Figure 1.1. Classical omega-3 and omega-6 fatty acid synthesis pathways and the role of omega-3 fatty acid in regulating health/disease markers.

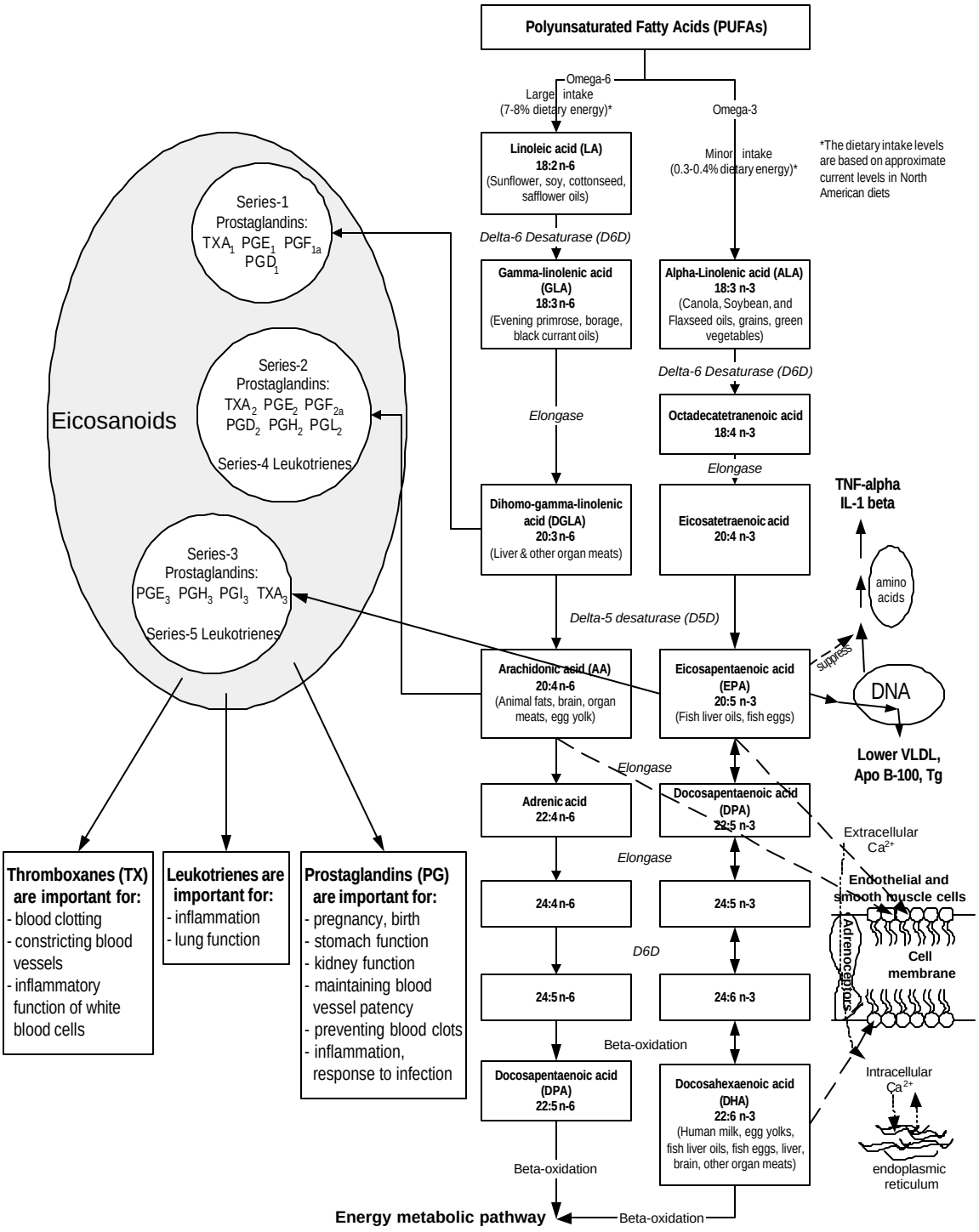
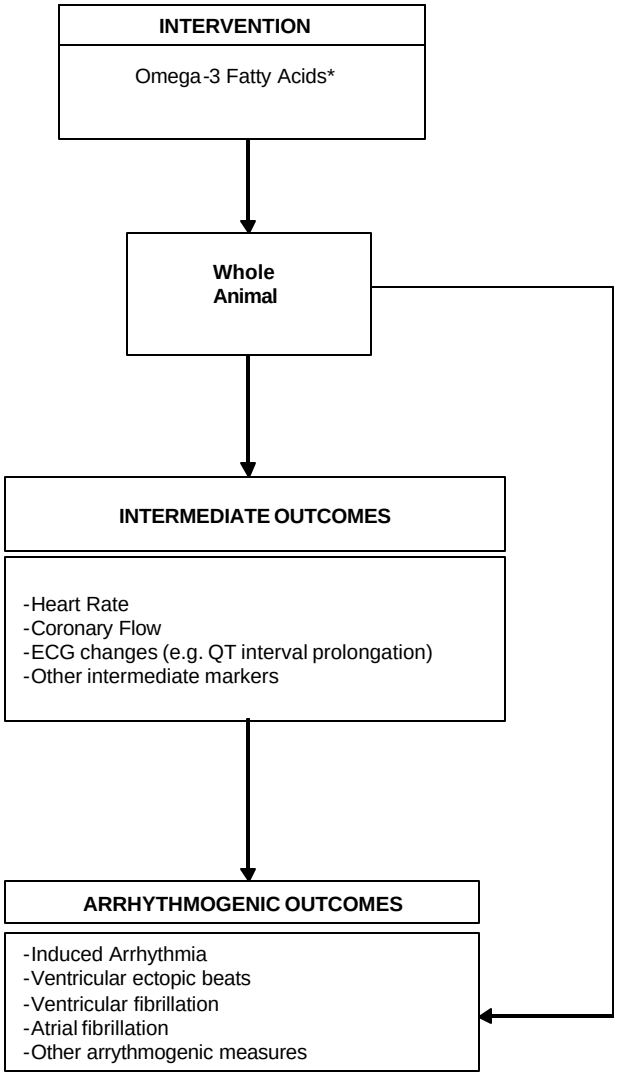


