

DIENCEPHALON

epithalamus

**thalamus
(metathalamus)**

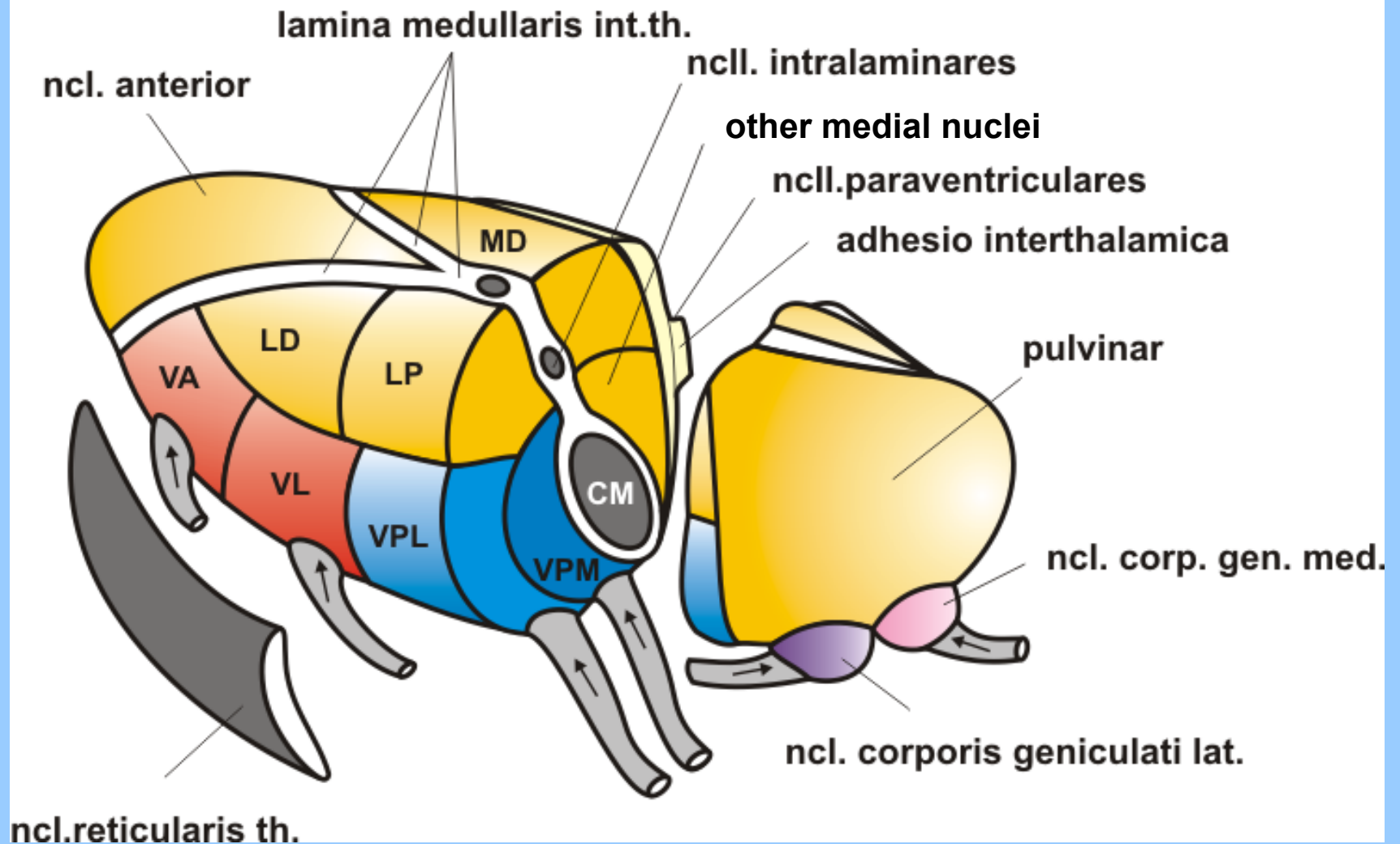
sulcus hypothalamicus



hypothalamus

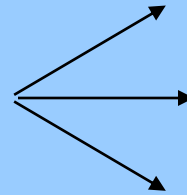
subthalamus

THALAMIC NUCLEI



FUNCTIONAL CLASSIFICATION OF THALAMIC NCLL.

specific ncll.



