1.1 INTRODUCTION

In aquatic health research, much attention is focused on aquatic pollution and its harmful effects on freshwater ecosystems. This is especially true in South Africa, a semi-arid country, where fresh water is a scarce and valuable resource. Aquatic health is an essential research field in which various monitoring tools and assessment protocols have been developed to monitor and manage the impacts of aquatic pollution on ecosystems. This includes the use of biomarkers, where the response of aquatic organisms resulting from exposure to pollutants, are measured in terms of sensitivity. Hence, the severity of the impact of the pollutant on the species and the larger system in which they occur can be determined. Fish are useful indicator organisms in this regard as they are sensitive to their environment, are easily attainable, and have a relatively long lifespan allowing diagnosis of both acute and chronic effects of exposure to pollutants. Assessing fish health usually incorporates various specialised fields, including parasitology, bacteriology, virology and histology.

Histology, the microscopic study of tissue, provides essential knowledge of living cells as the basic building blocks of all living organisms. It examines the structural