend to the reduction of this backlog. In addition, experiments involving large numbers of ex-house subjects are frequently convenient to run in the summer. The summer student workload are very helpful in assisting with this type of work.

RECOMMENDED

J. H. Reynolds 07/15/85

S958 88205

APPROVED

PF-2

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Planning forms 3 and 4 are not applicable.

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The next four pages include the Salaried Payroll Budget Worksheets for 1984 and 1985. This first page includes a personnel key to identify individuals by their initials. Initials were used on the worksheets to save space. The 1985 salary increase schedule shows everyone who is expected to receive a performance rating of 2 budgeted for a 6% increase at 13 months from the last increase. This will put us well within the guidelines and leave room for maneuver when we have to produce our final salary increase schedule in December. Normally, additional guidelines are issued and we have a better fix on the proposed performance ratings by then. For example, there will usually be various gradations of "2" ratings, which will merit more or less of an increase.

# PERSONNEL KEY

INITIALS	NAME	POSITION
CLC	C. L. CHAMBERLIN	ASST. R&D CHEMIST
RAD	R. A. DAVIS	SR. STAFF R&D PHARMACOL.
DGG	D. G. GILBERT	SR. BEHAV. SCIENTIST
PML	P. M. LIPPIELLO	SR. R&D CHEMIST
JHR	J. H. ROBINSON	SR. BEHAV. SCIENTIST
KGF	K. G. FERNANDES	LAB. TECHNICIAN
SWI	S. W. INGRAM	LAB. TECHNICIAN
PAG	P. A. GRAY	SUMMER STUDENT WRK. ('84)
JCS	J. C. STEPHENS	SUMMER STUDENT WRK. ('84)
SS1	Summer students	
SS2	requested for '85	

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REVISED SALARY PLAN - 1984 - #1 PAYROLL (081084 9:11 AM REV84)  
 BIOBEHAVIORAL RESEARCH DIVISION

NAME	DATE LAST INCR.	PROJ. DATE	PAY % INCR.	RATE T RATE	NO. PAY PERIODS	SUB- TOTAL	TOTAL	FRINGE
CLC	80183			2,115	9	19,035		0
		100184	5.67 M	2,235	3	6,705	25,740	8,752
RAD	40183			3,810	5	19,050		0
		60184	5.51 M	4,020	7	28,140	47,190	16,045
DGG	90183			3,735	9	33,615		0
		100184	6.69 M	3,985	3	11,955	45,570	15,494
PML	70183			3,300	5	16,500		0
		60184	6.67 M	3,520	7	24,640	41,140	13,988
JHR	20183			3,385	1	3,385		0
		20184	9.45 M	3,705	11	40,755	44,140	15,008
New	100184			4,000	0	0		0
		123184	0 M	4,000	3	12,000	12,000	4,080
TOTAL							215,780	73,365
GRAND TOTAL								289,145

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REVISED SALARY PLAN - 1984 - #3 PAYROLL (081084 9:16 AM REV384)  
 BIOBEHAVIORAL RESEARCH DIVISION

NAME	DATE LAST INCR.	PROJ. DATE	PAY % INCR.	RATE T RATE	NO. PAY PERIODS	SUB- TOTAL	TOTAL	FRINGE
KGF	70984	123184	0 M	384	0	0	9,677	3,290
				384	25.2	9,677	9,677	0
SWI	102583	92484	5.4 M	370	38	14,060	19,598	6,663
				390	14.2	5,538	5,538	0
New	100184	123184	0 M	427	0	0	5,636	1,916
				427	13.2	5,636	5,636	0
Secy	100184	123184	0 M	480	0	0	6,336	2,154
				480	13.2	6,336	6,336	220
PAG	52184			177	12.4	2,195	2,195	287
JCS	51784			191	15	2,865	2,865	
TOTAL							46,307	14,530
GRAND TOTAL								60,837

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PROJECTED SALARY PLAN - 1985 1001385 2:56 PM COMSALES)

BIOBHAVIORAL RESEARCH DIVISION

PROJECTED SALARY PLAN - 1985 - #1 PAYROLL

(Includes new staff already requisitioned, but not mgr.)

