

(internal stress) , 가 (neurogenesis) ,
psychosocial .
biological .
가 ,
가 ,
가 ,
corti-
otropin releasing factor(CRF) CRF
가 가 가
가 가 가 ,
가 CRF 가
가 , , ,
가 (structural (neuronal adaptation) , ,
가 ,
가 , 가 ,
가 .

rine ; NE)
 가 5-HT NE
 ,
 , 5-HT NE
 , 5-HT
 가 NE
 가 5-HT
 , NE
 가 5-HT
 NE
 5 -
 HT NE
 ,
 가
 가 가 3 4
 가 (monoamine receptor
 sensitivity hypothesis)(2)
 , 가 가 가
 가가
 , 가
 (down - regulation)
 reserpine 15%
 reserpine 가 , (up - regulation)
 가
 가 가 (monoamine depletion
 hypothesis)(1) . 가 가
 , (se- HT2A
 rotonin ; 5-HT) (norepineph- 가
 가 AR
 5 -
 가
 가 AR

가, NE 5-HT 가 , GABA/benzodiazepine

(10).

CRF

CRF

가, - - ,

CRF

(paraventricular nucleus) CRF CRF mRNA

가,

가 .

CRF

(adreno-

corticotropin hormone, ACTH) 가

- -

가 (8).

. CRF

Corticotropin Releasing Factor(CRF)

, .

CRF PVN (parvo-

cellular division) (brain stem)

, CRF

, bed nucleus stria terminalis(BNST)

. CRF 가

[

CRF

(locus coeruleus), (parabrachial nucleus),

(raphe nucleus)] CRF

(phenotype) ,

(immunoreactivity) ,

(9). 가

(early maternal separation)

(maternal deprivation)

(11).

CRF가 CRF receptor 1(CRF -

CRF

R1) CRF receptor 2(CRF - R2)가 ,

CRF - R1 (free cortisol)
 , CRF - R2 (dexamethasone test)
 가
 (12).

CRF 가
 (13), CRF - R1 , ,
 , (explicit process) 3 (MRI) (16).
 , CRF - R2
 (implicit process), 가 ,
 (11). CRF - R1
 CRF ACTH 가 . 가
 CRF - R1
 (antagonist) 가 , 가 (corticosteroid
 CRF - R2 receptor hypothesis)(17) . 가
 (14) .

(Glucocorticoid) mifepristone(RU486)
 (18).

(Cytokine)
 가
 가 .
 (nega-
 tive feedback)
 가
 (dentate
 CA3
 (15).
 가 proinflammatory
 가
 (19~23).

gyrus)

generation) quinolinate (neuro-
protection) ky-nurenate
HPA
TNF - 가 IL - 1, IL - 2, IL - 6, (24).
(27).
(28). cytokines 가
inflammatory
cytokines receptor antagonist, anti -
cytokine antibody, anti - inflammatory cytokines
IL - 1 receptor antagonist(IL - 1ra) mRNA가
(25). IL - 1 가 , IL - 1ra inescapable
shock (learned helplessness)
가, NE (turnover) 5 - HT 가,
DA 가 IL - 1 가
in vitro IL - 1가 5 - HT
5 - HT CRF receptor
transporter 가 (26). antagonist
, IL - 1
가 CRF IL - 1
가 CRF
5 - HT 가
indoleamine - 2,3 - dioxygenase(IDO) 가
가 5 - HT
cytokines 가가 IDO 가 tryptophan
degradation pathway가 (neurode-

(Neural Circuitry)

(anhedonia) 가 (anergy) (31). (meso- limbic dopamine system) (ventral teg- mental area) (nucleus accumbens) (motivation) (reward) 가 . (limbic - cortical - striatal - pallidal - thalamic tract)가 (29). 가 . 가 . 가 . 가 . (consolidation) , (explicit memory) 가 . (working memory), 가 , (32). (ventral tegmental area), (dorsal raphe nucleus), (locus coeruleus) BDNF NE 5 - HT cAMP - CREB BDNF 가 . cAMP - CREB BDNF (30). 가 . 3~4 가 .

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