

Study of Primary CMV Infection in Pregnant Women Guo Teliu, et al., Chengdu Hospital of Air Force

Clinical data and samples of blood for detecting CMV antibodies were obtained from 716 pregnant women of whom, 6.84% and 95.61% had CMV IgM and CMV IgG antibody, respectively. Statistic analysis showed that high positivity rates of CMV IgM antibody were correlated with lower socioeconomic status, first pregnancy at ≤ 22 or ≥ 29 years of age, and history of abortion, especially natural abortion. In the pregnant women primary CMV infection rates were not uniform in those of different occupations. Positivity rates of CMV IgM antibody were higher in medical workers and peasants ($P < 0.05$).

Key words CMV infection Pregnant women CMV IgM antibody

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(1990年3月19日收稿, 1990年6月25日修回)

用差示扫描量热法 (DSC) 对布鲁氏菌的研究

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差示扫描量热法 (Differential Scanning Calorimetry) 在生物科学研究中具有广泛的应用前景。在先前的工作基础上, 我们又对牛种布氏菌104M菌株的全细胞 (0~600℃) 及不同含水量的全细胞 (0~90℃) 的DSC图谱进行了测试。结果显示: 布鲁氏菌104M株全细胞的DSC谱线大体是三组峰: 30~90℃之间的吸热峰是细胞膜发生相变、蛋白质及DNA构象变化等因素所致。出现在230℃左右的吸热峰主要是细胞膜中脂类物质发生相变所造成, 因为细菌脂类物质的相变温度正是在200~300℃之间。而300~500℃之间的大放热峰是菌细胞裂解所致。作者先前的研究已经表明, 不同细菌其细胞物质的质与量存在一定差异, 这些差异在DSC图谱上可通过位置、形状、相变及变性、分解

温度和它们对应的热效应反映出来, 因而具“指纹图”特征。

实验又证明: 不同含水量的菌粉其DSC图谱有一定差异。当含水量低于0.35 (克)/菌体 (克) 时, DSC谱线上只有一个峰, 峰小且锐。当含水量在0.35~0.9 (克) 时, DSC图谱上有两个峰, 第一个峰的位置是内膜相变峰, 第二个峰是蛋白质构象变化峰, 况且此两峰都是可逆的。当含水量超过0.9 (克) 时, 上述两个峰新形成一个宽且大的峰。由上可知, 菌体呈干态时, DSC的转变温度较高, 随着含水量的增加, 菌粉变性温度也相应降低。