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b) Testis; c) Blood vessels and heart; d) Other organs; 5. Peripheral Degradation and Metabolic Clearance; Bibliography; Chapter 4. Vasopressin Receptors, the Signalling Cascade and Mechanisms of Action (Jacques Hanoune); 1. Introduction: A Short Historical Survey of Vasopressin Receptors; 2. Pharmacological Characterization of the Vasopressin Receptors; 3. Biochemical Characterization of the Vasopressin Receptors; 4. Tissue Expression; a) V1a receptor; b) V1b (V3) receptor; c) V2 receptor; 5. Vasopressin Receptors and G Proteins: An Overview; 6. Structure of the Vasopressin Receptors a) General features b) Modelling of vasopressin receptors; 7. Structural Basis of the Receptor-Ligand Interaction; a) Binding of agonists; b) Binding of antagonists; 8. Domains Responsible for G Protein-Coupling Selectivity; 9. Dimerization of Receptors; 10. Signalling Pathways; a) The heterotrimeric G protein; b) The cyclic AMP pathway; c) The calcium/phosphatidylinositol pathway; d) The V2 receptor pathway; e) The V1a receptor pathway; f) The V1b receptor pathway; g) The proteomic approach; 11. Pre- and Post-transcriptional Regulation of Vasopressin Receptor Expression 12. Downregulation of Vasopressin Receptors: Desensitization and Internalization 13. Are There Other Vasopressin Receptors?; Bibliography; Chapter 5. Pharmacology of the Vasopressin Receptors (Jacques Hanoune); 1. Introduction; 2. Radio-labelled Ligands; 3. Pharmacology of the Vasopressin V1a Receptor; 4. Pharmacology of the Vasopressin V1b Receptor; 5. Pharmacology of the Vasopressin V2 Receptor; 6. Mixed Vasopressin V1a/V2 Receptor Antagonists; 7. Inter-species and Inter-organ Variability; 8. Conclusion; Bibliography; Chapter 6. Vasopressin and Its Renal Effects (John Laycock) 1. Introduction

## Sommario/riassunto

Vasopressin is a hormone which has an increasingly important profile. Not only does it play a physiologically significant role in renal water regulation but it also has other renal actions and plays a role in overall cardiovascular control. Even more interesting is the recent growing interest in its potential effects on the brain, notably its influence on specific behaviours. This monograph about the polypeptide vasopressin covers all aspects relating to the production, control of release, and actions of this molecule within the body, including its roles as a hormone and as a central neurotr