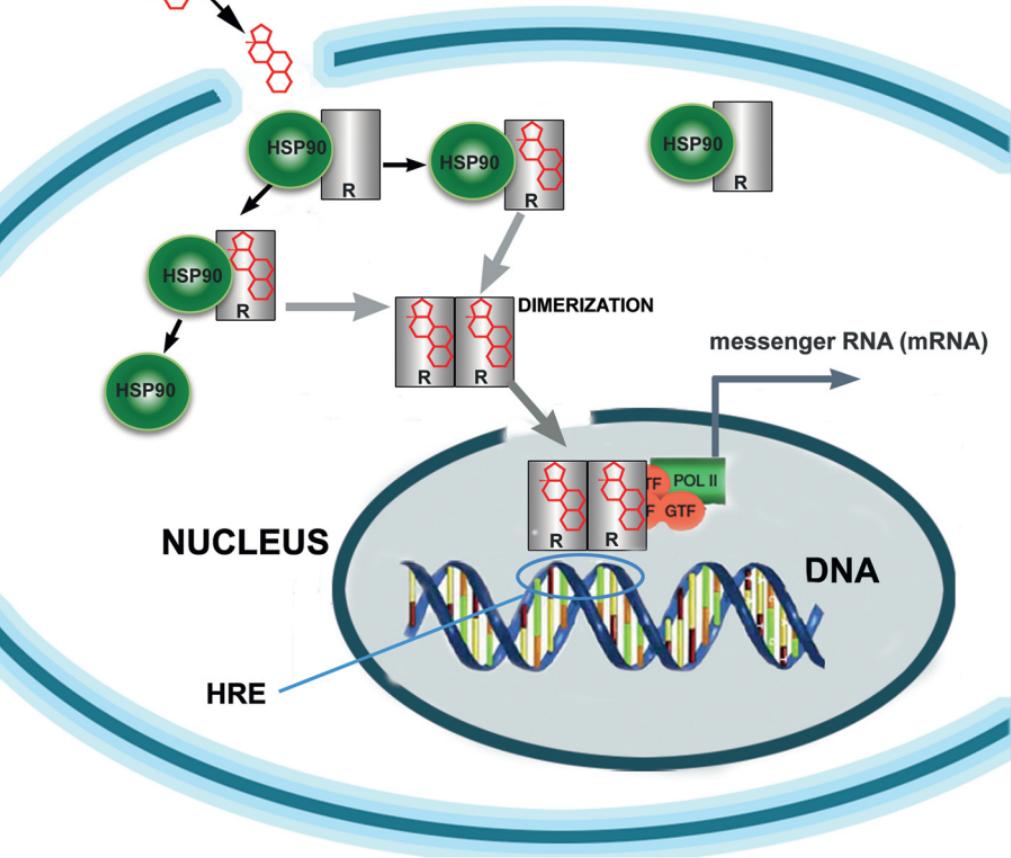


BINDING GLOBULIN



CELL MEMBRANE



# STEROID RECEPTOR “SUPERFAMILY”

AR

AMINO TERMINAL DOMAIN ( NTD )