(\* NEAREST \$5)

NAME	PROJ.	ANN'DZD	1985	MIN.	DATE	PROJ.	PAY RATE	NO. PAY	SUB-	TOTAL	FRINGE	
PERF.	RANGE	COMPA-	INCR.	LAST	DATE	% INCR.	T	PERIODS	TOTAL			
RATING	MIDPT.	RATIO	INTERVAL	INCR.			RATE*					
CLC	1	30,054	0.89	12	100184		2,235	9	20,115		0	
					100185	6.0%	M	3	7,110	27,225	8,160	
RAD	2	56,800	0.85	13	60184		4,020	6	24,120		0	
					70185	6.0%	M	6	25,560	49,680	14,904	
DGG	2	52,000	0.92	13	100184		3,985	10	39,850		0	
					110185	6.0%	M	2	8,450	48,300	14,490	
PML	2	52,000	0.81	13	60184		3,520	6	21,120		0	
					70185	6.0%	M	6	22,380	43,500	13,050	
JHR	2+	52,000	0.86	13	20184		3,705	2	7,410		0	
					30185	6.0%	M	10	39,250	46,660	13,998	
New	2	56,800	0.85	13	100184		4,080	10	40,800		0	
					110185	6.0%	M	2	8,480	48,480	14,544	
TOTAL #1										263,845	79,154	
TOTAL S&F #1											342,999	

PROJECTED SALARY PLAN - 1985 - #3 PAYROLL

(Includes sec'y., new technician already requisitioned and 2 summer students)

(\* NEAREST \$1)

NAME	PROJ.	ANN'DZD	1985	MIN.	DATE	PROJ.	PAY RATE	NO. PAY	SUB-	TOTAL	FRINGE	
PERF.	RANGE	COMPA-	INCR.	LAST	DATE	% INCR.	T	PERIODS	TOTAL			
RATING	MIDPT.	RATIO	INTERVAL	INCR.			RATE*					
KGF	2	24,960	0.80	13	70984		384	30.8	11,827			
					80585	6.0%	M	21.2	8,628	20,455	6,137	
SWI	2	24,960	0.81	13	92484		390	42.8	16,692			
					102885	6.0%	M	9.2	3,800	20,492	6,148	
New	2	27,532	0.81	13	100184		427	43.8	18,703			
					110485	6.0%	M	8.2	3,715	22,418	6,725	
Secy	2	1	0.80 ?	13	100184		480	43.8	21,029			
					110485	6.0%	M	8.2	4,174	25,190	7,559	
SS1							190	15	2,850	2,850	285	
SS2							190	15	2,850	2,850	285	
TOTAL #3										94,263	27,139	
TOTAL S&F #3											121,402	
GRAND TOTAL SALARY										358,108		
GRAND TOTAL S&F											464,400	

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This will take the place of Planning Form 5, since we do not have one for Department 771.

OPERATING PLAN - WORKSHEET - BIOBEHAVIORAL R&D DIV. (081684 12:36 PM OP85)

CONTROL. EXP.	CODE	1984 PLAN	1984 LATEST EST	1984 CURRENT EST	84 PLAN TO CURR EST	1985 PLAN	84 CURR EST TO 85 PLAN
SAL. #1	6001	255	245	216	(39)	264	48
SAL. #3	6003	26	25	46	20	94	48
FRINGE	6199	102	98	88	(14)	106	18
PROF FEES	9010	<u>130</u>	<u>123</u>	<u>153</u>	<u>23</u>	<u>115</u>	(38)
BOOKS/PER	9031			1	1	2	1
REC/RELOC	9042	25	25	40	15	0	(40)
TRAVEL AIR	9069	7	14	5	(2)	13	8
TRAVEL BUS	9070	2	2	2	0	8	6
CONF TRAV	9081	12	5	7	(5)	7	0
CONF FEES	9082	5	5	1	(4)	1	0
CONV EXP	9083			5	5	70	65
DUES CORP	9091	1	1	1	0	1	0
DUES IND	9092				0		0
SERV TRNFS	9152	6	6	6	0	6	0
MFG TRANSF	9154				0		0
PHOT UNIT	2-9159	1	1	1	0	1	0
ART UNIT	3-9159				0		0
AUD/VIS	7-9159	3	3	3	0	3	0
DATA PROC	9202	0	0	0	0	5	5
PRTG/PHOT	9206				0		0
M/RPR M&E	9232	5	5	5	0	6	1
GEN SUPPL	9251	75	73	16	(59)	20	4
SUPPL CHEM	9257	10	10	12	2	15	3
NONCAP M&E	9555				0	10	10
TRAINING	9670				0		0
SUNDRY	9954	3	3	3	0	4	1
TOTALS		668	644	611	(57)	751	140

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## CONSULTING FEES - CLASS CODE 9010- BIOBEHAVIORAL RESEARCH DIV. 1984

(CON84 12:46 PM 081684)