Figure 2.1 Analytic framework for animal studies

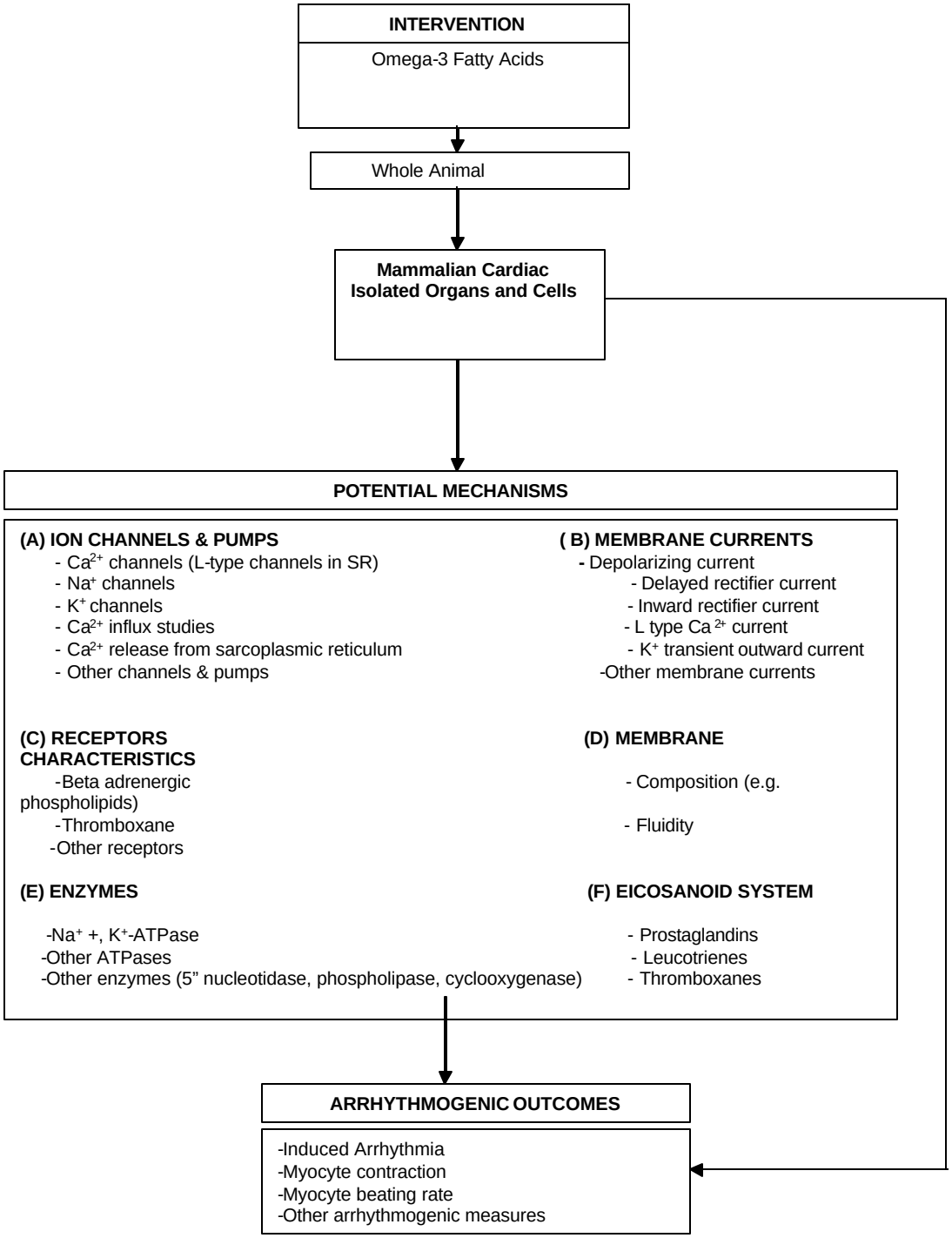
Question: What is the evidence from whole animal studies that omega-3 fatty acids affect arrhythmogenic outcomes (and intermediate outcomes)?