senzory

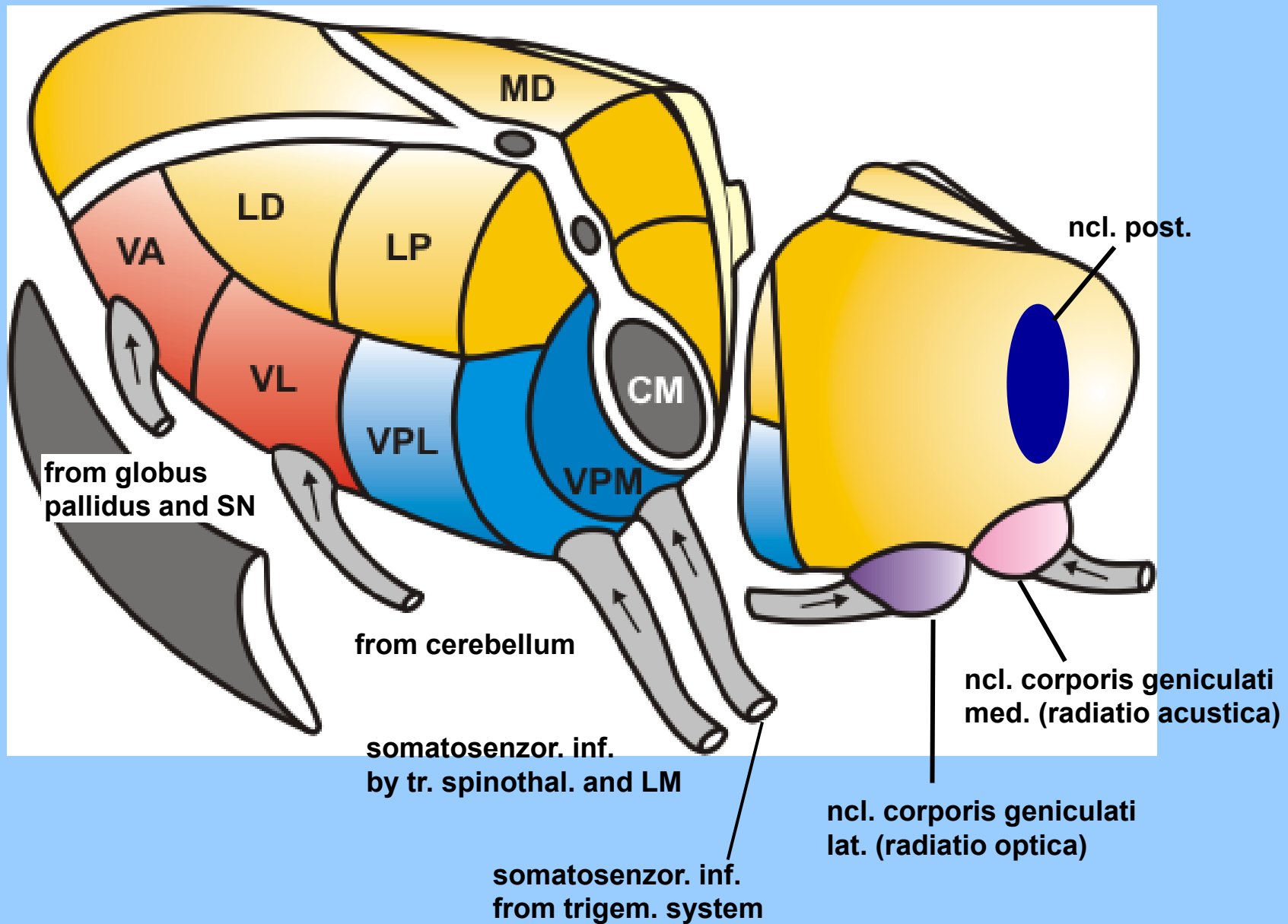
somatosenzory

motor

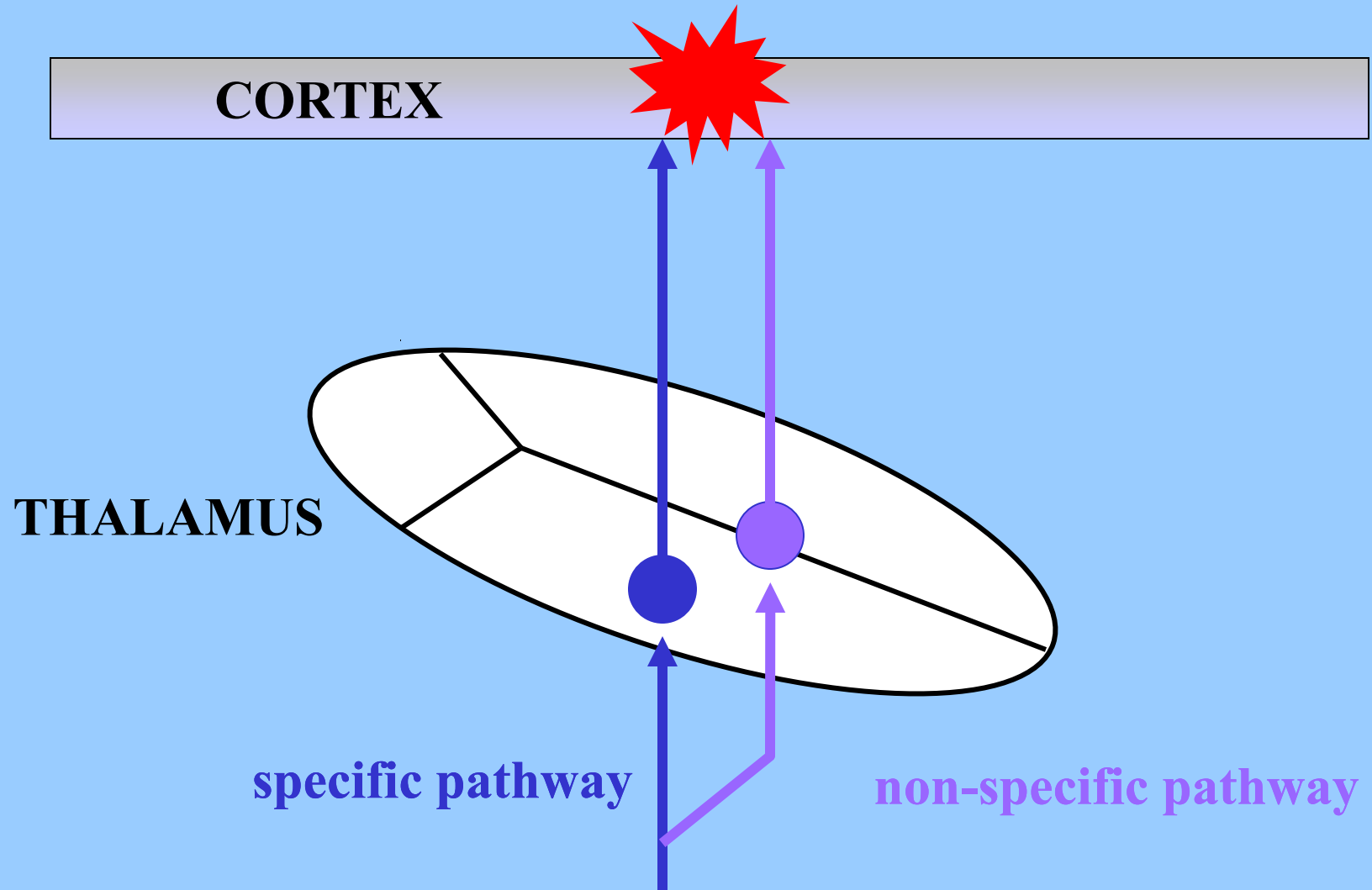
non-specific ncll.

association ncll.

