The lamina terminalis, consisting of the median preoptic nucleus (MnPO) and the other two sensory CVOs—i.e., subfornical organ (SFO) and organum vasculosum of the lamina terminalis (OVLT) —is recognized as a site in the brain that is crucial for the physiological regulation of hydroelectrolyte balance.

The SFO and OVLT lack a blood–brain barrier and contain cells that are sensitive to humoral signals, such as changes in plasma and cerebrospinal fluid sodium concentration (Vivas et al. 1990), osmolality (Sladek and Johnson 1983), and angiotensin II (ANG II) levels (Ferguson and Bains 1997; Simpson et al. 1978). Such unique features make the SFO and OVLT key brain regions for sensing the status of the body fluids and electrolytes [1)].

1)
Vivas L, Godino A, Dalmasso C, Caeiro XE, Macchione AF, Cambiasso MJ. Neurochemical Circuits Subserving Fluid Balance and Baroreflex: A Role for Serotonin, Oxytocin, and Gonadal Steroids. In: De Luca LA Jr, Menani JV, Johnson AK, editors. Neurobiology of Body Fluid Homeostasis: Transduction and Integration. Boca Raton (FL): CRC Press/Taylor & Francis; 2014. Chapter 9. PubMed PMID: 24829993.