

# Hematologic-Physiologic Research Institute

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Philip Paul Hoekstra III, Ph.D.  
DIRECTOR GENERAL

The Rheumatoid Disease Foundation  
R. T. 4, Box 137  
Franklin, TN 37064

Perry A. Chapdelaine, Sr.

Dear Perry:

The white blood cell featured in our discussions I characterize as atypical lymphocyte. This cell is essentially unremarkable in its nuclear characteristics, the nucleus consistently appears round, regular, and featureless under dark-field or Normarski illumination when viewed at 1250X. Perinuclear inclusion bodies seen as vesicles are a frequent feature of this cell type. The organelles of this cell, visible as off-white granularity under darkfield illumination, are few for a lymphocyte of this total size (approximately 10-12 micrometers) and usually concentrated in close proximity to the nucleus. The consistent feature that first brought this cell to my attention is the unusually large area of clear, featureless cytoplasm comprising 50% or more of the total volume of this cell. Additionally, the cell membrane is unusually bright, appears thick, and regularly spherical.

As our associated may be aware, this lymphocyte is likely medium in size and thus could be either a B-cell or a T-cell. Atypical lymphocytes in general are associated with viral infections, especially chronic viral infections or fungal infections. I do not associate the occurrence of this cell type with common, chronic candidiasis. This is an unusual variety of atypical lymphocyte, unfamiliar to me and unfound in references I have available. I have frequently observed numbers of this cell in rheumatoid patients and have a positive statistical correlation in a limited investigation. I have observed this atypical lymphocyte in blood relatives living with rheumatoid patients. I wish a better identification of this unusual type of white cell as well as to understand any mechanism associating the occurrence of this abnormality and rheumatoid disease. I would invite the comments of your professional associates to assist in this regard.

Best Regards and Appreciation For Your Interest



Philip Paul Hoekstra, III, Ph.D

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