

CAN PEPTIDES EXPLAIN  
THE DEPRESSIVE  
PSYCHOPHYSIOLOGY?

# MUST BE EXPLAINABLE BY FOUND FACTORS

- 1: SOCIAL INDIFFERENCE
- 2: DEPRESSED MOOD
- 3: MOTOR RETARDATION
- 4: SLEEP PROBLEMS
- 5: APPETITE CHANGES
- 6: LIBIDO DECREASE

# MUST BE EXPLAINED

- 1. DEXAMETHASONE SUPPRESSION ESCAPE
- 2: THYROID INVOLVEMENT
- 3: EFFECT OF SEROTONIN UPTAKE INHIBITORS
- 4. EFFECT OF TRICYCLIC ANTIDEPRESSANTS
- 5: CYCLIC NATURE OF DISEASE PROGRESS.

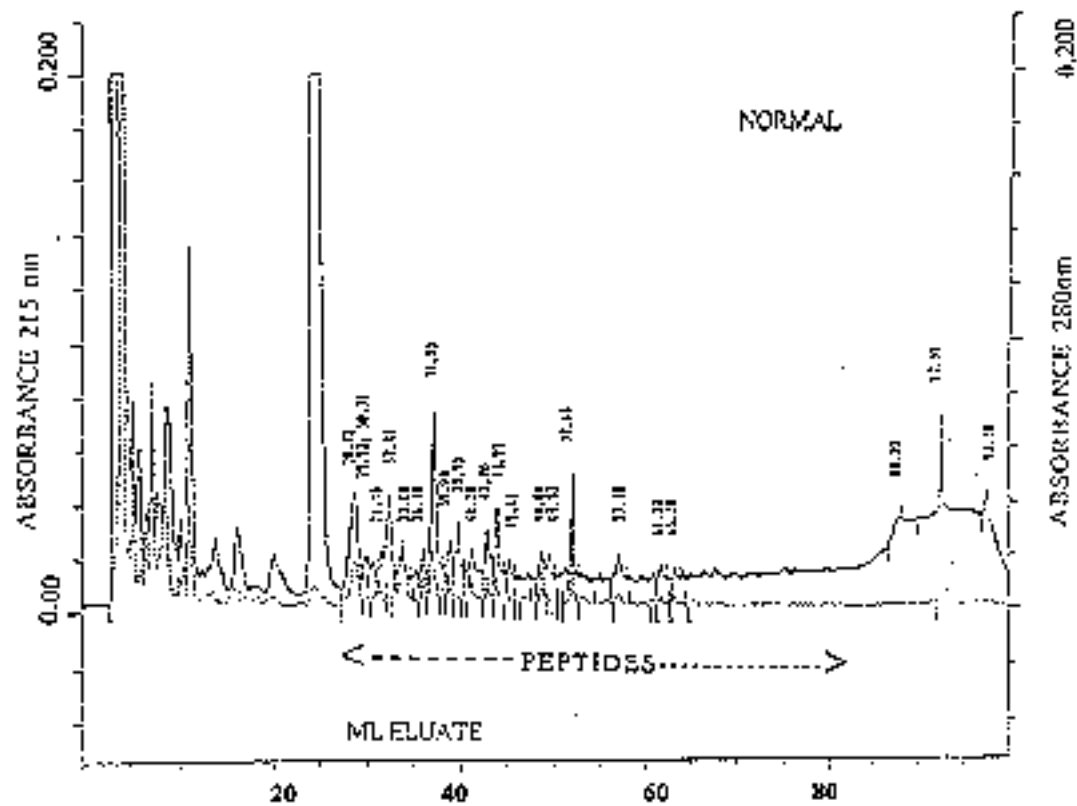
# SOCIAL INDIFFERENCE

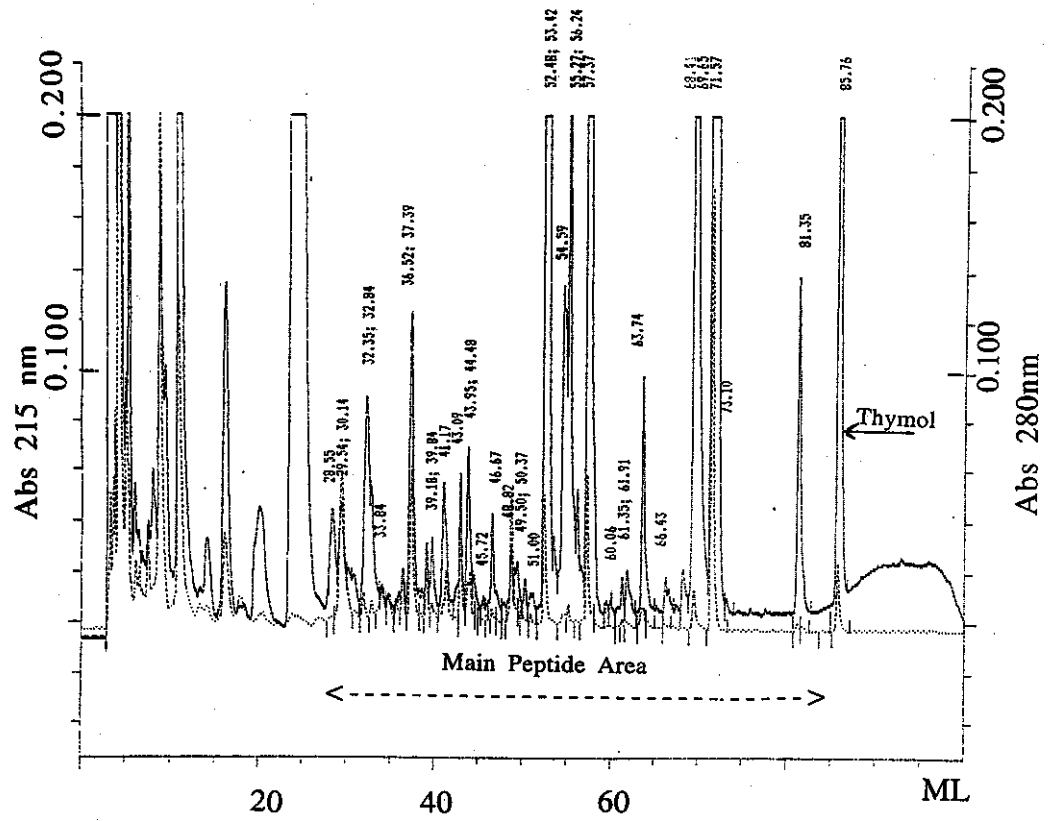
- 1. OPIOIDS INDUCE SOCIAL ISOLATION
- OPIOIDS ABROGATE SEPARATION DISTRESS CALL IN NEWBORN ANIMALS
- Panksepp J et al (1978)Peptides: 5:829-31
- Panksepp j et al ((1980)neurosci.behav. Rev.4:473-487