FIRM OR PARTY	REASON	CONSEQUENCES OF DISAPPROVAL	AMOUNT (\$1000's)	grant	to be
Dr. H. J. Eysenck	Continue grant to support work in effects of smoking on mental information processing in humans	Valuable information resource lost, research which RJR has previously funded will not be extended	129	101	28
Dr. S. A. Deadwyler	Consult re nicotine pharmacology	Hampers continuation, extension of research already begun	5	0	5
Bellomy-Garrigg, Inc.	Recruit research panelists	Projects dependent on human subjects cease	6	0	6
Miscellaneous	Consultation re human and animal research guidelines, etc.	Function important to R&D responsibility to scientific and public arenas not met	3	0	3
Integrated Ionics, Inc.	Conduct research on effects of smoking on oral chemistry	Opportunity to investigate oral pH & other phenomena important to sensory perception lost	10	9	1
Total			153	110	43

Handwritten notes:

20  
x 3  
60  
60  
60  
60

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CONSULTING FEES - CLASS CODE 9010- BIOBEHAVIORAL RESEARCH DIV. 1985

(CON85 12:02 PM 001684)

FIRM OR PARTY	REASON	CONSEQUENCES OF DISAPPROVAL	AMOUNT (\$1000's)
Dr. H. J. Eysenck	Continue grant to support work in effects of smoking on mental information processing in humans	Valuable information resource lost, research which RJR has previously funded will not be extended	60
Dr. S. A. Deadwyler	Consult re nicotine pharmacology	Hampers continuation, extension of research already begun	5
Bellomy-Carrigg, Inc.	Recruit research panelists	Projects dependent on human subjects cease	12
Miscellaneous	Consultation re human and animal research guidelines, etc.	Function important to R&D responsibility to scientific and public arenas not met	3
Integrated Ionics, Inc.	Conduct research on effects of smoking on oral chemistry	Opportunity to investigate oral pH & other phenomena important to sensory perception lost	25
Drs. C. Spielberger & R. Rosennan	Develop and evaluate questionnaires, or other psychological instruments for study of interaction of smoking and Type-A personality traits	Important aspect of smoking and stress research ignored or severely delayed	10
Total			115

90% of 115 = 103.5

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MEDICAL RESEARCH PROGRAMS - 1984

(MEDPB4 081684 12:54 PM)

(Charge code 48-90-2001-9104-774)

FIRM OR PARTY	REASON	CONSEQUENCES OF DISAPPROVAL	AMOUNT (\$1000's)
------------------	--------	--------------------------------	----------------------

Bowman-Gray School of Medicine	Electrophysiology of nicotine in hippocampal slice	Research into CNS ef- fects of nicotine delayed	51
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Bowman-Gray School of Medicine	Electrophysiology of nicotine in hypothalamic slice	Research into CNS ef- fects of nicotine delayed	42
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Total

93

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MEDICAL RESEARCH PROGRAMS - 1985

(MEDP85 081684 12:54 PM)

(Charge code 40-90-2001-9104-774)

FIRM OR PARTY	REASON	CONSEQUENCES OF DISAPPROVAL	AMOUNT (\$1000's)
Bowman-Gray School of Medicine	Electrophysiology of nicotine in hippocampal slice	Research into CNS ef- fects of nicotine delayed	47
Bowman-Gray School of Medicine	Electrophysiology of nicotine in hypothalamic slice	Research into CNS ef- fects of nicotine delayed	57 <i>is better no.</i>
University of Texas Health Sci. Center at Dallas	Study influence of nicotine on brain function through special imaging and application techniques	Research into CNS ef- fects of nicotine delayed	128

Total

~~202~~ 212

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**உள்ளுறை**

**1984 Operating Plan to 1984 Current Estimate**  
(\$ in Thousands)

(\$ in thousands)

Total	
Controllable	
(PF-2)	(PF-5)

## Summary of FINDGE

Prof. F&ES

Boats/Penn Judicials

REC'd REC'D.

TRAVEL

CONVENTION EXP.

## Gen. Supplies

CHEM. SUPPLIES

To 1984 Current Estimate

Hdct.	\$ Amount	Hdct.	\$ Amount	Hdct.	\$ Amount	Hdct.	\$ Amount	Hdct.	\$ Amount
10	668								
	(33)								
	23								
	1								
	15								
	(11)								
	5								
	(59)								
	2								
10	611								

**(See Instructions on Reverse Side)**

# R.J. Reynolds Tobacco Company

Planning Form 7

PI of 2

## EXPLANATION OF MAJOR CHANGES

### 1984 OPERATING PLAN to 1984 CURRENT ESTIMATE

Department Biochemical/Behavioral Res  
(Behavioral Div.)

Dept. No. 771

Explain below the reasons for the specific programs/activities/events identified on PF-6. Identify, where possible, the relationship to a specific Action Program, the objectives to be obtained and your estimate of the time frame for implementation.