DBD

H

HORMONE BINDING DOMAIN

ER $\alpha$

NTD

DBD

H

HORMONE BINDING DOMAIN

ER $\beta$

NTD

DBD

H

HORMONE BINDING DOMAIN

GR

NTD

DBD

H

HORMONE BINDING DOMAIN

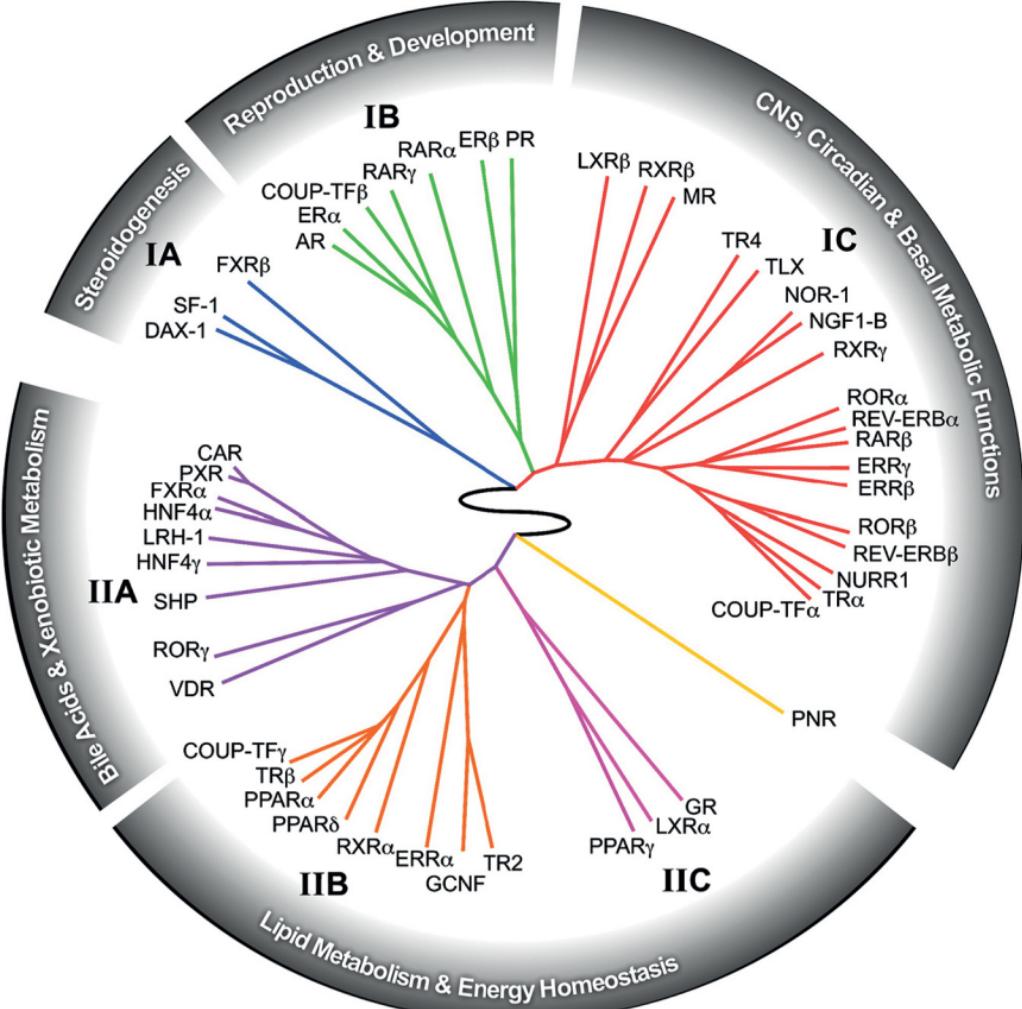
PRB

NTD

DBD

H

HORMONE BINDING DOMAIN



**ER $\alpha$**

## Brain

↓ Food intake  
↑ Energy expenditure  
↓ Obesity

## Liver

↑ Insulin sensitivity  