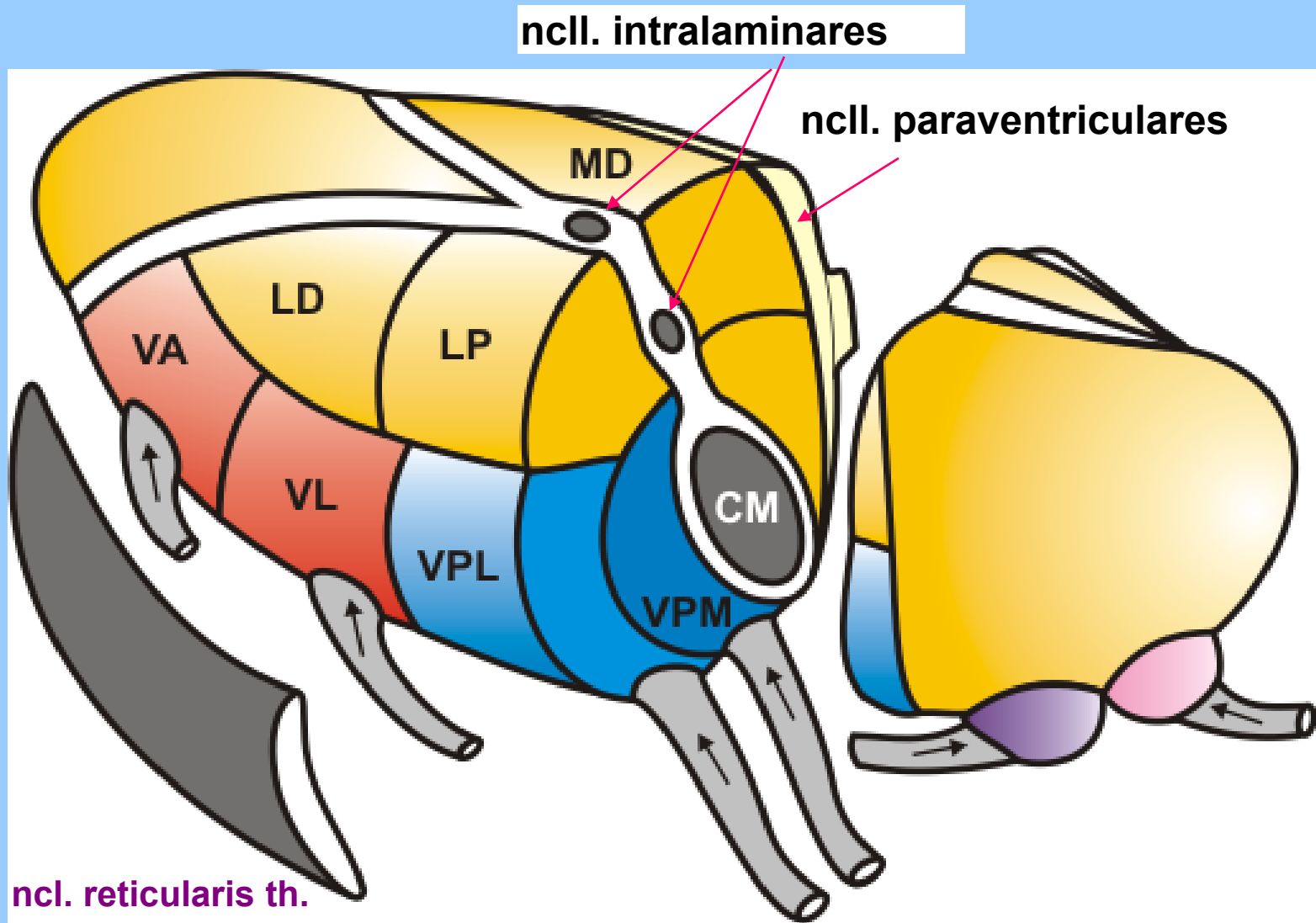
SPECIFIC THALAMIC NUCLEI



AFFERENTATION OF CORTEX BY SPECIFIC AND NON-SPECIFIC THALAMIC NCLL.

