

Chemotaxis

Exam Topic List

2011

1. General significance of chemotaxis in biology
2. Main migratory responses of cells
3. Phylogeny of signaling molecules
4. Phylogeny of receptors with special respect to chemotaxis
5. Chemotaxis in invertebrates and vertebrates
6. Chemotaxis in inflammatory cells I.: Antigen presenting cell, monocytes-macrophages, eosinophils and neutrophils
7. Chemotaxis as part of immune response
8. Chemotaxis in bacteria
9. Main classes of bacterial chemotactic ligands
10. Characterization of bacterial chemotaxis receptor
11. Chemotactic signaling pathway in bacteria
12. Genetical backgrounds of bacterial chemotaxis
13. Inflammation and chemotaxis
14. Main steps of extravasation – its molecular interactions
15. Significance of endothelial cells in chemotaxis
16. Immunological aspects and their clinical implications in general
17. Phagocytosis: the target reaction of chemotaxis
18. Chemotactic ligands in vertebrates – Characterization of their genomics and proteomics
19. Cytokines and chemotaxis
20. Chemokines – classes and subclasses
21. The optimal chemotactic ligand
22. Clinical approaches of chemotactic responsiveness – Infections
23. Clinical approaches of chemotactic responsiveness – Primary inflammations
24. Clinical approaches of chemotactic responsiveness – Toxic agents
25. Tumor biology and chemotaxis
26. Chemotaxis and fertilization
27. Pheromones and chemotaxis
28. Chemotaxis assays – “Chambers”
29. Chemotaxis assays – Agar-plate assays
30. Chemotaxis assays – Equipments to measure chemotaxis