# Peptide increase in urine

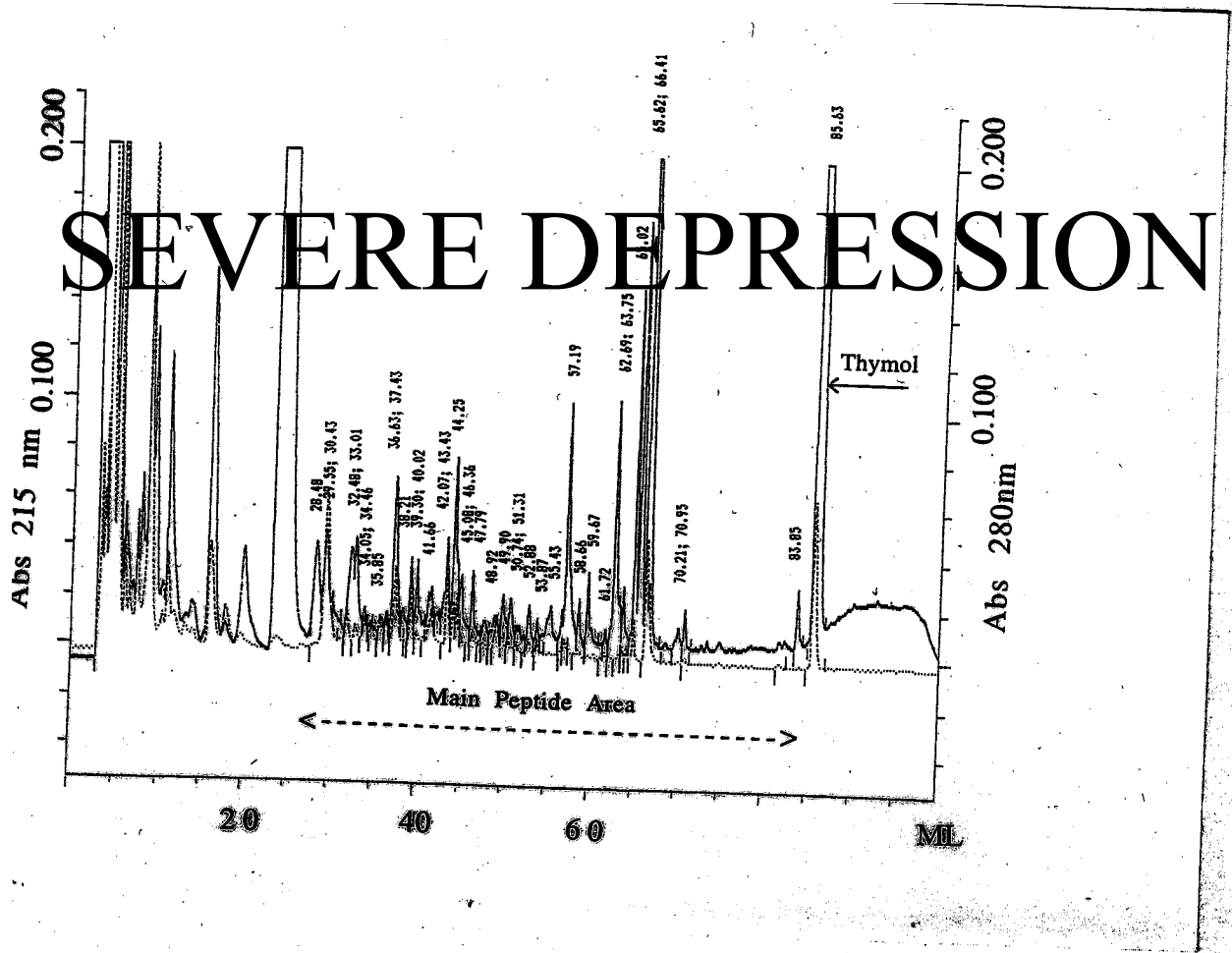
- 1. Sælid G et al (1985) Biol psychiat 20: 245-256
- 2. Reichelt KL et al ( 1985) Stress med. 1: 169-181