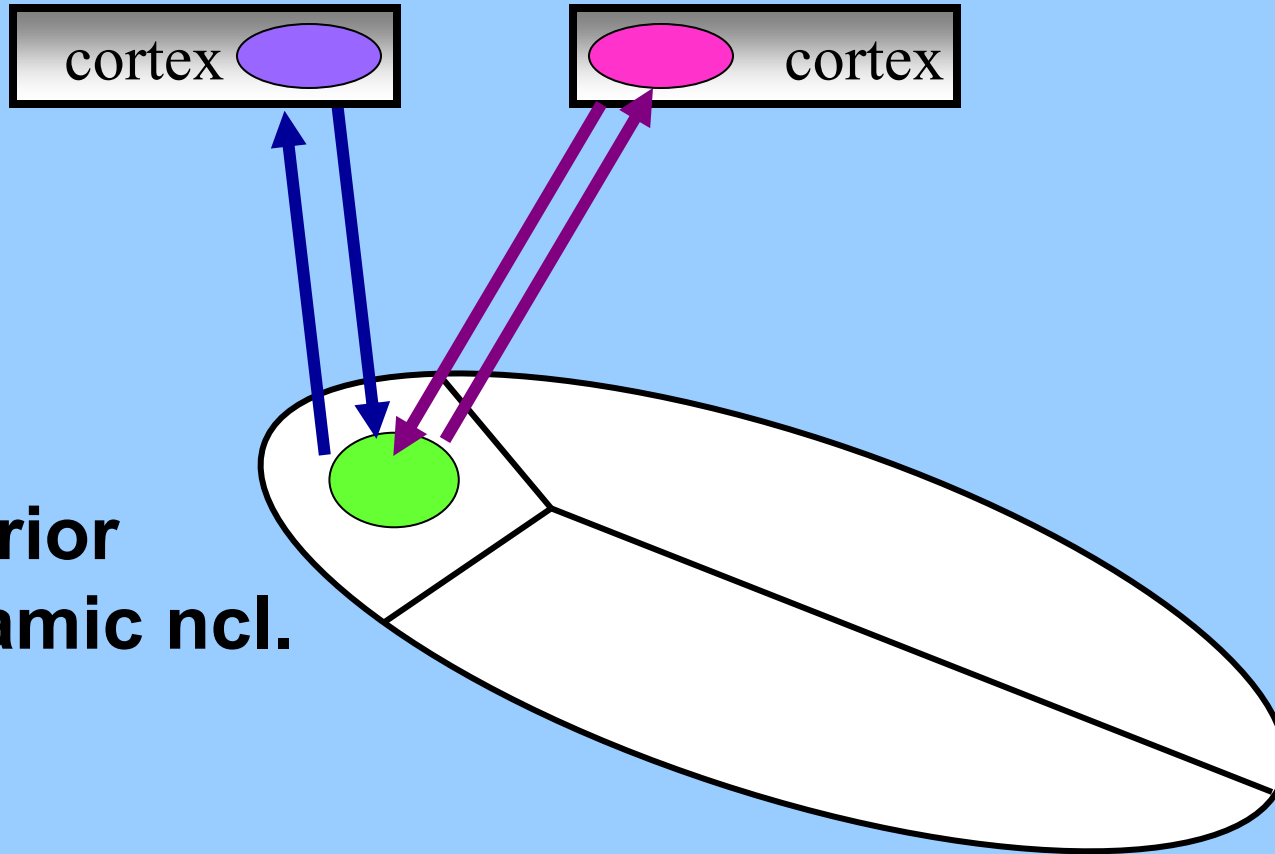


NON-SPECIFIC THALAMIC NUCLEI



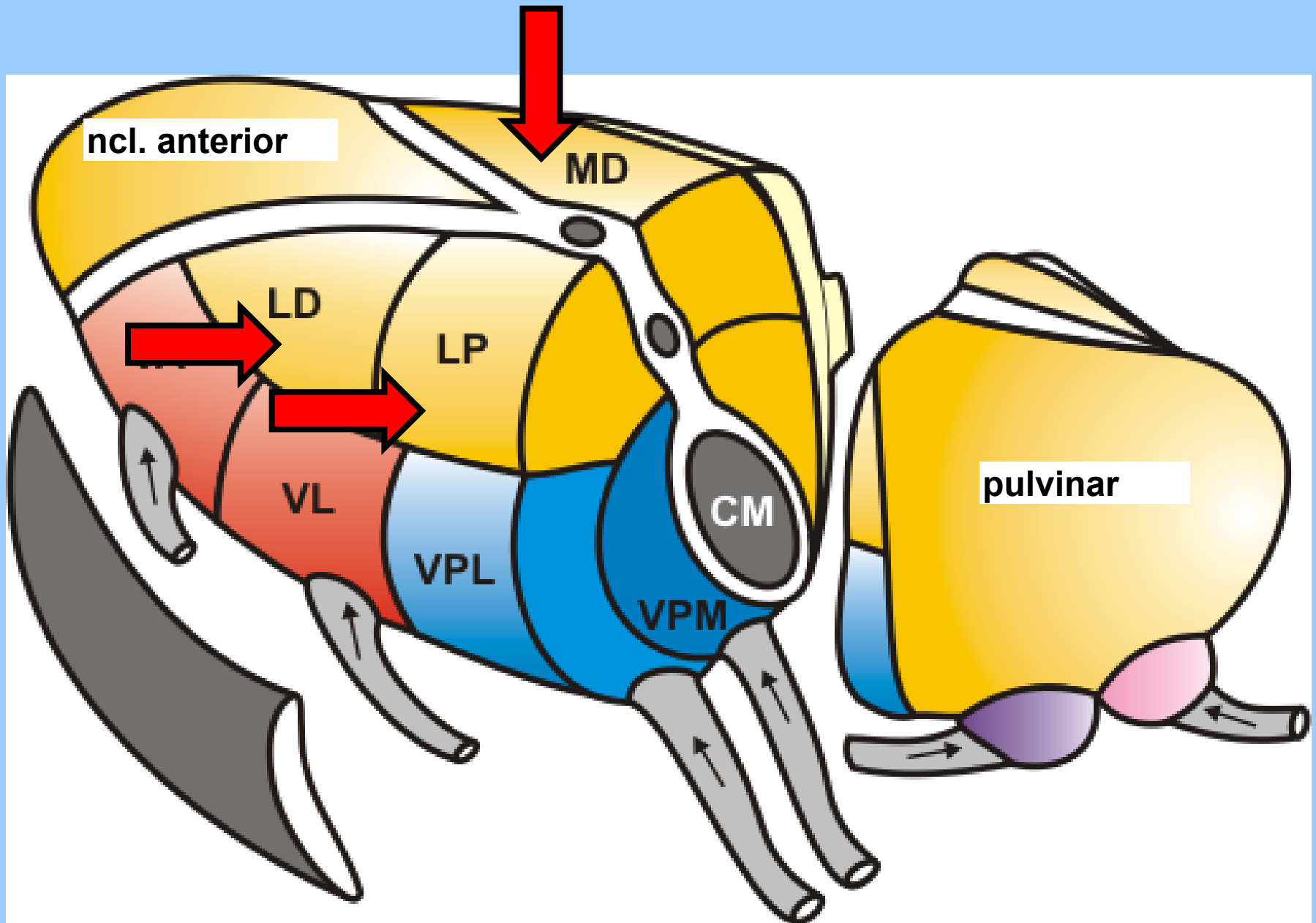
CM= ncl. centromedianus

FUNCTIONAL PATHWAYS OF ASSOCIATION THALAMIC NUCLEI



**anterior
thalamic ncl.**

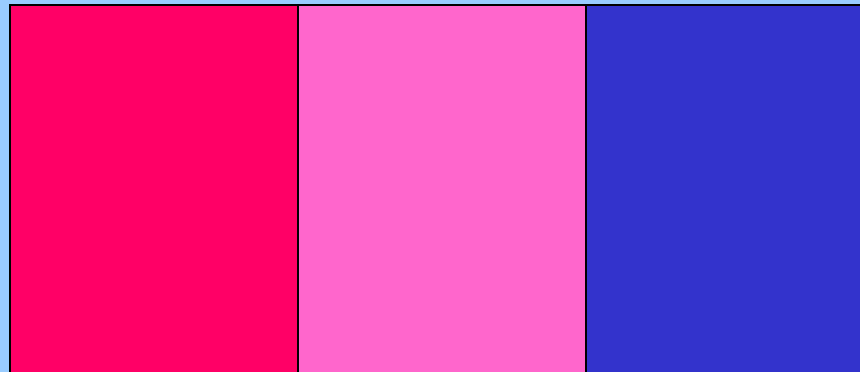
ASSOCIATION THALAMIC NUCLEI



HYPOTHALAMIC NCLL.

anterior middle posterior

