**Data Analysis Problem**

by Marianna Pap and József Szeberényi

to accompany

*The Cell: A Molecular Approach,* Eighth Edition

Geoffrey M. Cooper

**11.3 *In situ* Hybridization with Radioactive rRNA**

This Data Analysis Problem does not appear in the textbook.

**Source:** Gall, J. G., M. L. Pardue. 1969. Formation and detection of RNA-DNA molecules in cytological preparations. *Proc. Natl. Acad. Sci.* 63: 378–383.

**Chapter(s) in the textbook:** Chapter 11 (and 1, 4 and 8)

**Review the following terms before working on the problem:** *Xenopus laevis,* molecular hybridization, radioactive labeling, rRNA, autoradiography, silver grains

**Experiment**

A section of the ovary of the frog *Xenopus laevis* was hybridized *in situ* with radioactively labeled rRNA and analyzed by autoradiography.

**Figure**



Source: Gall, J. G., M. L. Pardue. 1969. Formation and detection of RNA-DNA molecules in cytological preparations. *Proc. Natl. Acad. Sci.* 63: 378–383.

**Questions**

1. What organelle is shown in this micrograph?

2. What region in the organelle is indicated by the arrow?

3. What conclusion can be drawn from the distribution of silver grains?