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Abstract

The laboratory guide is an attempt to reconstruct the structure of the tissues and organs of the body of aquatic animal organisms as seen under the optical microscope. A summary of the characteristics of the main phyla of invertebrate animal organisms and chordates is presented first. Emphasis is placed on the taxonomic groups of aquatic animals, especially those of particular applied (ichthyological) interest (fish, amphibians, sponges, cnidarians, molluscs, echinoderms). Methods for the production of histological sections are presented, as well as simple techniques for mounting and observation under the optical microscope. The basic equipment of a histology laboratory is briefly described. The third part of the book consists of eight laboratory exercises. For each exercise the subject matter, the educational objectives, the teaching hours required

to complete it and the laboratory equipment are indicated. A brief introduction to theoretical concepts is given, followed by instructions for carrying out the experimental part of the exercise. Finally, instructions are given for recording and evaluating the results and a worksheet is provided for the students to hand in. The laboratory exercises are divided into two categories: those in which the students produce the microscopic preparations themselves for observation and those in which the students practice only in the optical microscopy room by studying prepared preparations. In all sections there are visual aids and photographs. The images are analysed comparatively in the accompanying explanatory text in order to provide the necessary information for understanding the microscopic structure of the body and physiological functions.



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