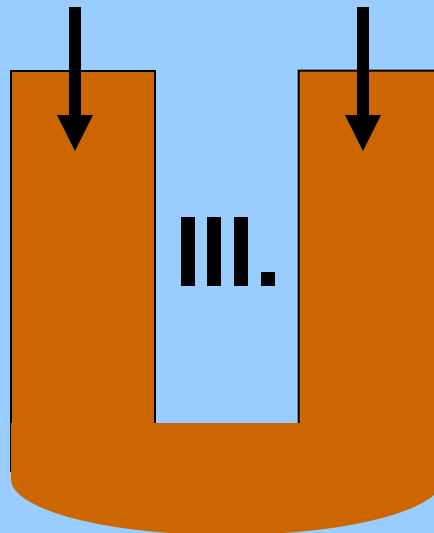
rostral



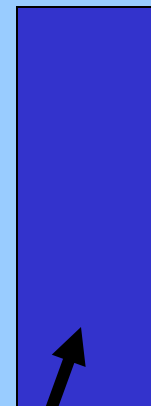
dorsal

PERIVENTRICULAR ROW

LATERAL
ROW



III.

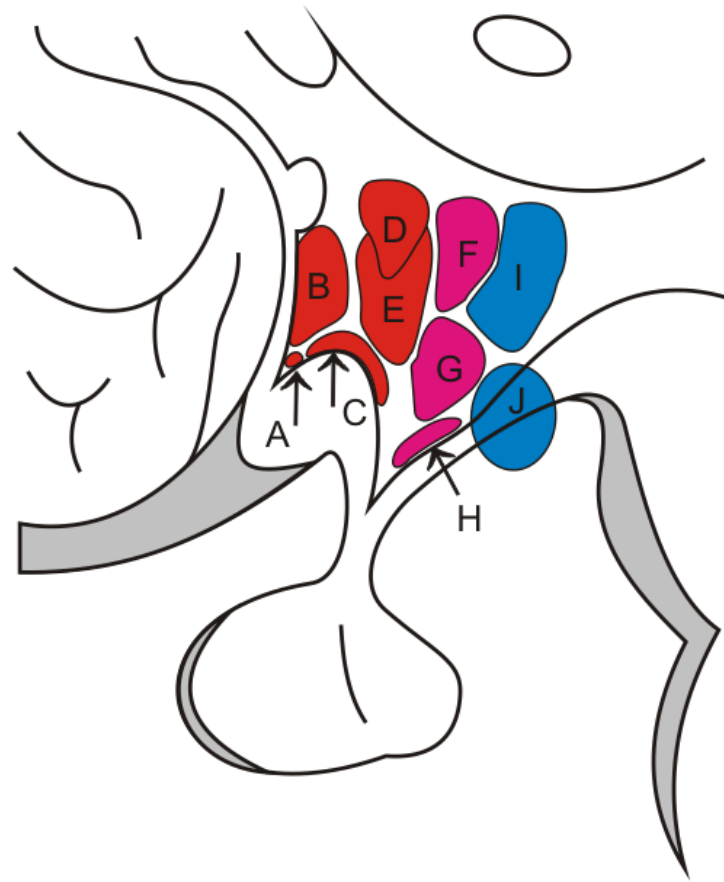


LATERAL
ROW



MEDIAL ROWS

Basic arrangement of hypothalamic nuclei



ANTERIOR GROUP Periventricular row

A - ncl. suprachiasmaticus

Medial row

B - ncl. preopticus

C - ncl. supraopticus

D - ncl. paraventricularis

E - ncl. anteriores

MIDDLE GROUP

F - ncl. dorsomedialis

G - ncl. ventromedialis

H - ncl. arcuatus

POSTERIOR GROUP

I - ncl. posterior

J - ncl. mamillaris

ANTERIOR HYPOTHALAMUS

Ncl. supraiasmaticus – afferentation from retina - generator of circadian rhythms