↓ HGP

## Pancreas

↑ Survival  
↑ Insulin biosynthesis

## Fat

↓ Total WAT mass  
↓ Adipogenesis  
↑ SC distribution

## Skeletal muscle

↑ Insulin sensitivity

**ER $\beta$**

## Brain

↓ Food intake  
↑ Energy expenditure  
↓ Obesity

## Pancreas

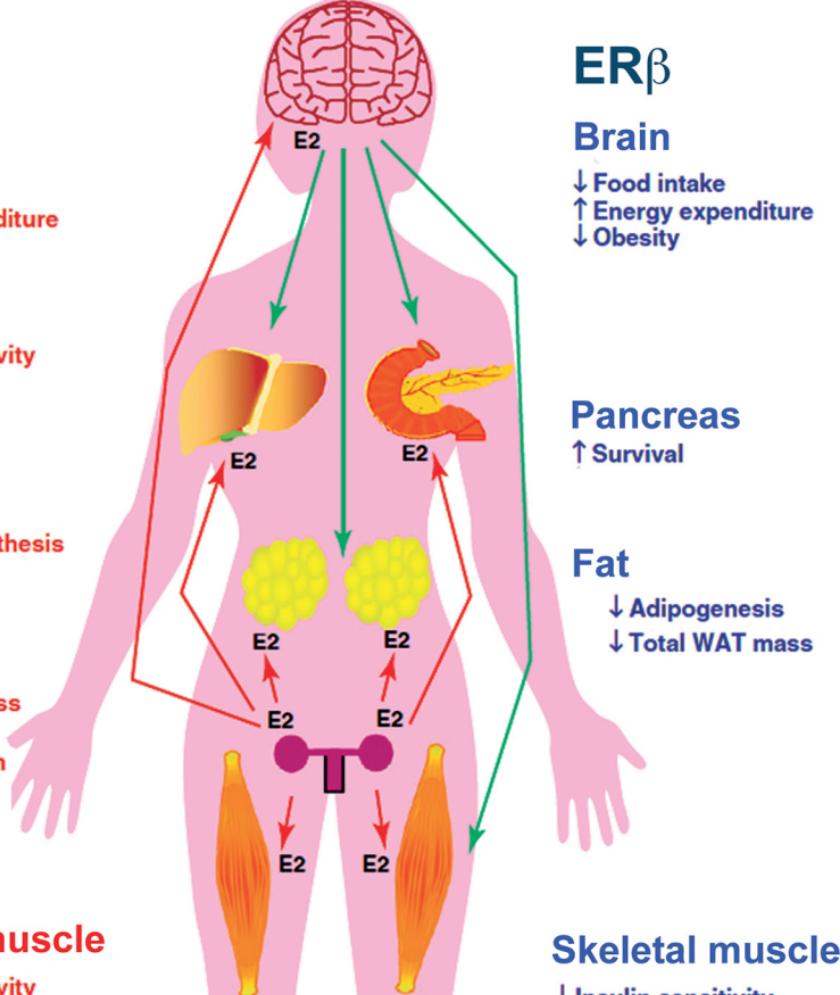
↑ Survival

## Fat

↓ Adipogenesis  
↓ Total WAT mass