# INCREASE IN URINE OPIOIDS





# SEVERE DEPRESSION 2



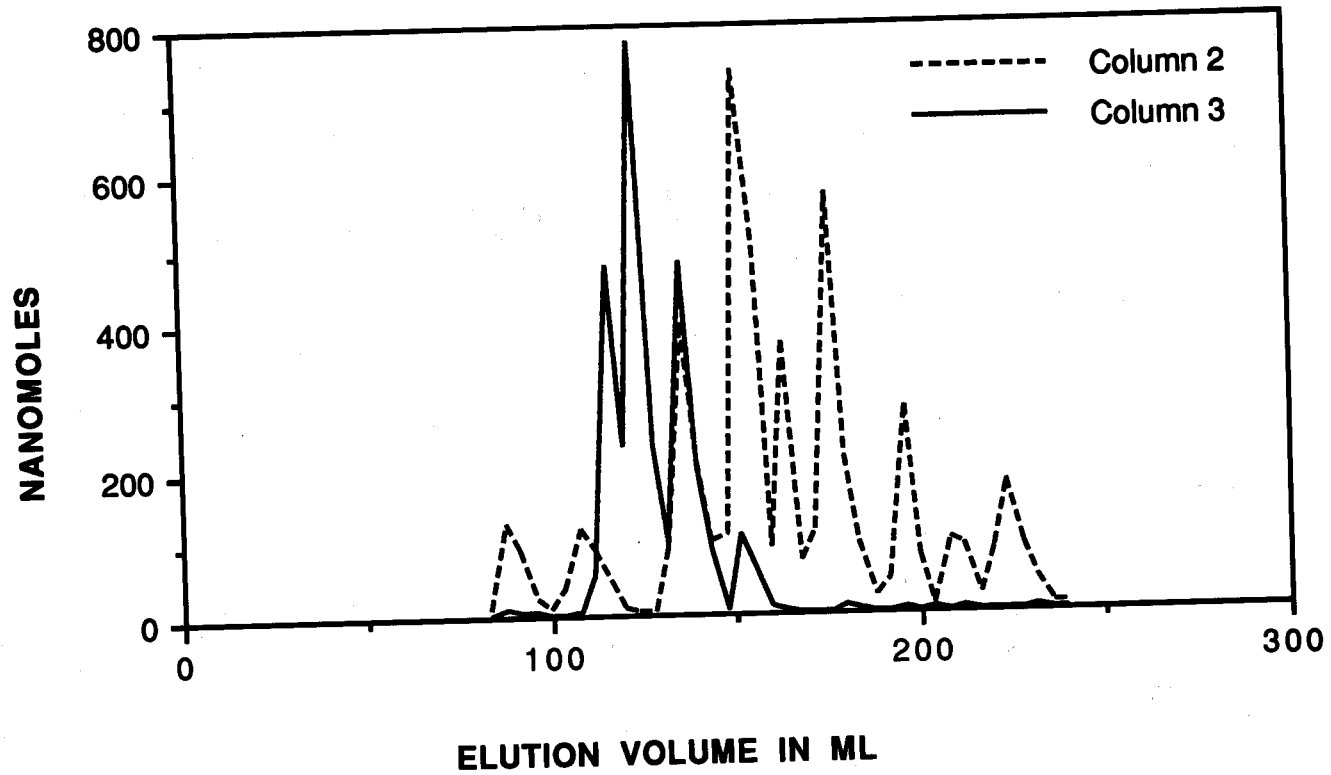
# QUANTITATIVE ASPECTS OF DEPRESSION

	FEMALES	MALES	FEMALES	MALES
	DEP.	DEP	CONT	CON
	812	766	252	221
SD	263	257	101	69
N	24	13	118	99
95%CI				
LOW:	701	611	234	208
HIGH:	923	921	275	325

# TREATED FEMALES COMPARED WITH UNTREATED

	Untreated	Treated
Mean	812	335
SD	263	106
N	24	18
95% CI		
Lower	701	254
Upper	923	417
P=0.001		