Ncl. preopticus – different structure in female and male – control of individual sexual behavior, behavior associated with maternity; regulation of body temperature

Ncl. supraopticus and paraventricularis (magnocellular component) – tractus hypothalamo-hypophysialis – transport of hormones into neurohypophysis

Ncl. paraventricularis (parvocellular component) - capillary network in eminentia medialis – control of adenohypophysis - hypothalamo-hypophysial portal pathway

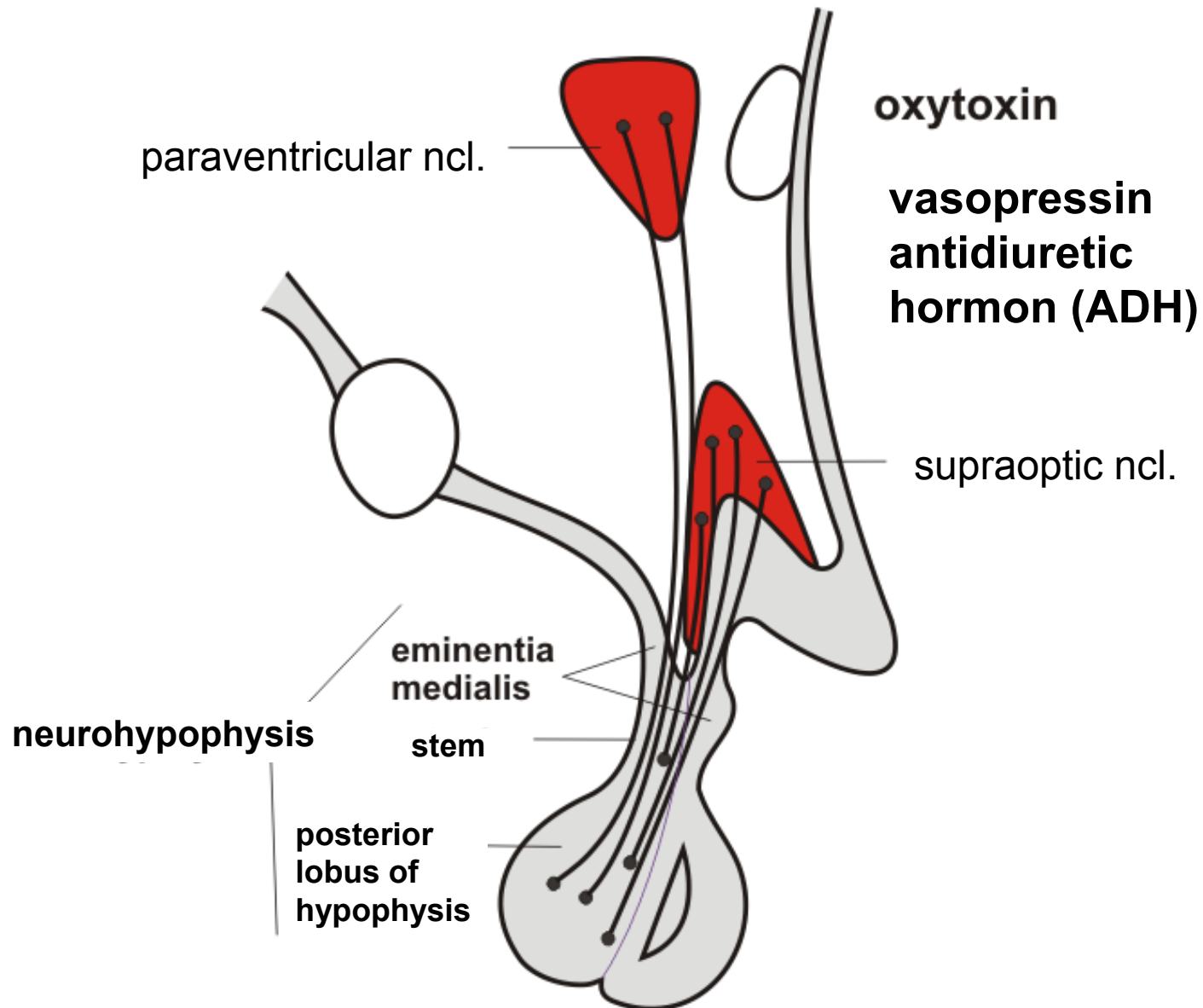
MIDDLE HYPOTHALAMUS

***Ncl. arcuatus** - capillary network in eminentia medialis – control of adenohypophysis - hypothalamo-hypophysial portal pathway*

