

## **Contents**

To facilitate downloading, the article has been divided into PDF sections so that separate topics or the entire article can be printed and saved. The article has not been copyrighted, so it, or sections of it can be used without written permission by the author. Enjoy the article.

### **Home**

Contents  
The Author  
Introduction

### **Water**

1. Liquid Water  
2. The Solid State and Air/Water Interface  
3. The Hydrocarbon/Water interface  
4. Protein Assembly  
5. Ions in Water  
6. The Polypeptide/Water Interface  
7. Hydration Quantization  
8. Alcohols in Water

### **Proteins**

9. Polypeptide Folding and Assembly  
10. Aminoacids  
11. Transient Linear Hydration Analysis

### **Carboxypeptidase A**

12. Carboxypeptidase A  
13. Peptides 307-283  
14. Peptides 307-263  
15. Peptides 307-251  
16. Peptides 307-241  
17. The Transient Linear Hydration Model  
18. The Catalytic Reaction Site  
19. Reaction Site Hydration  
20. Substrate Binding  
21. Substrate Cleavage  
22. Reaction Detail

### **Alpha-Chymotrypsin**

23. Alpha-Chymotrypsin  
24. Peptides 245-230  
25. Peptides 245-215  
26. Peptides 245-202  
27. Peptides 245-182  
28. Peptides 245-133  
29. The TLH Model  
30. The Calaytic Reaction Site  
31. Reaction Site Hydration  
32. Substrate Binding  
33. Substrate Cleavage  
34. Summary

### **Insulin**

35. Insulin  
36. B Chain  
37. B Chain  
38. A Coils  
39. C Segment  
40. The TLH Model and Hormonal Activity

### **Ribonuclease A**

41. Ribonuclease A and Peptides 1-13  
42. Peptides 1-36  
43. The Binding Site and Ordering Hydration  
44. Nucleotide Binding and Catalytic Cleavage

### **Receptor Sites**

45. Glycogen Phosphorylase  
46. Membranal Receptor Sites  
47. Neurotransmitters and Hormones  
48. Bacterial D-Aspartic Acid  
49. A Human Dopamine Receptor  
50. Acetylcholine Receptor Site  
51. Tubocurare  
52. An Opiate Receptor - Met Enkephalin  
53. An Opiate Receptor Site TLH Model  
54. Opiate Analgesic Binding  
55. Naloxone  
56. Steroidal Hormone Receptors - Testosterone  
57. Ribosomal Binding Sites - Transfer RNAs

### **Double Helix DNA**

58. Double Helix B-DNA  
59. B-DNA - The TLH Model

### **References**

60-64