# GEL FILTRATION

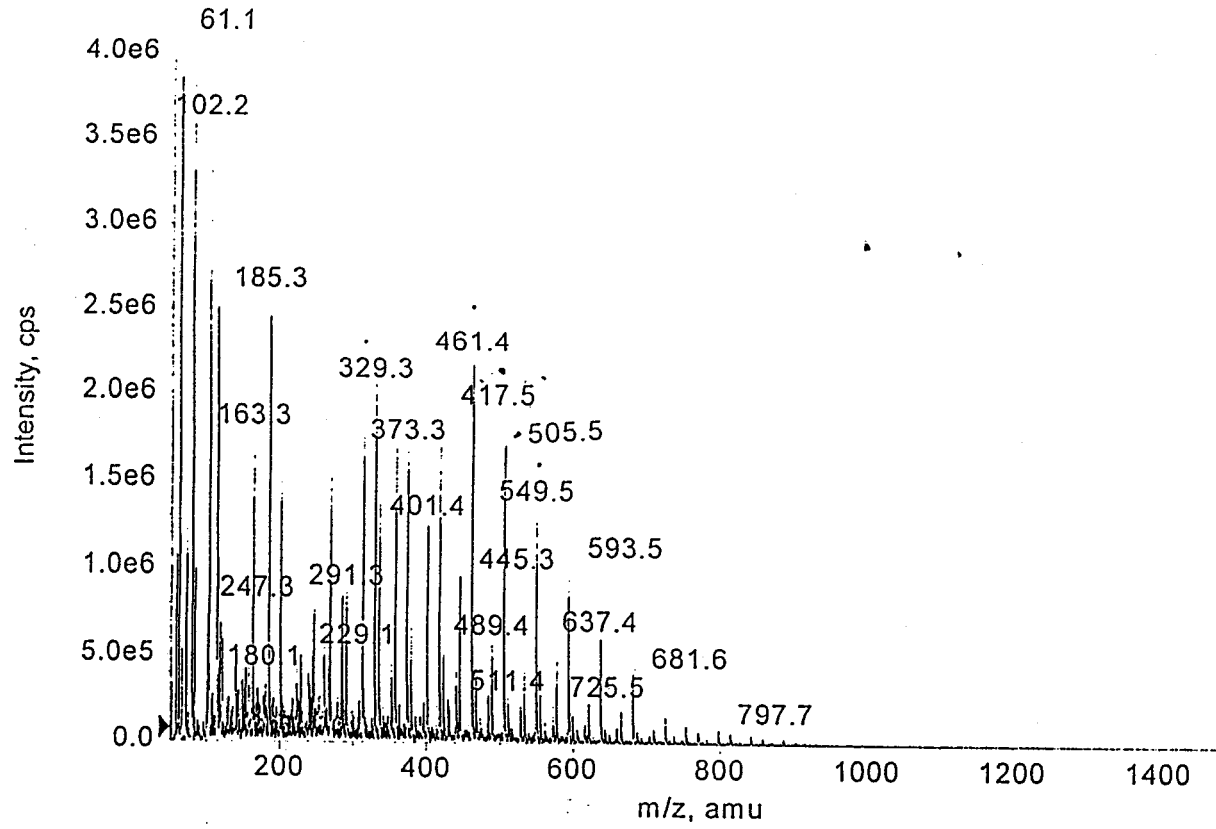


# Gel filtration characteristics

Table 2: The frequency (F) of the peak maxima typical of schizophrenia and depression expressed as Kav values (A gel-filtration constant) are shown.

Schizo. type 1		Schizo. type 2		Depression	
Kav	F.	Kav	F	Kav	F
0.20	5/34			0.20	3/27
0.41	14/34			0.43	19/27
		0.46	10/29	0.46	11/27
		0.53	12/29	0.50	25/27
0.61	21/34	0.61	17/29	0.61	26/27
				0.66	20/27
0.76	28/34	0.77	27/29	0.74	8/27
0.84	27/34	0.85	20/29	0.83	1/27
0.93	24/34	0.93	19/29		
1.04	20/34	1.03	17/29		
1.15	15/34				
1.25	15/34	1.26	11/29		
		1.35	2/29		
1.56	5/34	1.56	4/29		

Kav = Elution volume - Void volume / Total volume - Void volume. F = frequency  
 Kav values like 0.76 and 0.77 are the same and the difference is due to small variations in the elution volume. Schizo type 1 = DSM III 295.1 and Schizo type 2 = DSM III 295.9. Depression shown here is psychomotorically retarded psychotic depression. All were drug free and collected over 18 years.



# SOME PEPTIDES ISOLATED

STRUCTURE	MASS (THEOR) SPECT	K <sub>av</sub>
Y-P-F-P-GNH <sub>2</sub>	578.2 (578.6)	0.61
Y-P-F-P	521.2(521.3)	0.66
Y-P-F-P-G-P-I-P	888(888.05)	0.50
PyroE-W-G	372.3(372.36)	0.61
Y-P-F-P-G-I	790.7(790.9)	0.5

