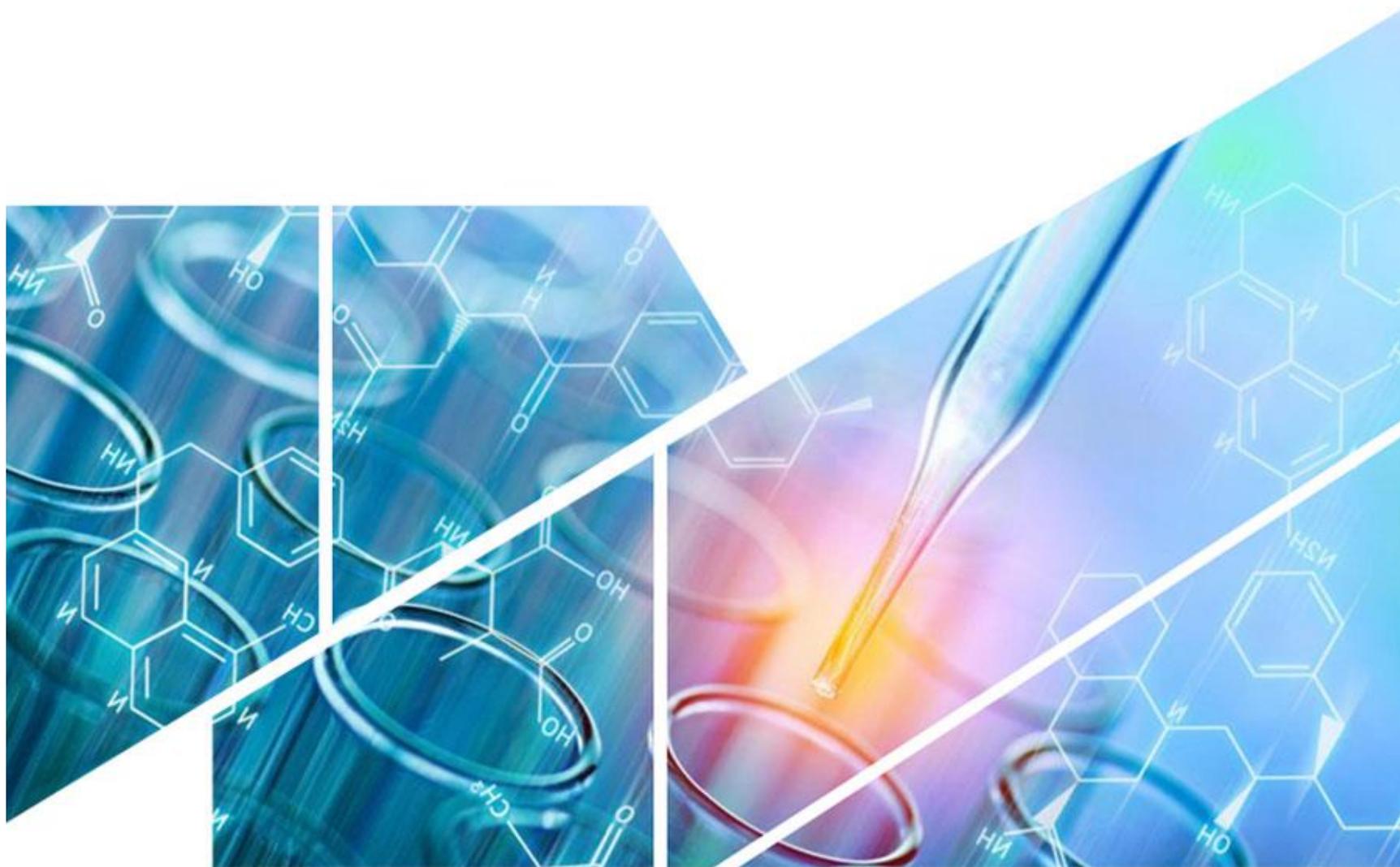


Na⁺/Cl⁻ Cotransporter Inhibitors (inhibitors, agonists and modulators)



Na⁺/Cl⁻ cotransporter (sodium-chloride symporter, NCC) is a cotransporter in the kidney which has the function of reabsorbing sodium and chloride ions from the tubular fluid into the cells of the distal convoluted tubule of the nephron. The sodium-chloride symporter accounts for the absorption of 5% of the salt filtered at the glomerulus. NCC activity is known to have two control mechanisms affecting protein trafficking to the plasma membrane and transporter kinetics by phosphorylation and de-phosphorylation of conserved serine/threonine residues. Furthermore, many residues of NCC can be phosphorylated or dephosphorylated to activate or inhibit NCC uptake of Na⁺ and Cl⁻. Other NCC modulators, including intracellular chloride depletion, angiotensin II, aldosterone and vasopressin, can regulate NCC activity by phosphorylating conserved serine/threonine residues.



