

## Scientific Publications

### Peer-Reviewed Journal Articles

1. Jones, J. D., Almeida, P. F., and Thompson, T. E.(1990). Spontaneous Interbilayer Transfer of Hexosylceramides between Phospholipid Bilayers. *Biochemistry* 29, 3892-3897.
2. Vaz, W. L. C., and Almeida, P. F.(1991). Microscopic versus macroscopic diffusion in one-component fluid phase lipid bilayer membranes. *Biophys. J.* 60, 1553-1554.
3. Almeida, P. F. F., Vaz, W. L. C., and Thompson, T. E.(1992). Lateral diffusion and percolation in two-phase, two-component lipid bilayers. Topology of the solid phase domains in-plane and across the lipid bilayer. *Biochemistry* 31, 7198-7210.
4. Almeida, P. F. F., Vaz, W. L. C., and Thompson, T. E.(1992). Lateral diffusion in the liquid phases of dimyristoylphosphatidylcholine/cholesterol lipid bilayers: a free volume analysis. *Biochemistry* 31, 6739-6747.
5. Almeida, P. F. F., Vaz, W. L. C., Thompson, T. E.(1993). Percolation and diffusion in three-component lipid bilayers: effect of cholesterol on an equimolar mixture of two phosphatidylcholines. *Biophys. J.* 64, 399-412.
6. Vaz, W. L. C., and Almeida, P. F. F.(1993). Phase topology and percolation in multi-phase lipid bilayers: is the biological membrane a domain mosaic? *Current Opinion Struct. Biol.* 3, 482-488.
7. Almeida, P. F. F., and Vaz, W. L. C.(1995). Lateral diffusion in membranes. *Handbook of Physics of Biological Systems, vol 1: Structure and Dynamics of Membranes*, 305-357. R. Lipowsky & E. Sackmann, Eds. Elsevier.
8. Jerala, R., Almeida, P. F. F., and Biltonen, R. L.(1996). Simulation of Gel-Fluid Transition in a Membrane composed of Lipids with Two Connected Acyl Chains: Application of a Novel Monte Carlo Step. *Biophys. J.* 71, 609-615.
9. Jerala, R., Almeida, P. F. F., Ye, Q., Biltonen, R. L., and Rule, G. S.(1996).  $^1\text{H}$ ,  $^{15}\text{N}$ , and  $^{13}\text{C}$  Resonance Assignments and Secondary Structure of Group II Phospholipase A2 from *Agkistrodon piscivorus piscivorus*: Presence of an Amino-Terminal Helix in Solution. *J. Biomol. NMR.* 7, 107-120.
10. Jerala, R., Almeida, P. F. F., Biltonen, R. L., and Rule, G. S.(1997). NMR Confirms the Presence of an Amino-Terminal Helix of Group II Phospholipase A2 in Solution. *Techn. Prot. Chem.* VIII.
11. Hinderliter, A. K., Almeida, P. F. F., Biltonen, R. L., and Creutz, C. E.(1998). Membrane domain formation by calcium-dependent lipid-binding proteins: insights from the C2 motif. *Biochim. Biophys. Acta* 1448, 227-235.
12. Almeida, P. F. F.(1999). Lipid exchange between vesicles: effect of high vesicle concentration. *Biophys. J.* 76, 1922-1928.

13. Pokorny, A., Almeida, P. F. F., Melo, E. C. C., and Vaz, W. L. C.(2000). Kinetics of Amphiphile Association with Two-Phase Lipid Bilayer Vesicles. *Biophys. J.* *78* 267–280.
14. Pokorny, A., Almeida, P. F. F., and Vaz, W. L. C.(2001). Association of a Fluorescent Amphiphile with Lipid Bilayer Vesicles in Regions of Solid–Liquid-Disordered Phase Coexistence. *Biophys. J.* *80*, 1384–1394.
15. Hinderliter, A. K., Almeida, P. F. F., Creutz, C. E., and Biltonen, R. L.(2001). Domain formation in a fluid mixed bilayer modulated through binding of the C2 protein motif. *Biochemistry* *40*, 4181–4191.
16. Pokorny, A., Birkbeck, H., and Almeida, P. F. F.(2002). Mechanism and Kinetics of  $\delta$ -lysin interaction with phospholipid vesicles. *Biochemistry* *41*, 11044–11056.
17. Hinderliter, A., Biltonen, R. L., and Almeida, P. F. F.(2004). Lipid modulation of protein-induced membrane domains as a mechanism for controlling signal transduction. *Biochemistry* *43*, 7102–7110.
18. Pokorny, A. and Almeida, P. F. F.(2004). Kinetics of dye efflux and lipid flip-flop induced by  $\delta$ -lysin in phosphatidylcholine vesicles and the mechanism of graded release by amphipathic,  $\alpha$ -helical peptides. *Biochemistry* *43*, 8846–8857.
19. Almeida, P. F. F., Vaz, W. L. C., and Thompson, T. E.(2005). Lipid diffusion, free area, and molecular dynamics simulations *Biophys. J.* *88*, 4434–4438.
20. Pokorny, A., and Almeida, P. F. F.(2005). Permeabilization of Raft-Containing Lipid Vesicles by  $\delta$ -Lysin: a Mechanism for Cell Sensitivity to Cytotoxic Peptides. *Biochemistry* *44*, 9538–9544.
21. Almeida, P. F. F., Sohma, H., Rasch, K., Wieser, C. M., and Hinderliter, A. (2005). Allosterism in membrane binding: a common motif of the annexins? *Biochemistry* *44*, 10905–10913.
22. Almeida, P. F. F., Pokorny, A., and Hinderliter, A. (2005). Thermodynamics of membrane domains. *Biochim. Biophys. Acta* *1720*, 1–13.
23. Almeida, P. F. F., and Wiegel, F. W.(2006). A Simple Theory of Peptide Interactions on a Membrane Surface: Excluded Volume and Entropic Order. *J. Theor. Biol.* *238*, 269–278.
24. Pokorny, A., Yandek, L., Elegbede, A., Hinderliter, A., and Almeida, P.F. (2006). Temperature and composition dependence of the interaction of  $\delta$ -lysin with ternary mixtures of sphingomyelin/cholesterol/POPC. *Biophys. J.* *91*, 2184–2197.
25. Zhang, J., Cao, H., Jing, B., Almeida, P.F., and Regen, S.L. (2006). Cholesterol-phospholipid association in fluid bilayers: a thermodynamic analysis from nearest-neighbor recognition measurements. *Biophys. J.* *91*, 1402–1406.

26. Kertz, J. A., Almeida, P.F.F., Frazier, A.A., and Hinderliter, A. (2007). The cooperative response of synaptotagmin I C2A. A hypothesis for a  $\text{Ca}^{2+}$ -driven molecular hammer. *Biophys. J.* *92*, 1409–1418.
27. Frazier, M.L., Wright, J.R., Pokorny, A., and Almeida, P.F.F. (2007). Investigation of domain formation in sphingomyelin/cholesterol/POPC mixtures by fluorescence resonance energy transfer and Monte Carlo simulations. *Biophys. J.* *92*, 2422–2433.
28. Yandek, L.E., Pokorny, A., Floren, A., Knoelke, K., Langel, U., and Almeida, P.F.F. (2007). Mechanism of the cell-penetrating peptide Tp10 permeation of lipid bilayers. *Biophys. J.* *92*, 2434–2444.