* ALA, EPA, DPA, DHA

Figure 2.2 Analytic framework for intact animal isolated organ and cell studies

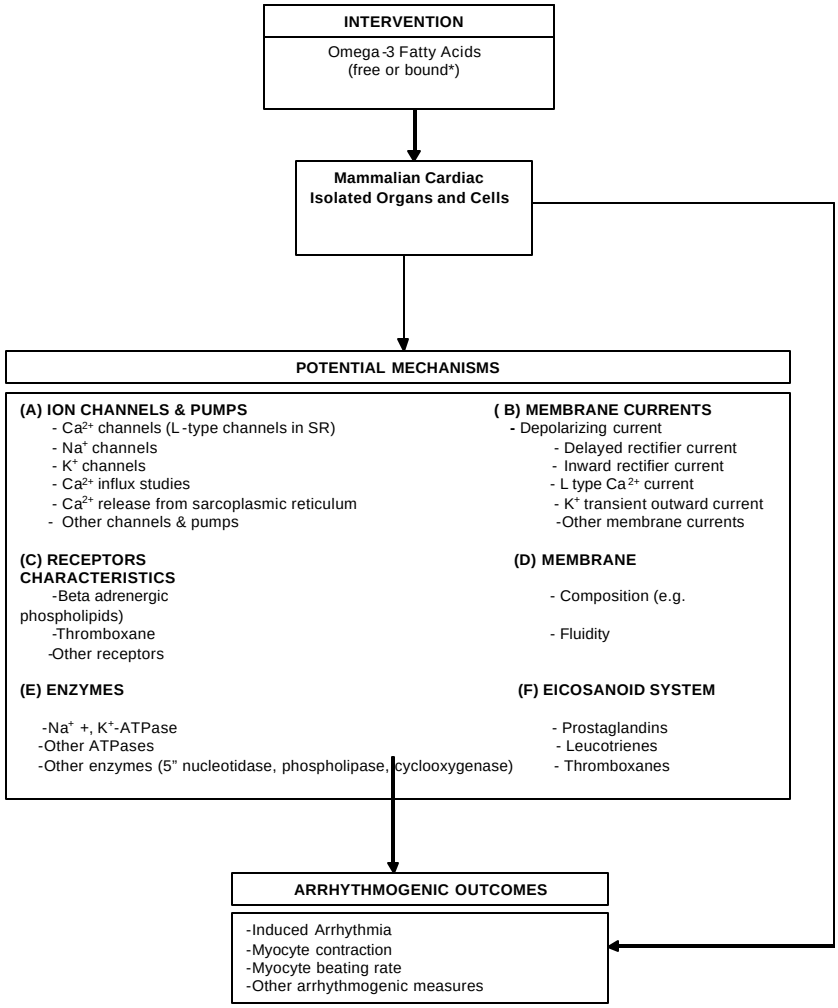
Question: What is the evidence from intact {intact, whole animal} cell culture and tissue studies (including animal and human cardiac tissue). that omega-3 fatty acids directly affect cell organelles such as cardiac ion channels, pumps, or exchange mechanisms involved in electrogenesis?



*omega-3 fatty acids (ALA, EPA, DPA, DHA) are fed to the animals as part of their diet, and organs, tissues or cells are subsequently excised from the animal for study.

Figure 2.3. Analytic framework for cell culture studies

Question: What is the evidence from cell culture and tissue studies (including animal and human cardiac tissue). that omega-3 fatty acids directly affect cell organelles such as cardiac ion channels, pumps, or exchange mechanisms involved in electrogenesis?



*omega-3 fatty acids (ALA, EPA, DPA, DHA) applied directly to (free) mammalian tissues or cultured cell lines or incorporated into the membrane (bound) of the mammalian tissues or cultured cell lines.