SPECIFIC PROGRAMS SALARY & FRINGE  
ACTIVITIES/EVENTS

\$ (33) NEW SR. STAFF BUDGETED FROM 01-01-84 NOW BUDGETED  
FROM 10-01-84.  
NEW TECHNICIAN & SECRETARY, ORIGINALLY UNBUDGETED,  
NOW BUDGETED FROM 10-01-84.

SPECIFIC PROGRAMS PROFESSIONAL FEES  
ACTIVITIES/EVENTS

\$ 23 ADDED GRAL PH CONTRACT  
ADDED SUPPORT FOR DR. H. J. EYSELER FOR EXTENSION  
OF RESEARCH TO REID WILSON

SPECIFIC PROGRAMS BOOKS/PERIODICALS  
ACTIVITIES/EVENTS

\$ 1 LIBRARY REQUESTED ADDITIONAL SUPPORT DURING  
TO NEED FOR TEXTS/REPRINTS FOR EXPANDED  
BIOCHEMICAL INFORMATION BASE.

SPECIFIC PROGRAMS REC & RELX.  
ACTIVITIES/EVENTS

\$ 15 REVISED ESTIMATE PER INFORMATION SUPPLIED  
WITH BUDGET PACKAGE (SEE P. 5 OF INSTRUCTIONS)

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Use additional pages if necessary.

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# R.J.Reynolds Tobacco Company

Planning Form 7

## EXPLANATION OF MAJOR CHANGES 1984 OPERATING PLAN to 1984 CURRENT ESTIMATE

P2 of 2

Department \_\_\_\_\_

Dept. No. \_\_\_\_\_

Explain below the reasons for the specific programs/activities/events identified on PF-6. Identify, where possible, the relationship to a specific Action Program, the objectives to be obtained and your estimate of the time frame for implementation.

SPECIFIC PROGRAMS ACTIVITIES/EVENTS	<u>TRAVEL</u> <u>(ALL CODES)</u>	EXPLANATION
--	-------------------------------------	-------------

\$ <u>(11)</u>	<u>IMPROVED COST ESTIMATES</u> <u>CANCELLATION OF CONVENTION ATTENDANCE PLANS</u> <u>FOR NEW SR STAFF &amp; SOME EXISTING STAFF.</u>
----------------	--

SPECIFIC PROGRAMS ACTIVITIES/EVENTS	<u>(CONVENTION)</u> <u>EXPENSE</u>	EXPLANATION
--	---------------------------------------	-------------

\$ <u>5</u>	<u>ADDED RESPONSIBILITY FOR SYMPOSIUM PLANNING</u> <u>FOR R&amp;D CENTER DESCRIPTION</u>
-------------	---

SPECIFIC PROGRAMS ACTIVITIES/EVENTS	<u>GENERAL</u> <u>SUPPLIES</u>	EXPLANATION
--	-----------------------------------	-------------

\$ <u>(59)</u>	<u>SR STAFF HEADQUARTER ADDITION DELIVERED,</u> <u>IMPROVED HISTORICAL COST DATA,</u> <u>REALLOCATION TO MORE ACCURATE COST CODE 7424.</u>
----------------	--

SPECIFIC PROGRAMS ACTIVITIES/EVENTS	<u>CHEMICAL</u> <u>SUPPLIES</u>	EXPLANATION
--	------------------------------------	-------------

\$ <u>2</u>	<u>IMPROVED HISTORICAL COST DATA,</u> <u>REALLOCATION TO MORE ACCURATE COST CODE 7424.</u>
-------------	---

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Use additional pages if necessary.

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# R.J.Reynolds Tol. Coo Company

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Planning Form 6A

## RECONCILIATION OF CHANGES IN CONTROLLABLE EXPENSES BY FUNCTION

1984 Current Estimate to 1985 Operating Plan

(\$ in Thousands)

Dept. No. 771

Department *Production Support Dept.*  
*Production Support Dept.*

Total  
Controllable  
(PF-2) (PF-5)

MAJOR FUNCTIONS/ACTIVITIES

From 1984 Current Estimate  
Specific Programs/Act./Events

*SALARY & FRIUDGE*

*PROF. FEES*

*BOOKS/PERIODICALS*

*REC & RELOC.*

*TRAVEL*

*CONVENTION EXP.*

*CUSTOMER DATA PROG.*

*M/MPR M&E*

*GEN. SUPPLIES*

*CHEM. SUPPLIES*

*NON-CAP. M&E*

*SUBURBY*

To 1985 Operating Plan

Hdct.	Amount	\$
10	611	
	114	
	(38)	
	1	
	(40)	
	14	
	65	
	5	
	1	
	4	
	3	
	10	
	1	
10	751	

Hdct.	Amount	\$

Hdct.	Amount	\$

Hdct.	Amount	\$

Hdct.	Amount	\$

Hdct.	Amount	\$

(See Instructions on Reverse Side)

# R.J. Reynolds Tobacco Company

Planning Form 7A

## EXPLANATION OF MAJOR CHANGES

P1 of 3

1984 CURRENT ESTIMATE to 1985 OPERATING PLAN

Department Biochemical/Bio behavioral Res  
(Biobehavioral Div.)

