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QUASI-ELASTIC LIGHT SCATTERING STUDIES ON HUMAN FETAL AND ADULT α-CRYSTALLINE SOLUTION

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Using quasi-elastic light scattering, the anthors have measured the diffusion coefficient (D) of human fetal and adult α-crystallin in solution. The results show that the diffusion coefficients of α-crystallin from fetal lenses are larger than those from adult lenses; D rises with temperature and as the concentration is increased. The radii of scattering elements estimatted by Stocks-Einstein formula are over 130 nm, which are corresponding to the polymers of α-crystallin reported in the literature. This study suggests that there be polymers in human α-crystalline solution. The difference between fetal and adult α-crystallin indicates that the post-translational modification of α-crystallin can promote light scattering particle formation.

Subject headings eye proteins; crystallins; laser; scattering

·新成果·

山蛭生物学和行为的研究

课题负责 谭恩光

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该课题采用国际先进软件SAS统计分析,全面深入研究山蛭的形态解剖,室内人工饲养,生长动态,生殖与摄食规律以及种群动态与气象因素的关系等等,弄清了我国山蛭17种类分布区系,海南岛生态分布规律,生态行为和种群数量动态及6个新种的发现,不但填补了我国该类动物及其生物学行为研究的空白,而且为科研、教学、医疗、生产和军事等提供资料,为山蛭的防治和利用提供科学依据,该成果已得到国内专家的充分肯定和引用。1994年获国家教委科技进步一等奖。

(陈丽芳)