The Mononuclear Phagocyte System (MPS) implies a morphological and functional scheme of bone marrow derived cells that are involved in many inflammatory reactions. The present day thorough knowledge of the functional and morphological versatility of these cells, has steadily grown over the last decade.

In spite of this, diagnostic histopathologists still use the MPS mainly as a morphological scheme.

This, together with a confusing nomenclature, with regard to cells of the MPS, that is still persistently used, probably obscures the understanding of its functional dynamics in human pathology.

An understanding of the dynamics of pathological processes, that are well known from experimental studies, would be of value in human pathology too. Assessing any histopathological or cytopathological picture as an instantaneous snapshot during the course of complex pathological tissue events, may lead to a better understanding of inflammatory processes and might have clinical relevance.

This thesis deals with some problems regarding granulomatous inflammatory processes of which sarcoidosis is chosen as a model. Histopathological data concerning mononuclear phagocytes, are related to the cellular dynamics and are studied in relation to the course of the disease.

Taking one thing with another, the purpose of this study is to unravel the relevance of the MPS in granulomatous chronic inflammations, apart from its application as a morphological and functional scheme.