# PEPTIDES FOUND WITHOUT KNOWN FUNCTION

• STRUCTURE	MASS (THEOR.)	K <sub>av</sub>
• Y-P-E-P	504.6 (504.54)	0.61
• F-P-G-P	416.3 (416.4)	0.61
• P-F-P	359.4 (359.42)	0.61

# PEPTIDASES DECREASED IN DEPRESSIVE DISORDERS

A:ENZYME

REFERENCE

- ANGIOTENSIN MAES M ET AL. BIOL  
CONV. ENZ PSYCH.30(91)577-86

- B:DIAMINO PEP- MAES M ET AL.BIOL
- TID. IV. PSYCH.32(92) 621-24

- C:PROLYL EN- MAES M ET AL. BIOL
- DOPEPTIDAS. PSYCH.35(94)545-52

# PEPTIDURIA AFTER PEPTIDASE INHIBITION.

- 1: WATANABE Y ET AL (93) RES  
COMM CHEM. PATHOL.  
PHARMACOL. 81: 323-50
- 2: ABASSI Z ET AL (92) METABOLISM  
41: 683-85

# OPIOIDS AND DEPRESSION

- AGREN H AND TERENIUS L (1985)  
Hallucinations in patients with major depressions. Interactions between CSF monoaminergic and endorphinergic indices.  
J Affect Disord. 9: 25-34
- AGREN H AND TERENIUS L (1983)  
Depression and CSF endorphin fraction 1.  
Psychiat Res 10 : 303-311.

# OPIOIDS EXPLAIN CONSTIPATION

- DE PONTI F ET AL (1989) J PHARM  
PHARMACOL 41: 302-305

# PEPTIDE INCREASES FOUND BY OTHERS.

- SUBST P LIKE: RIMON R ET AL (1984)  
BIOL PSYCH. 19: 509-516,
- DELTA SLEEP PEPTIDE: WESTRIN Å  
ETAL (1998) J AFFECTIVE DIS. 49: 45-  
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