Dept. No. 771

Explain below the reasons for the specific programs/activities/events identified on PF-6A. Identify, where possible, the relationship to a specific Action Program, the objectives to be obtained and your estimate of the time frame for implementation.

SPECIFIC PROGRAMS SALARY & FRINGE  
ACTIVITIES/EVENTS

EXPLANATION

\$ 114 SR. STAFF MEMBER BUDGETED FOR FULL YEAR.  
TECHNICIAN, SECRETARY BUDGETED FOR FULL YEAR.  
CPI & FRINGE ADJUSTMENTS.

SPECIFIC PROGRAMS PROFESSIONAL  
ACTIVITIES/EVENTS FEES

EXPLANATION

\$ (38) REQUIRED SUPPORT FOR DR. N. J. EYSENCK.  
ADDITIONAL ORAL CHEMISTRY RESEARCH  
PSYCHOLOGICAL QUESTIONNAIRE DEVELOPMENT.

SPECIFIC PROGRAMS BOOKS/PERIODICALS  
ACTIVITIES/EVENTS

EXPLANATION

\$ 1 SUPPORT BASIL SENSORY PROGRAM.

SPECIFIC PROGRAMS REC. & RELOC.  
ACTIVITIES/EVENTS

EXPLANATION

\$ (40) NO NEW HEADCOUNT TO BE ADDED IN 1985

Use additional pages if necessary.

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21

# R.J. Reynolds Tobacco Company

Planning Form 7A

## EXPLANATION OF MAJOR CHANGES 1984 CURRENT ESTIMATE to 1985 OPERATING PLAN

P2 of 3

Department \_\_\_\_\_

Dept. No. \_\_\_\_\_

Explain below the reasons for the specific programs/activities/events identified on PF-6A. Identify, where possible, the relationship to a specific Action Program, the objectives to be obtained and your estimate of the time frame for implementation.

SPECIFIC PROGRAMS ACTIVITIES/EVENTS	<u>TRAVEL</u> <u>(ALL CODES)</u>	EXPLANATION
\$ <u>14</u>		REINSTITUTION OF CONFERENCE/SEMINAR TRAVEL FOR NEW & EXISTING SR STAFF, WHICH WAS DISCONTINUED IN 1984.

SPECIFIC PROGRAMS ACTIVITIES/EVENTS	<u>CONVENTION</u> <u>EXPENSE</u>	EXPLANATION
\$ <u>65</u>		SYMPOSIUM TO ACCOMPANY R&D CENTER DEDICATION

SPECIFIC PROGRAMS ACTIVITIES/EVENTS	<u>OUTSIDE DATA</u> <u>PROCESSING</u>	EXPLANATION
\$ <u>5</u>		SPECIALTY EXTRACTION & CODING OF DATA FROM FILMSTRIPS OF INTERPERSONAL INTERACTIONS DURING SMOKING AND STRESS STUDIES.

SPECIFIC PROGRAMS ACTIVITIES/EVENTS	<u>MAINTENANCE/REPAIR</u> <u>M&amp;E</u>	EXPLANATION
\$ <u>1</u>		CONTINGENCY TO COVER RODEO EQUIPMENT

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Use additional pages if necessary.

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# R.J. Reynolds Tobacco Company

Planning Form 7A

## EXPLANATION OF MAJOR CHANGES 1984 CURRENT ESTIMATE to 1985 OPERATING PLAN

P3 of 3

Department \_\_\_\_\_

Dept. No. \_\_\_\_\_

Explain below the reasons for the specific programs/activities/events identified on PF-6A. Identify, where possible, the relationship to a specific Action Program, the objectives to be obtained and your estimate of the time frame for implementation.

SPECIFIC PROGRAMS  
ACTIVITIES/EVENTS

GENERAL  
SUPPLIES

EXPLANATION

§ 4 SUPPORT NEW RESEARCH AREA (BASIC SENSORY)

SPECIFIC PROGRAMS  
ACTIVITIES/EVENTS

CHEMICAL  
SUPPLIES

EXPLANATION

§ 3 SUPPORT NEW RESEARCH AREA (BASIC SENSORY)

SPECIFIC PROGRAMS  
ACTIVITIES/EVENTS

NON-CAP.  
M&E

EXPLANATION

§ 10 SUPPORT NEW RESEARCH AREA (BASIC SENSORY)

SPECIFIC PROGRAMS  
ACTIVITIES/EVENTS

SUNDRY

EXPLANATION

§ 1 SUPPORT NEW RESEARCH AREA (BASIC SENSORY)  
ADDITIONAL COMPUTER SYSTEMS SOFTWARE SUPPORT.