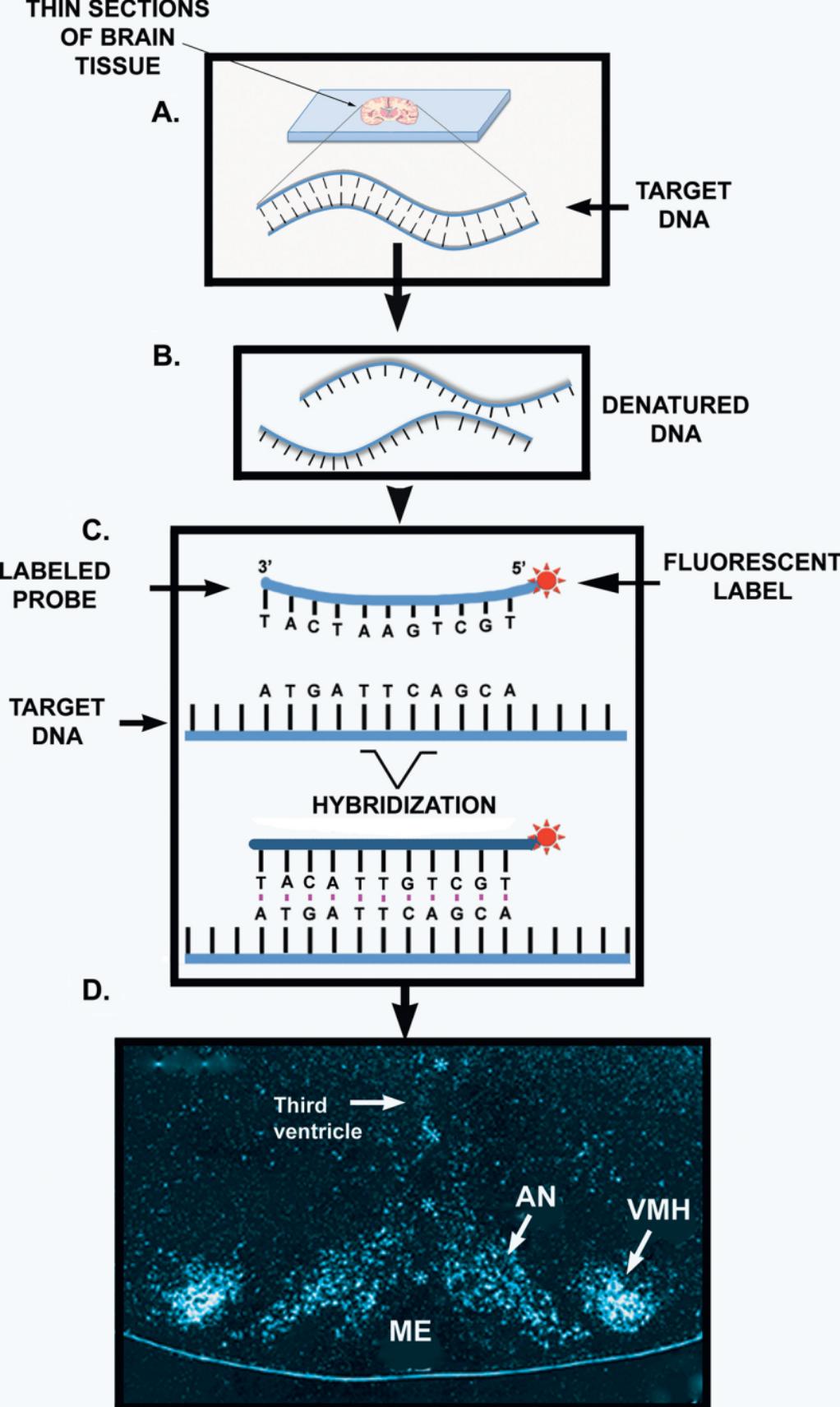
## Skeletal muscle

↓ Insulin sensitivity

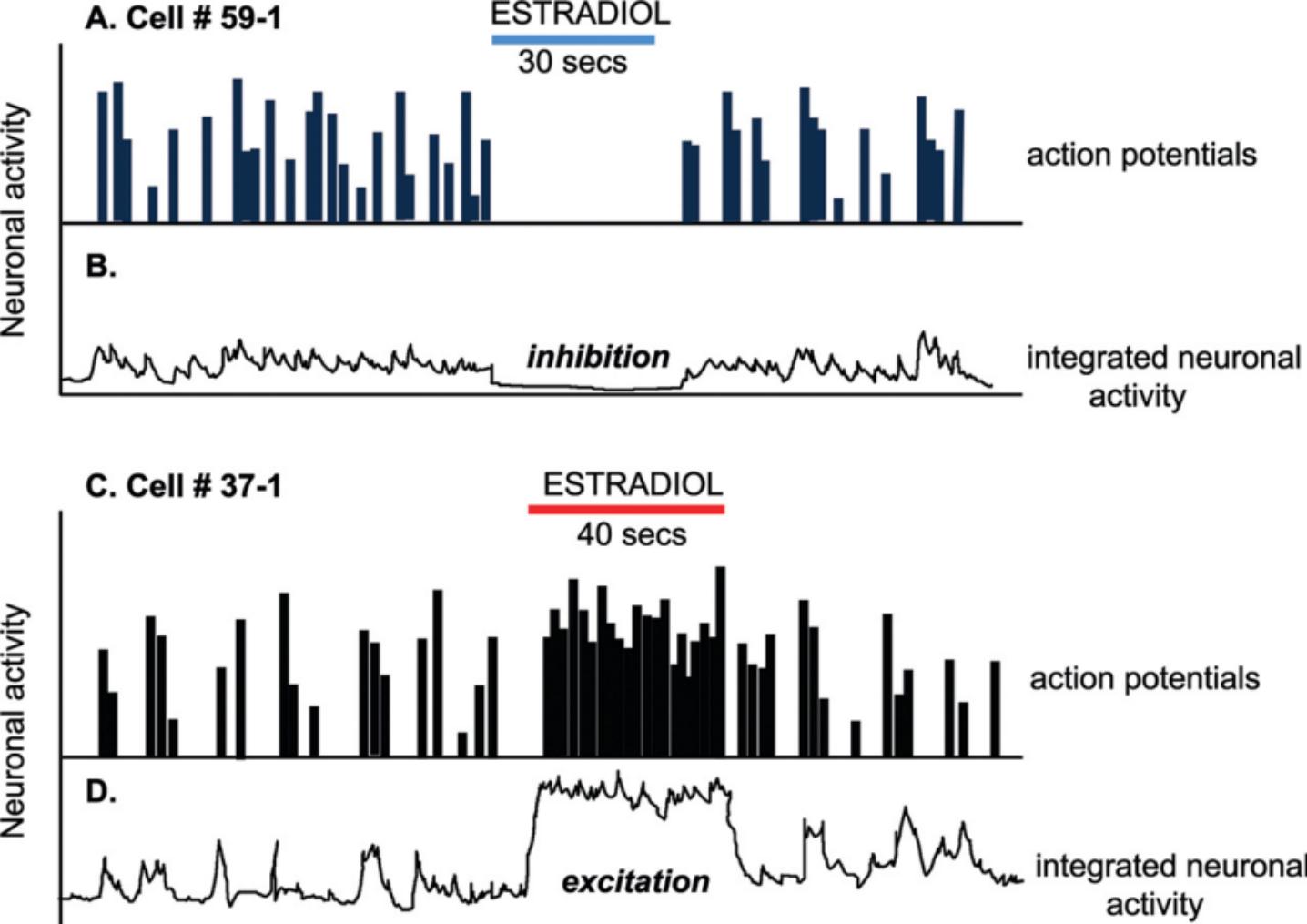


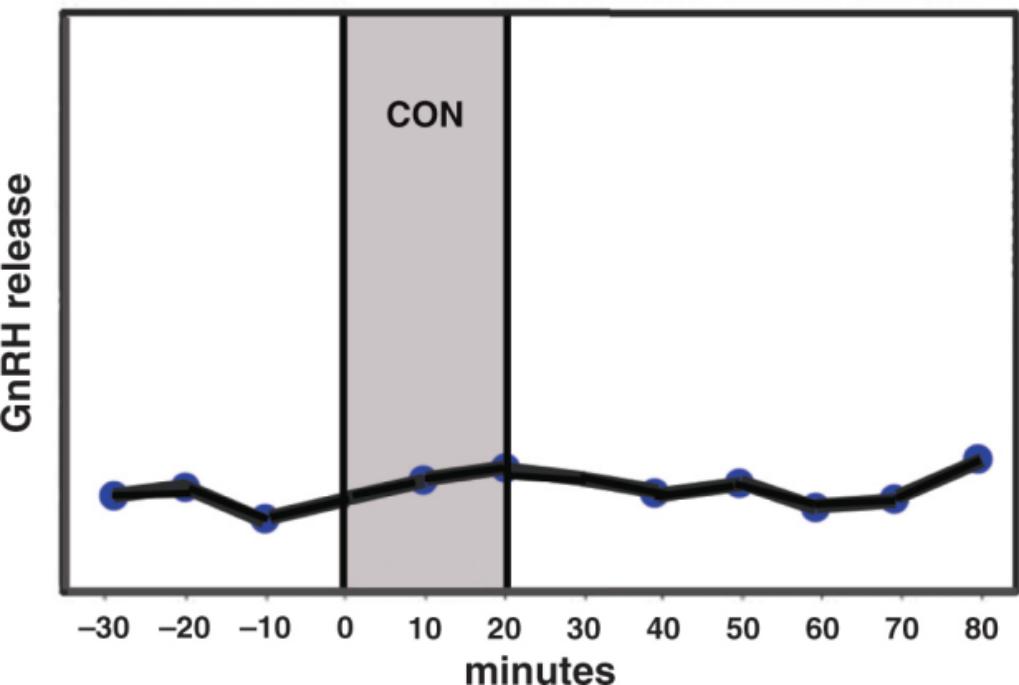
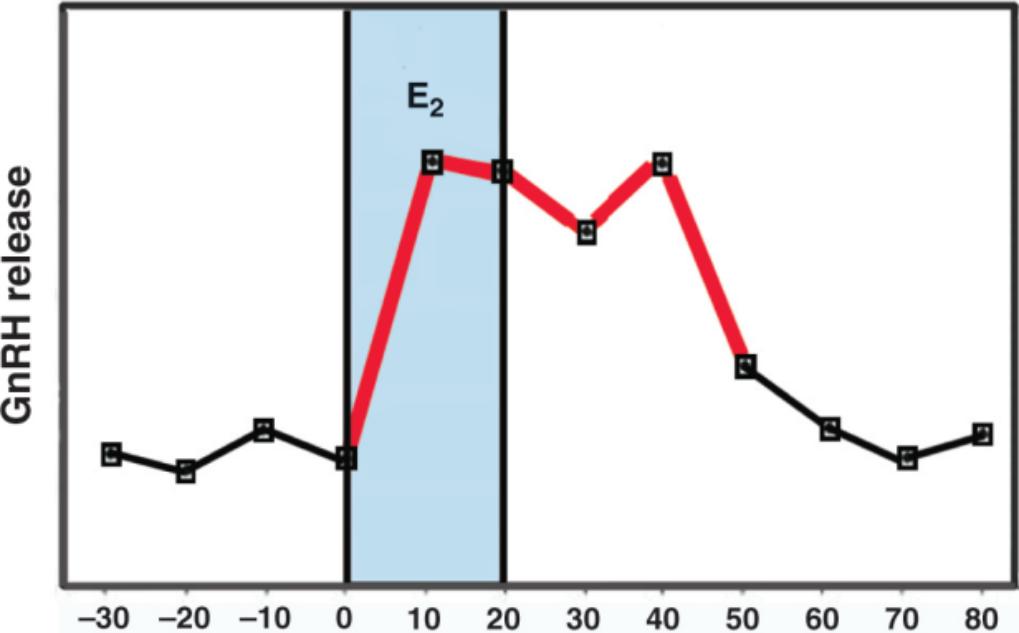
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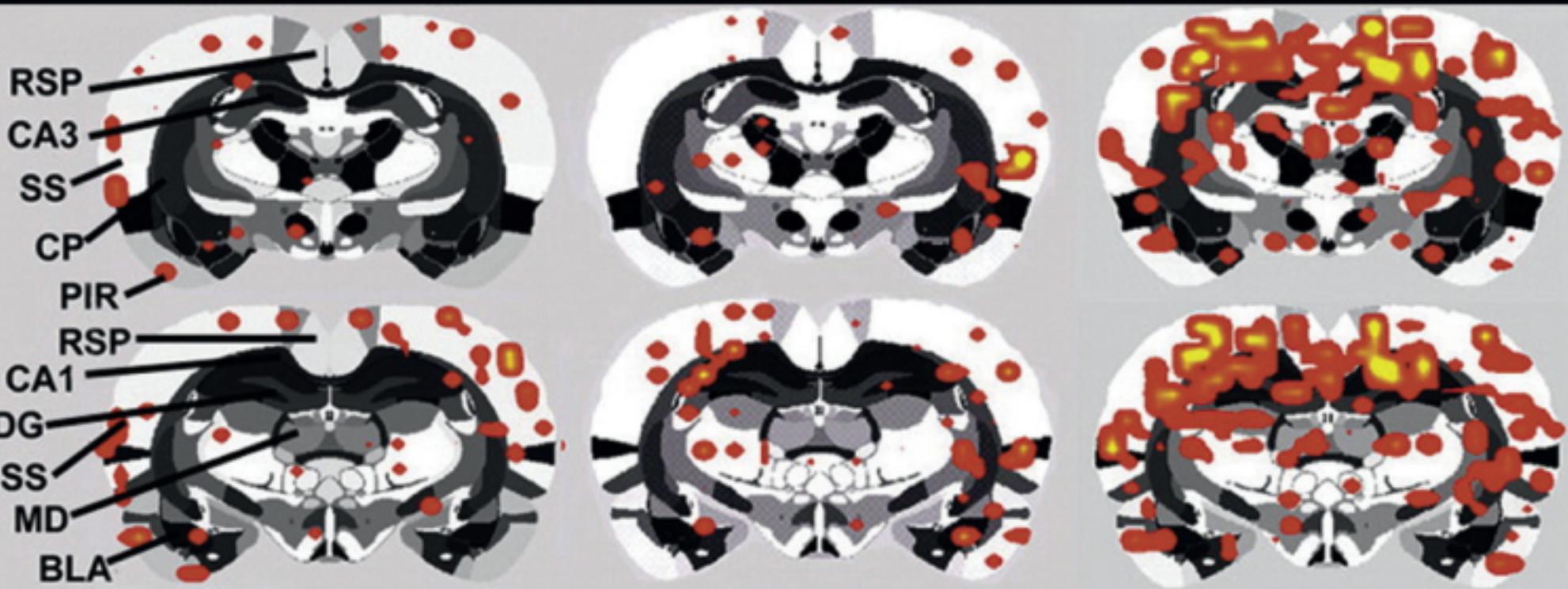
- Direct E2 effects on tissues
- E2 effects via autonomic nervous system