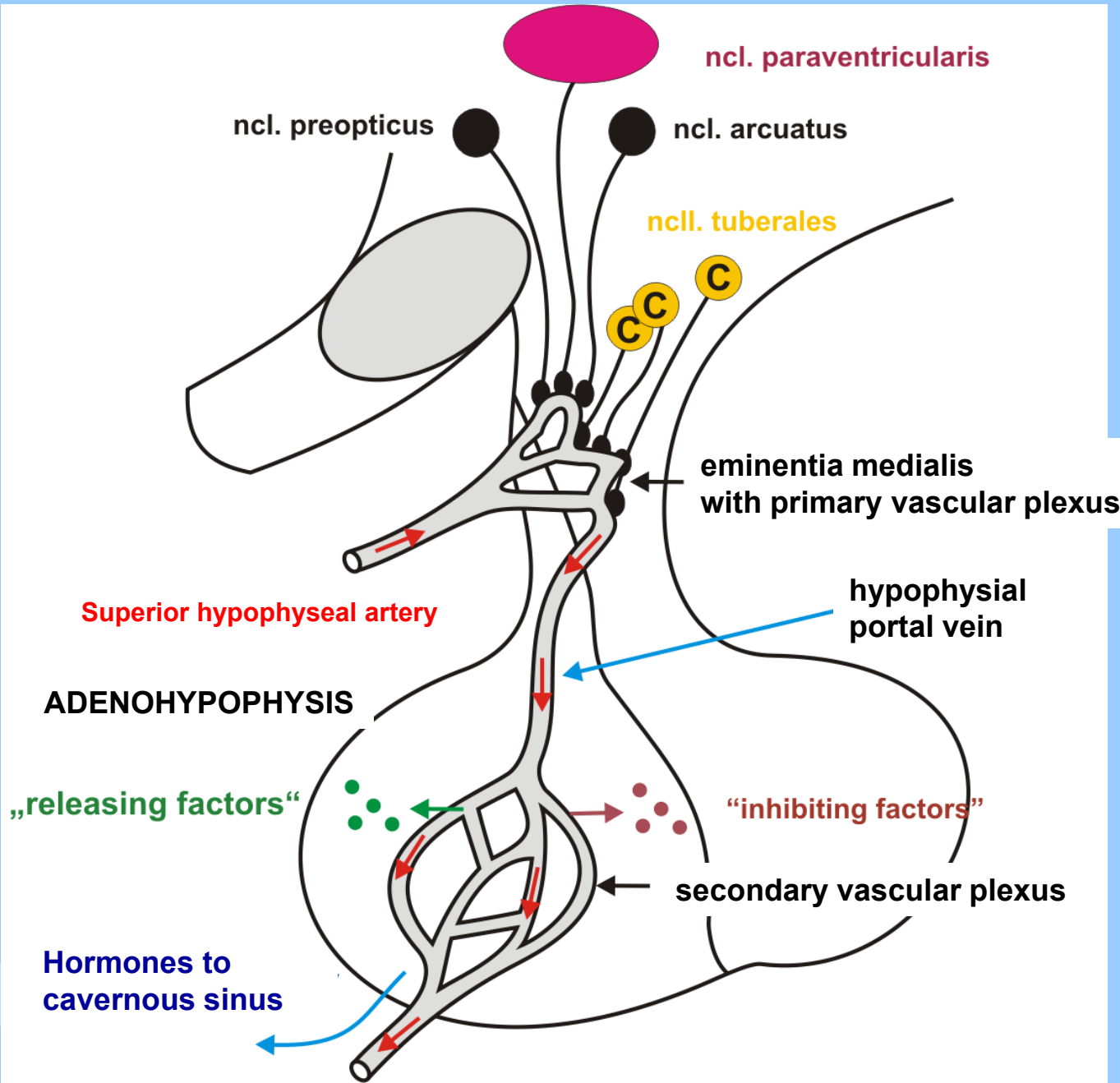
***Ncl. ventromedialis** – control of food intake (apestat)*

***Ncl. tuberales** - capillary network in eminentia medialis – control of adenohypophysis - hypothalamo-hypophysial portal pathway*

Hypothalamo-hypophysial pathway



Hypothalamo-hypophysial portal pathway



JÁDRA HYPOTHALAMU

PERIVENTRIKULÁRNÍ ŘADA

ncl. suprachiasmaticus ↑

MEDIÁLNÍ ŘADA

ncl. preopticus →

ncl. supraopticus ↑

ncl. paraventricularis ↓

ncl. anteriores ★