50283 8582

Use additional pages if necessary.

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RW0154 4792

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Planning Form 68

24

## R.J.Reynolds Tobacco Company

## RECONCILIATION OF CHANGES IN CONTROLLABLE EXPENSES

1985 Operating Plan to 1986 Strategic Plan

1986 Strategic Plan to 1987 Strategic Plan

(\$ in Thousands)

Department Biochemical/Biobehavioral R&D  
(Biobehavioral Research Div.)

Dept. No. 771

From 1985 Operating Plan  
 Increase/(Decrease) in:

\$ 751

• Salaries and Fringe

281

• Action Programs

142

• Specific Activities/Events

• Other

To 1986 Strategic Plan\$ 1174

From 1986 Strategic Plan  
 Increase/(Decrease) in:

\$ 1174

• Salaries and Fringe

83

• Action Programs

45

• Specific Activities/Events

• Other

To 1987 Strategic Plan\$ 1302

(See Instructions on Reverse Side)

RW0154 4793

PLANNING FORM 10 - COMPANY MEMBERSHIPS

(081484 3:56 PM PF10)

BIOCHEMICAL/BIOBEHAVIORAL RESEARCH (771)

BIOBEHAVIORAL RESEARCH - J. H. Reynolds, Mgr.

ORGANIZATION

COMPANY  
REPRESENTATIVE      ANNUAL  
                                 DUES

Association for Chemoreception Sciences

J. H. Reynolds 1,000

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25

RW0154 4794

PLANNING FORM 10A - INDIVIDUAL MEMBERSHIPS

(081484 3:53 PM PF10A)

BIOCHEMICAL/BIOBEHAVIORAL RESEARCH (771)

BIOBEHAVIORAL RESEARCH - J. H. Reynolds, Mgr.

NAME	ORGANIZATION	ANNUAL DUES
R. A. Davis	American Chemical Society	70
D. G. Gilbert	American Psychological Association	75
P. M. Lippiello	Sigma Xi	20
J. H. Reynolds	American Association for Advancement of Science	55
J. H. Robinson	American Association for Advancement of Science	55
New Staff	American Psychological Association	75
		-----
		350

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CONFERENCE/SEMINAR TRAVEL - 1985 PLAN

(081684 9:53 PM SEM85)

NAME	CONFERENCE	FEES	AIR TRAVEL	BUSINESS EXPENSE
DGG	American Psychological Association	100	400	700
DGG	Society for Psychophysiological Research	100	400	700
JHR	FASEB, Anaheim, CA.	100	500	800
JHR	Society for Neuroscience, Dallas, TX. 10/20-25	100	400	700
PML	International Society for Neurochemistry, Riva del Garda, Italy, 5/19-24	100	1,800	1,200
RAD	Society for Neuroscience, Dallas, TX. 10/20-25	100	400	700
RAD	American Society for Neurochemistry, Baltimore, MD. 3/3-8	100	400	700
New	?	100	400	700
Staff	?	100	400	700
		-----	-----	-----
Totals		900	5,100	6,900
Grand Total				12,900

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PROJECT: Biobehavioral R&D  
7610

WORK: Smoke Component  
UNIT: Dose

BACKGROUND:

To properly assess the sensory, physiological or psychological responses of smokers to products it is necessary to accurately determine the doses of smoke/tobacco components to individuals. Since the dose to an individual is dependent on his/her smoking behavior (e. g., puff volume, frequency, duration, etc.), measurement and understanding of the effects of such behavior on smoke delivery is needed.

OBJECTIVES:

Develop or improve means to accurately determine the doses of nicotine and other smoke components to smokers. Determine the relationships of smoking behavior patterns to product properties (e. g., sensory, physical, chemical).

STEPS:

COMPLETION DATE

- |  |          |
|--|----------|
| 1. Complete development of 2nd-generation human-mimic smoking machine (HMSM).  | ASAP     |
| 2. Build additional or improved HMSM's as required.  | Ongoing  |
| 3. Improve methodology for measurement of human puffing characteristics.   | Ongoing  |
| 4. Execute study of human puffing characteristics in WINSTON and Marlboro smokers.<br>a. Initiate study.   | ASAP     |
| b. Repeat tests as needed.   | Ongoing  |
| 5. Support programs in Basic Sensory Research, Blood Chemistry, and Psychophysiology.<br>a. Continue analysis of previously collected data and collect new data as needed. | Ongoing  |
| b. Complete smoke regeneration experiments as needed.  | Ongoing  |
| 6. Service/support other projects/programs as required.  | Ongoing  |
| 7. Add capability to measure respiration.  | 01/01/85 |
| 8. Integrate respiratory measurements into programs in Psychophysiology, Blood Chemistry and Basic Sensory Research, as needed.  | Ongoing  |

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9. Add staff scientist (e.g., physical chemist, engineer) to assume responsibility for overall progress of Work Unit.