**Brain section showing cells (white) positive for ER $\alpha$  mRNA**





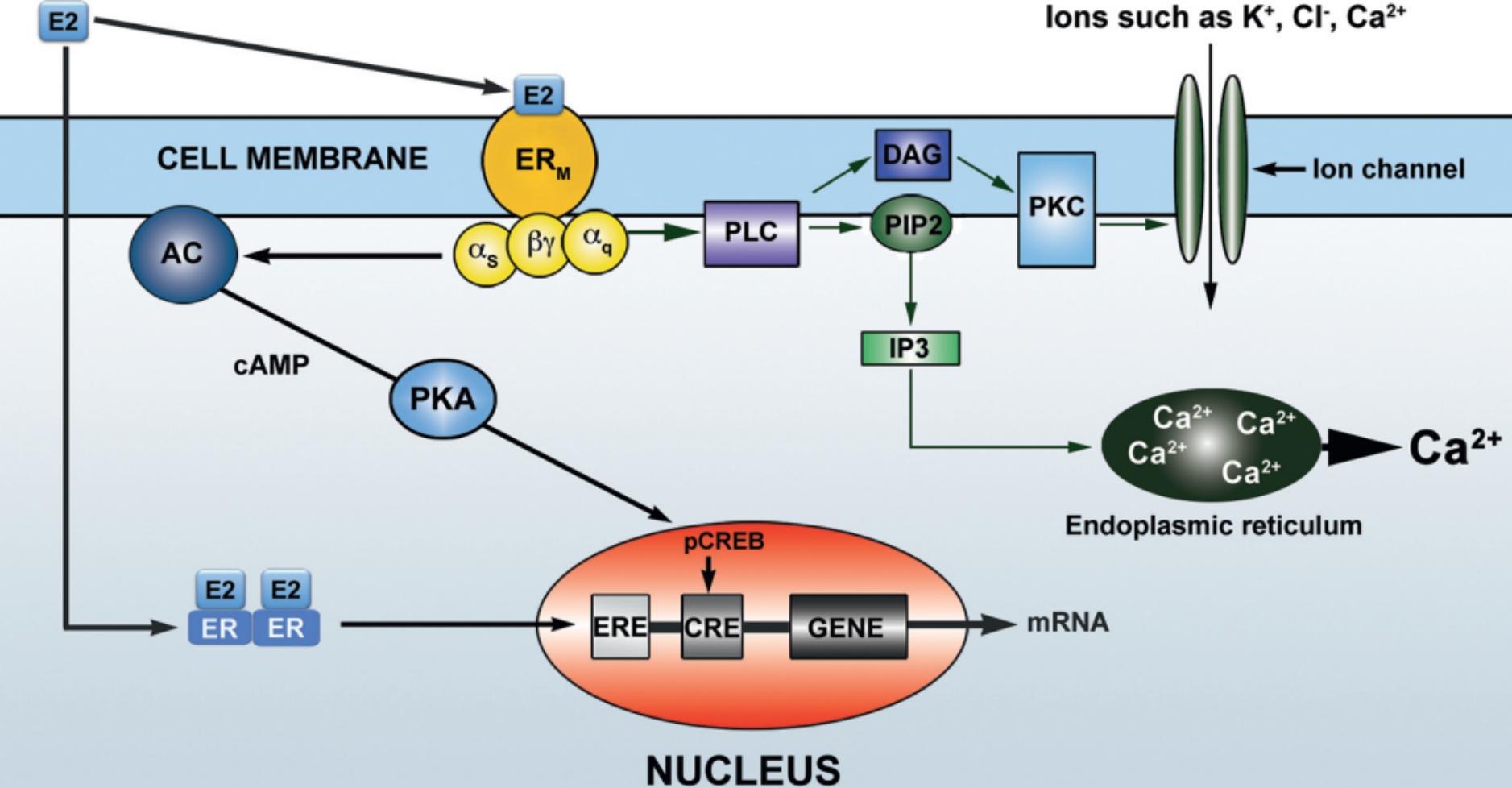


vehicle

17 $\mu$ g/kg

68 $\mu$ g/kg

0–60 secs post corticosterone injection



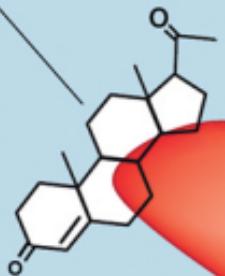
## GABA<sub>A</sub> RECEPTOR

progesterone

Cl<sup>-</sup>

β2  
β2

α1



α1

Enhanced current

Inhibition of  
action  
potentials

Excitatory input

NEURON

*ER $\alpha$*

*ER $\beta$*

HIPPOCAMPUS

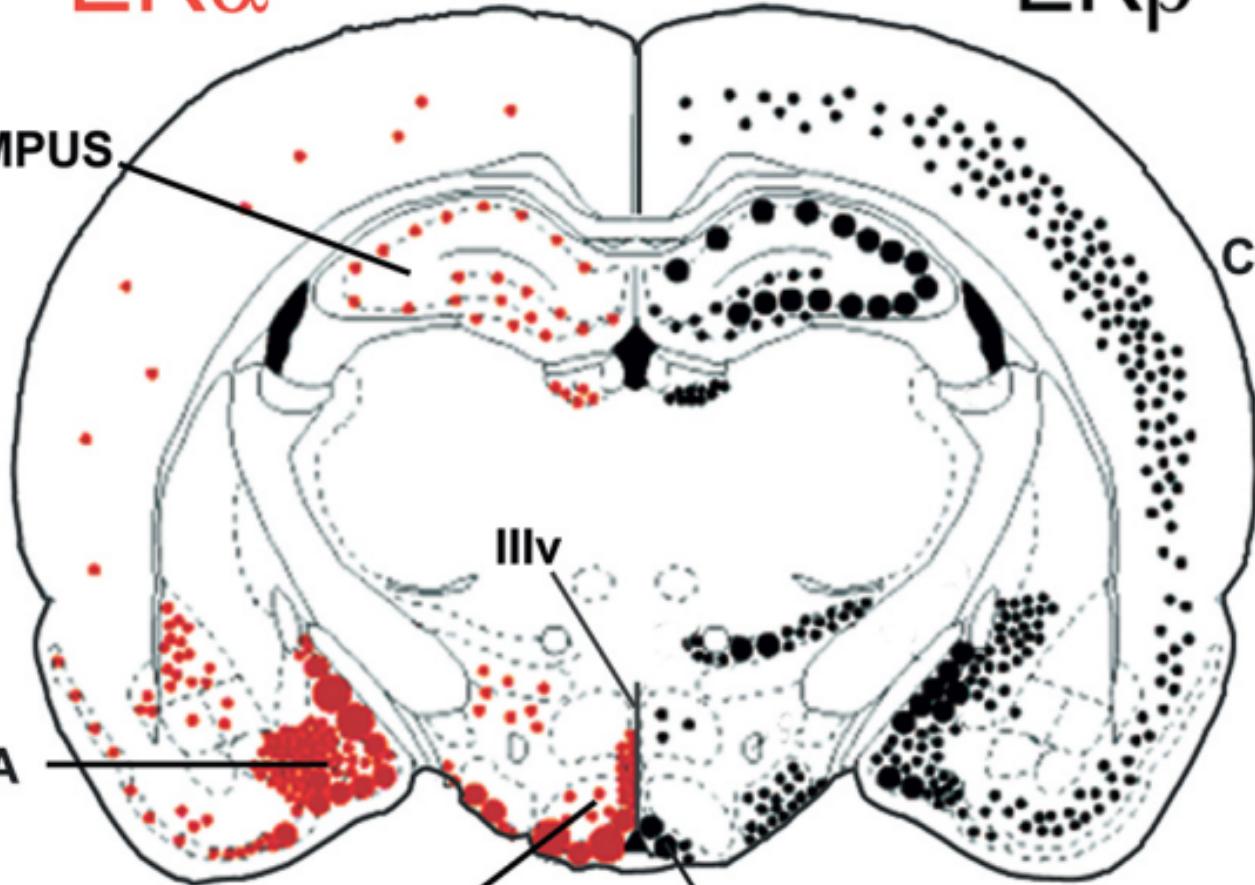
CORTEX