01/01/86

50283 8588

PROJECT: Biobehavioral R&D  
7610

WORK: Nicotine Receptor  
UNIT: Pharmacology

BACKGROUND:

Current theories of the action of endogenous or exogenous agents on the central nervous system (CNS) postulate that observable psychophysiological effects are brought about in many cases by chemical interactions (binding) of the agents with specific areas (receptors) located in or on specific cell types with the CNS. Therefore, to fully understand exactly how agents produce their effects, it is necessary to locate and characterize receptors, identify the cell types or brain areas with which they are associated and determine what specific neurochemical processes or events occur as a result of interactions of receptors and active agents.

OBJECTIVES:

Establish ongoing, state-of-the-art research on nicotine receptor pharmacology, including ex-house as well as in-house programs. Develop and test hypotheses which relate the biochemistry of the nicotine/neuron interaction to observable psychophysiological effects.

STEPS:

COMPLETION DATE

- |   |  |
|---|--|
| 1. Establish existence of nicotine binding sites in undifferentiated neuronal cell cultures.  | Complete   |
| 2. Determine effects of nicotine binding on selected biochemical processes (e.g., glucose uptake, cyclic AMP levels, neurotransmitter release, ion fluxes, etc.) in neuronal cell cultures. | Cyclic AMP in C-1300, 12/31/84.<br>Others ongoing. |
| 3. Expand present data base of thermodynamics of nicotine binding to neuronal cells to include new cell types, isolated cells in monolayer culture and brain homogenates.                   | Ongoing  |
| 4. Demonstrate pharmacological specificity of receptors in model neuronal cell cultures and in rat brain homogenates.   | With cultures, some done. With brain, 12/31/85     |
| 5. Define kinetics of nicotine binding to cells/cell membranes.   | 07/01/85   |
| 6. Identify and visualize cells and sites which bind nicotine through immuno-   | 07/01/86   |

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fluorescent and autoradiographic methods.

7. Investigate properties of nicotine binding sites in specific brain areas through ex-house research.
  - a. At Bowman Gray School of Medicine (Dr. S. A. Deadwyler). Dr. Robinson will collaborate.
    1. Hippocampus Ongoing
    2. Hypothalamus Initiate-  
10/01/84
  - b. Microiontophoresis in awake animals and brain-imaging (Dr. D. J. Woodward, University of Texas Health Science Center at Dallas). Initiate-  
01/01/85
8. Add staff scientist (PhD cellular physiologist, endocrinologist or biochemist) and laboratory technician. 01/01/86
9. Implement nicotine titration methodology involving single-cell electrode techniques in in-vitro cell cultures. 12/31/87
10. Establish new brain research techniques in-house.
  - a. Electrophysiology of brain regions (e.g., hippocampus, hypothalamus, other regions found to be of interest). 12/31/87
  - b. Brain-slice imaging. 12/31/88
11. Detailed study of biochemical sequelae of nicotine binding in cell culture and/or brain. 12/31/87
12. Extend work on cell-nicotine interactions to include cell membrane biochemistry. 12/31/87

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PROJECT: Biobehavioral R&D  
7610

WORK  
UNIT: Blood Chemistry

BACKGROUND:

The study of the blood chemistry of smokers is important because: 1) Smoke components such as nicotine have been reported to have physiological and psychological effects upon the smoker. The exact amounts of these materials in the bloodstream of the smoker at any given time must be known in order to understand how these effects come about. 2) The physiological and psychological effects are mediated through other bodily substances, such as hormones and neurotransmitters. Therefore, the circulating levels of these substances must also be known.

OBJECTIVES:

Develop means to accurately assess the blood chemistry of smokers and use these to determine the effects of smoking on blood chemistry in humans.

<u>STEPS:</u>	<u>COMPLETION DATE</u>
1. Complete development of analytical method for nicotine and cotinine in blood.	ASAP
2. Complete analysis of samples/data from 1983 study of smokers' blood.	ASAP
3. Establish in-house RIA method for selected compounds.	07/01/84
4. Develop HPLC technique for selected catecholamines in blood.	12/31/84
5. Conduct integrated study of smoking/stress and blood chemistry.	12/31/84
6. Complete analysis of data from 5., above.	03/01/85
7. Service/support other projects/programs as required.	Ongoing
8. Add staff scientist ( PhD/MS clinical chemist).	01\01\86
9. Expand repertoire of assays to include COHb, thiocyanate, blood gases, expired gases, others as needed.	12/31/86
10. Build data base of information through a series of studies (as described in 5 & 6,	Ongoing through

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above), improving methodology and integrating additional, more sophisticated measurement techniques, at 6-9 month intervals.

12/31/87

11. Develop quantitative information regarding the processes of absorption, transport, metabolism and excretion of smoke/tobacco components (with emphasis on nicotine) and their relation to useage behavior or other factors (e.g., demographics).

Initiate by  
01/01/86

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PROJECT: Biobehavioral R&D  
7610

WORK Psychophysiology of  
UNIT: Smoking

BACKGROUND:

That tobacco products have effects on the psychophysiological states of consumers is well-established. For example, nearly every smoker will aver that smoking helps him/her to "relax". It has been found in some cases that smoking facilitates performance of boring but demanding tasks. Nearly all of the overt physiological effects of smoking (e.g., rise in heart rate and blood pressure) have been noted only in resting subjects; little is known about effects in active subjects. The psychological bases for these phenomena are not understood, yet to the consumer, some may be perceived as "benefits of smoking".

OBJECTIVES:

Develop knowledge and expertise in regard to the effects of tobacco use on the psychophysiological state of the consumer, including interactions with (for example) personality traits, emotions, stress, short-term activity level and life-style factors.

STEPS:

COMPLETION DATE

- |  |          |
|--|----------|
| 1. Complete pilot study, integrating measurements of psychophysiological variables and blood chemistry, of smoking and stress. | 12/31/84 |
| 2. Complete analysis of data from 1., above.   | 03/01/85 |
| 3. Complete analysis and interpretation of 1982 smoking/stress experiment.   |          |
| a. Statistical analysis.   | 12/31/84 |
| b. Final report.   | 03/01/85 |
| 4. Complete development of technique for measurement/analysis of multichannel auditory and visual evoked potentials.           | 04/01/85 |
| 5. Complete pilot study of auditory and visual evoked potentials.  | 07/01/85 |
| 6. Complete study of multichannel auditory and visual evoked potentials.   | 10/01/85 |
| 7. Complete studies of effects of smoking on selected psychophysiological variables during active coping with stress.          |          |
| a. During game-playing stress.   | 07/01/85 |
| b. Develop social interaction rating   |          |

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- scale (Dr. C. D. Spielberger, U. South Fla. and Dr. Ray Rosenman, SRI, consultants). 07/01/85
- C. During social interaction. 12/31/85
8. Develop techniques for analysis of effects of smoking under "naturalistic" conditions. 07/01/86
  9. Add staff scientist (MS/BS psychologist) 01/01/86
  10. Build data base of information through a series of studies (as described in 1 & 2 above), improving methodology and integrating additional, more sophisticated measurement techniques, at 6-9 month intervals. Ongoing through 12/31/87
  11. Expand Division capability in computerized measurement technology. Ongoing
  12. Fund selected ex-house projects, for example; long-term study of the interaction of smoking and diet, longitudinal development of electroencephalographic characteristics of smokers and non-smokers. Initiate by 01/01/86
  13. Continue support of research of Dr. H. J. Eysenck. Ongoing through 12/31/87

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PROJECT: Biobehavioral R&D  
7610.

WORK: Basic Sensory  
UNIT: Research

BACKGROUND:

At least three sensory modalities are involved in the perception of smoke by humans, namely; taste, smell and the common chemical sense. Each of these modalities is served by separate branches of the nervous system. Little is known about the relative importance of the sensations perceived by these separate senses to the satisfaction of the consumer. The relationships of smoking behavior and smoke chemistry to the sensory properties of smoke are also not well understood.

OBJECTIVES:

Develop understanding of the relative importance of sensory modalities to smokers and of the relationships among sensory and chemical properties of smoke and smoking behavior.

STEPS:

COMPLETION DATE

- |   |                                |
|---|--------------------------------|
| 1. Acquire needed professional and support staff.   | 10/01/84                       |
| 2. Determine relative importance of sensory modalities in at least one population of smokers. (Supports Consumer Satisfaction Interfunctional Program.) | 12/31/85                       |
| 3. Complete at least one major examination of the relationships of sensory and chemical properties of smoke to detailed smoking behavior.               | 12/31/85                       |
| 4. Determine effects of smoking on oral pH and examine relationship of oral pH to sensory properties of smoke (in collaboration with Fundamental R&D).  | 12/31/86                       |
| 5. Integrate sensory measures into psychophysiological studies, as appropriate.   | Ongoing<br>through<br>12/31/87 |
| 6. Provide liason/consultancy to other R&D projects as required.  | Ongoing                        |

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