AMYGDALA

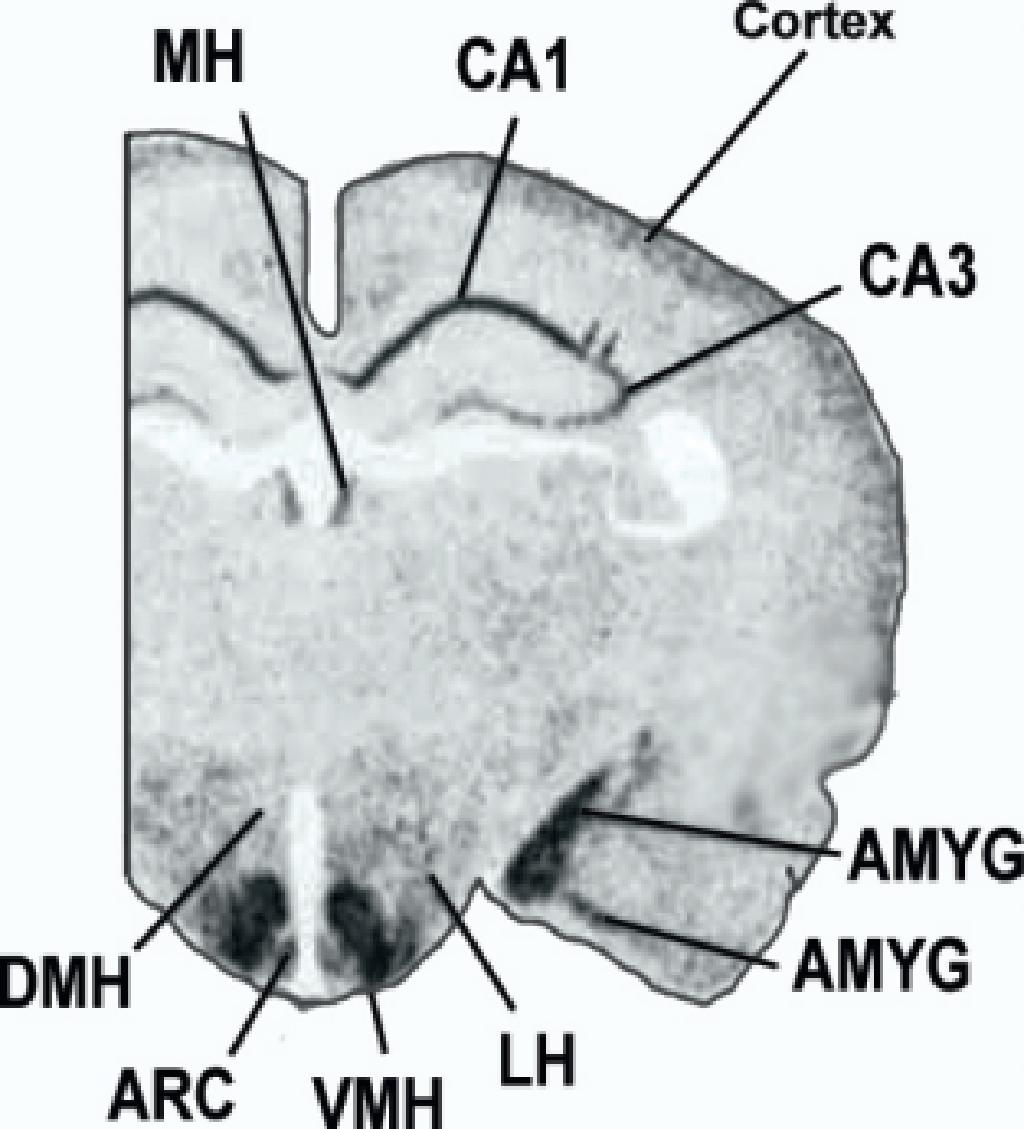
HYPOTHALAMUS

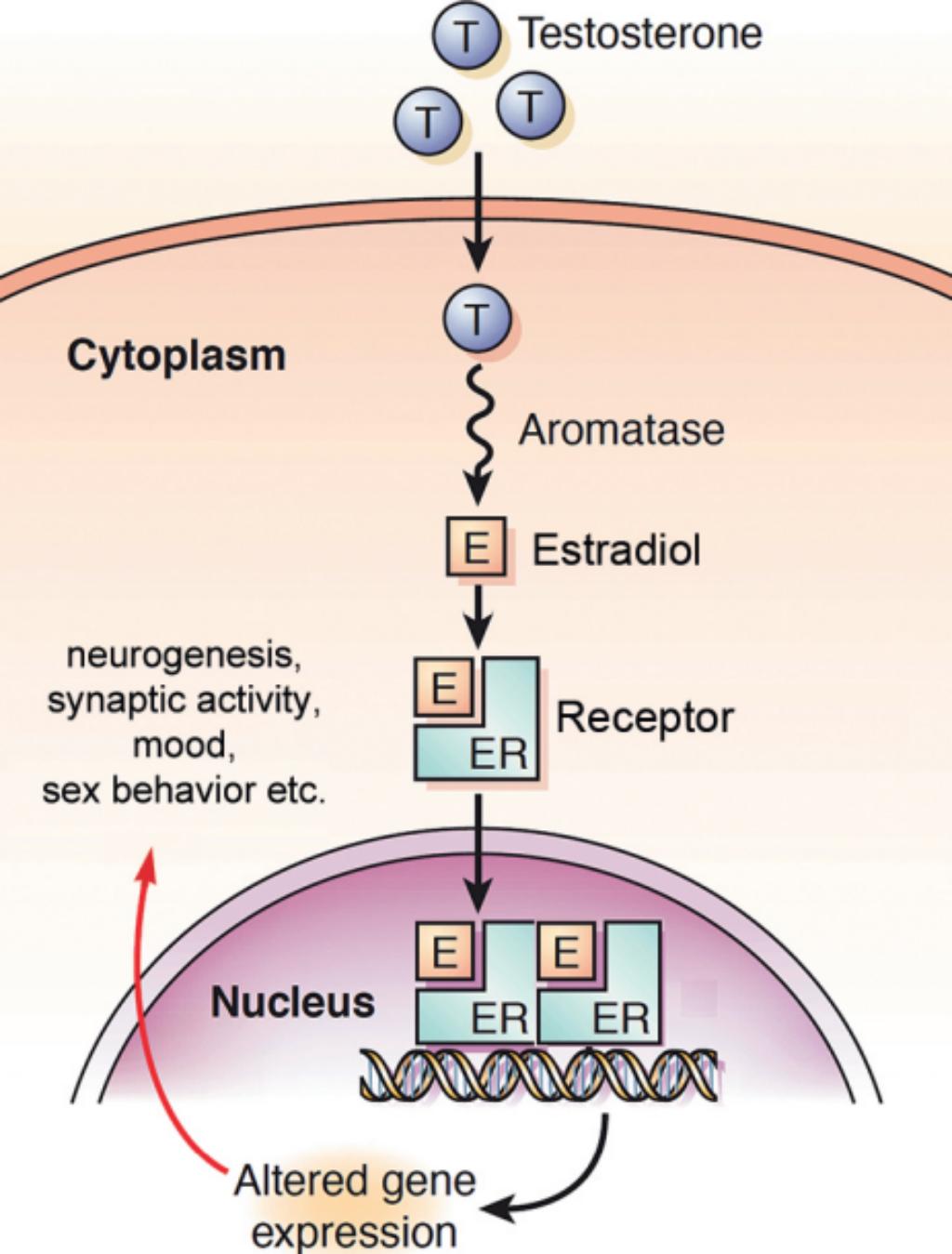
ARCUATE NUCLEUS

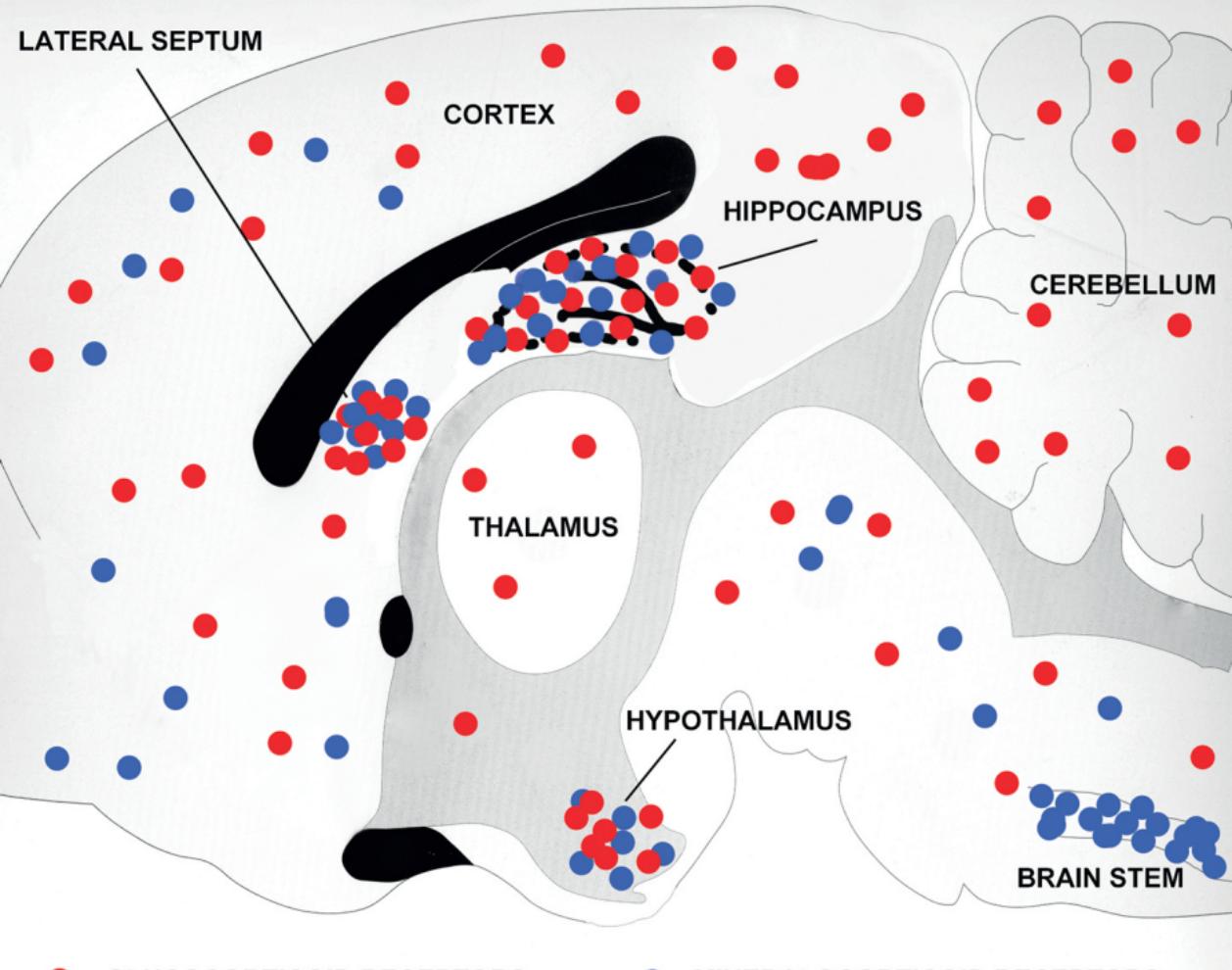
IIIv

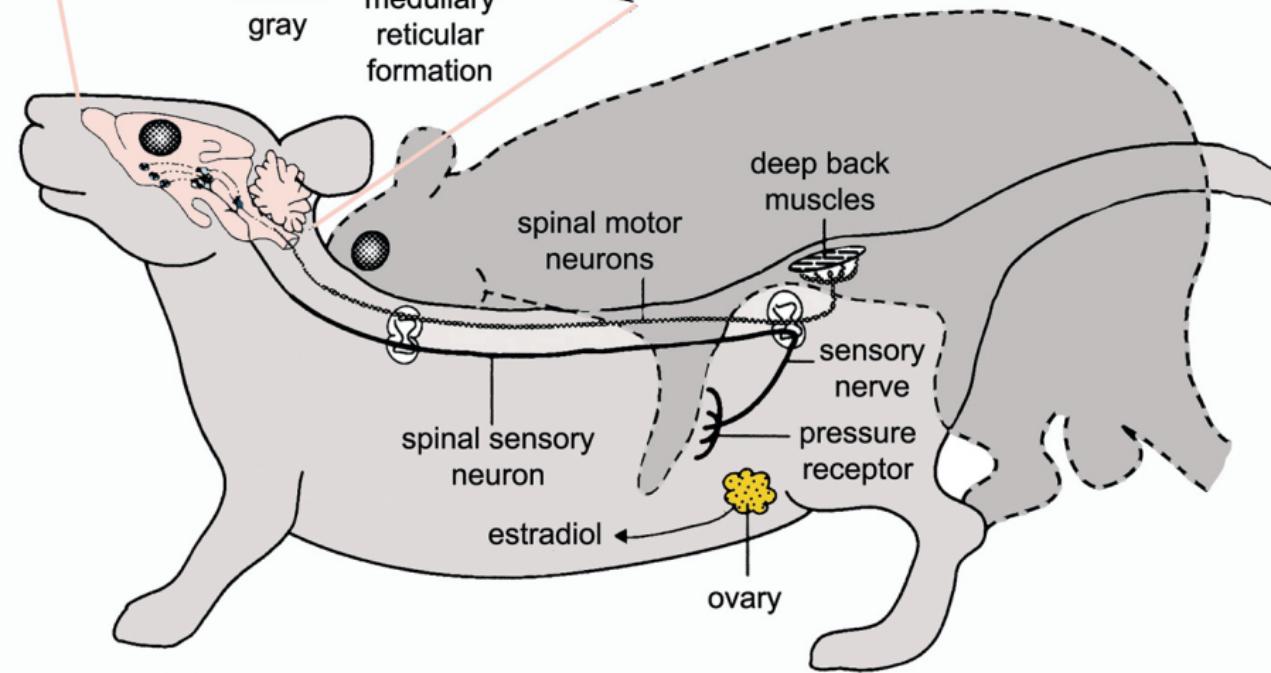
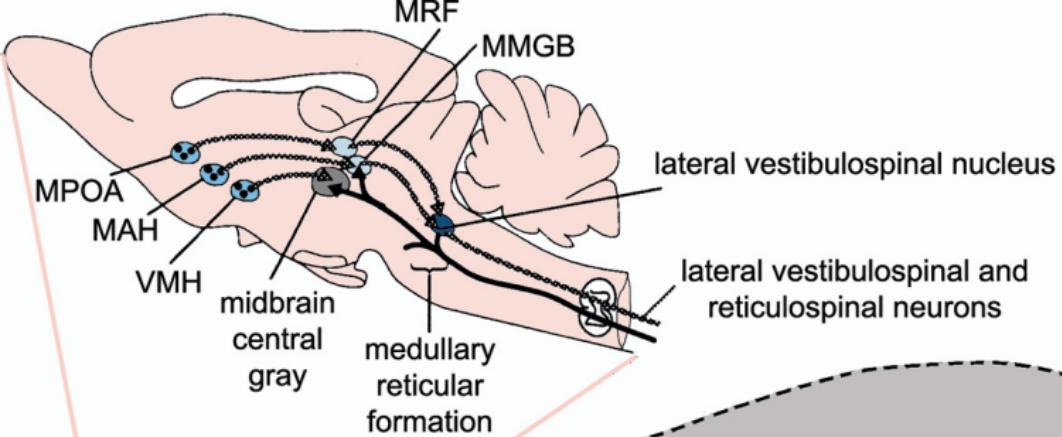


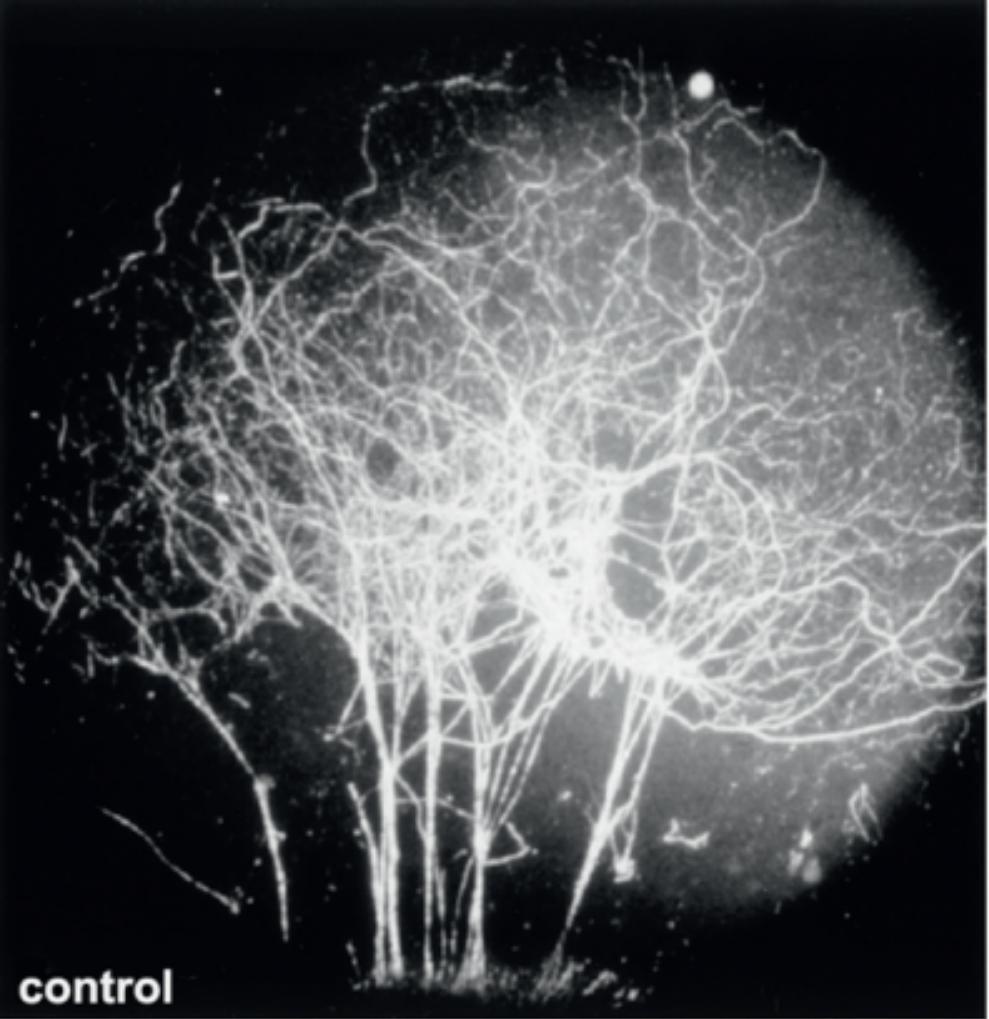




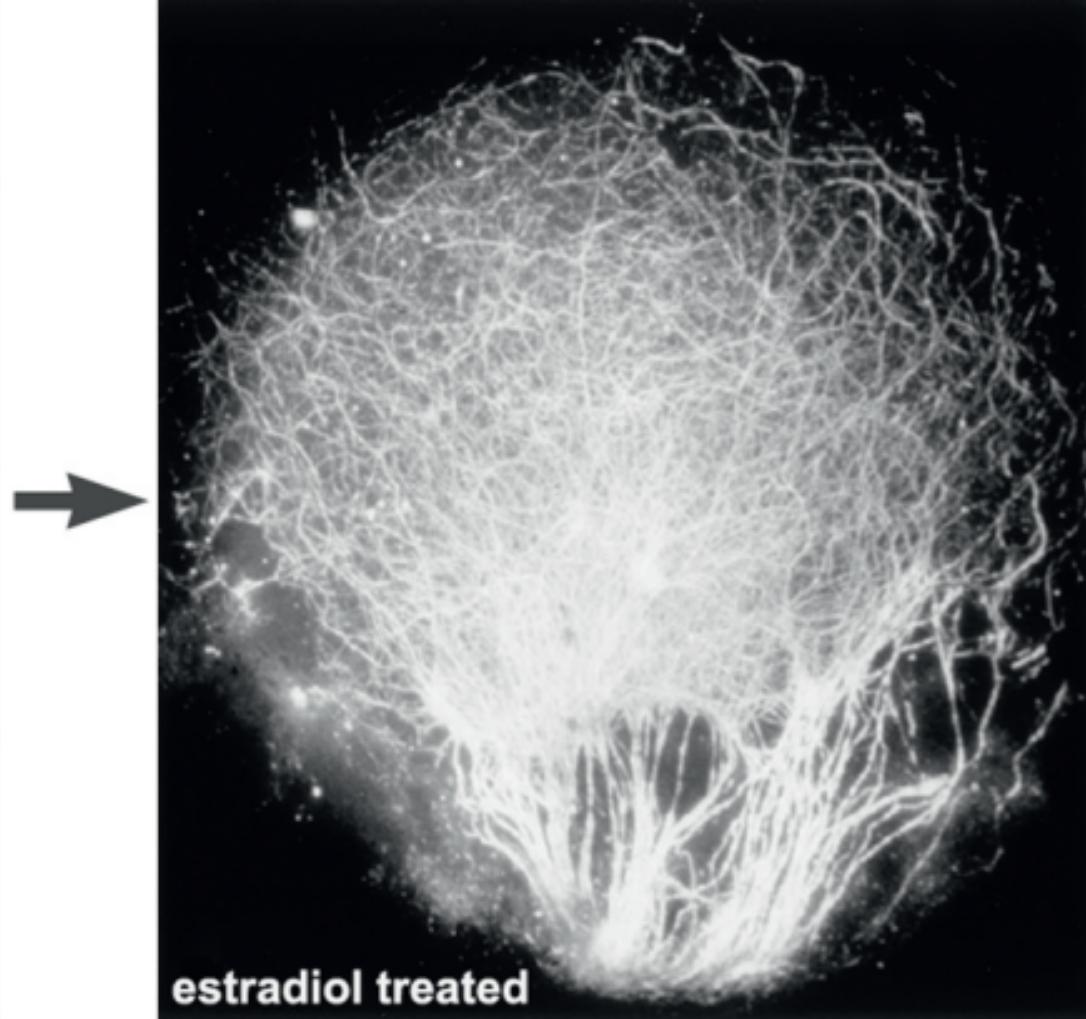








control



estradiol treated

