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# Springer Protocols 介绍与使用指南

Springer北京代表处王颖

医科院

2009年11月6日

- 什么是Protocols
- Springer Protocols
- 平台使用介绍

- Protocol: 实验室指南
- 实验室指南: 详细、精确地实验操作记录, 主要面向生物化学、分子生物学、以及生物医学等学科。
  - 实验室指南是一种标准化的, 并可在实验室再现的“配方”或“方法”
  - 包括按部就班的操作步骤、试验必需的原材料清单 (原材料包括化学成分、硬件、软件等等)
  - 包括注释和提醒, 提醒使用者在试验过程中需要注意的问题, 以及如何解决问题
  - 帮助科研人员研究基因行为、疾病治疗新方法、以较低成本进行新药开发

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O...

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## What makes a good protocol?

- Complete and thorough instructions
- Detailed materials list
- Clearly organized
- Supporting images/tables
- Video Protocols
- Trustworthy source

**Contents of this article**

2.1 Introduction

2.2 Materials 

1. Resol H 8.8.

2. Step 1

1. I

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Springer Protocols

**Macrophages and Dendritic Cells**

Methods and Protocols

Series Ed.: Walker, J.M.

ISSN: 1064-3745

B be

150 c

KDa

10 C

-test)

## Recreating experiments

- Protocols are used wherever scientific experiments are conducted
- Laboratory methods often first published in research literature – these often lack details of what can go wrong, hints and troubleshooting advise.
- **Particularly for life sciences it's important to document the course experiments precisely, step-by-step, so that other researchers can reproduce them.**

# SPRINGER PROTOCOLS

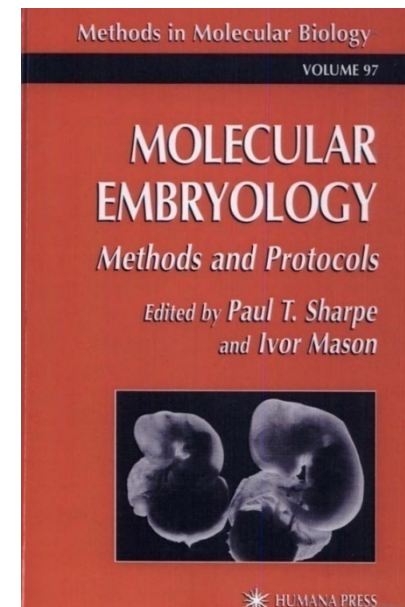
## High quality content

- **Book Series** (by Humana Press)
  - *Methods in Molecular Biology* 分子生物学方法  
Editor: Dr. John M. Walker
- **Methods in Molecular Medicine** □ 分子医学方法
- **Methods in Biotechnology** □ 生物技术方法
- **Methods in Pharmacology and Toxicology** □ 药理学与毒物学方法
- **Neuromethods** □ 神经方法
- **Journals**

**All protocols are peer-reviewed**

- **Hand Books**

- The Protein Protocols Handbook
  - Molecular Biomethods Handbook
- And many more....



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- ★ 蛋白生物学
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- ★ 生物信息学
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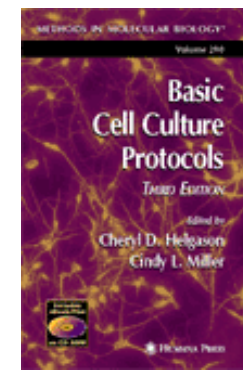
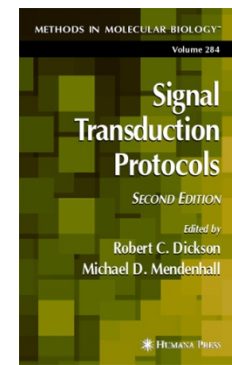
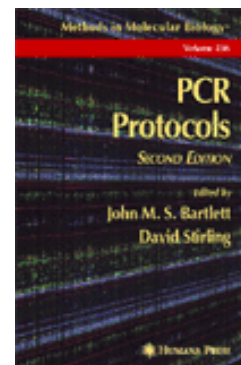
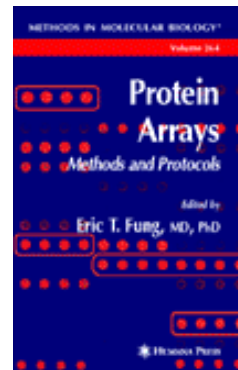
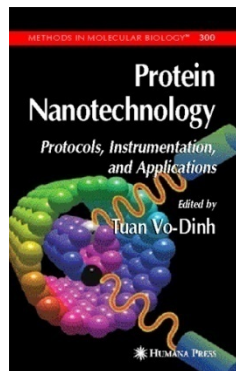
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分子生物方法（*Methods in Molecular Biology™ Series*）和分子医学方法（*Methods in Molecular Medicine™ series*）
- ★ Springer Protocols由 Protocol的鼻祖 John M. Walker博士担任主编



The screenshot shows the Springer Protocols website interface. At the top, there is a navigation bar with the Springer Protocols logo, a search bar, and links for 'ABOUT US', 'RSS', and 'HELP'. Below the navigation bar, there is a welcome message and a 'Register here' link. The main content area is divided into several sections: 'Upload a Protocol', 'Protocol Alert', 'Video Protocols', 'Comments', 'Favorites', 'RSS', and 'Search Protocols'. The 'Search Protocols' section includes a search input field and a 'Search' button. Below the search bar, there is a 'Browse by Subject' section with a grid of subject categories. The 'Most Popular Protocols' section lists several protocols, including 'Measurement of Regional Cerebral Hemodynamics and Metab...', 'Sensory-Evoked Potentials', 'Immunodeficient Mouse Models to Study Human Stem Cell-M...', 'Multiple Opioid Receptors in the Central Nervous System...', and 'Visualizing Calcium Signaling in Cells by Digitized Wid...'. On the right side, there is a sidebar with 'Inside Springer Protocols' and 'Most Popular Searches' sections. The 'Most Popular Searches' section lists terms like 'mass spectrometry', 'biotin', 'fluorescence', 'microarray', and 'plant'. At the bottom right, there is a 'Humana Press' logo and a tagline: 'A reliable source for research on the application of molecular biology'.

在过去的23年中，由SpringerProtocols.com在线提供的分子生物学方法 (Methods in Molecular Biology) 中的科研指南和方法，得到科学家和研究员的广泛信赖。此系列创循序渐进的实验室指南方式的先河，所采用的指南方式，后来成为实验室和相关机构的标准格式。

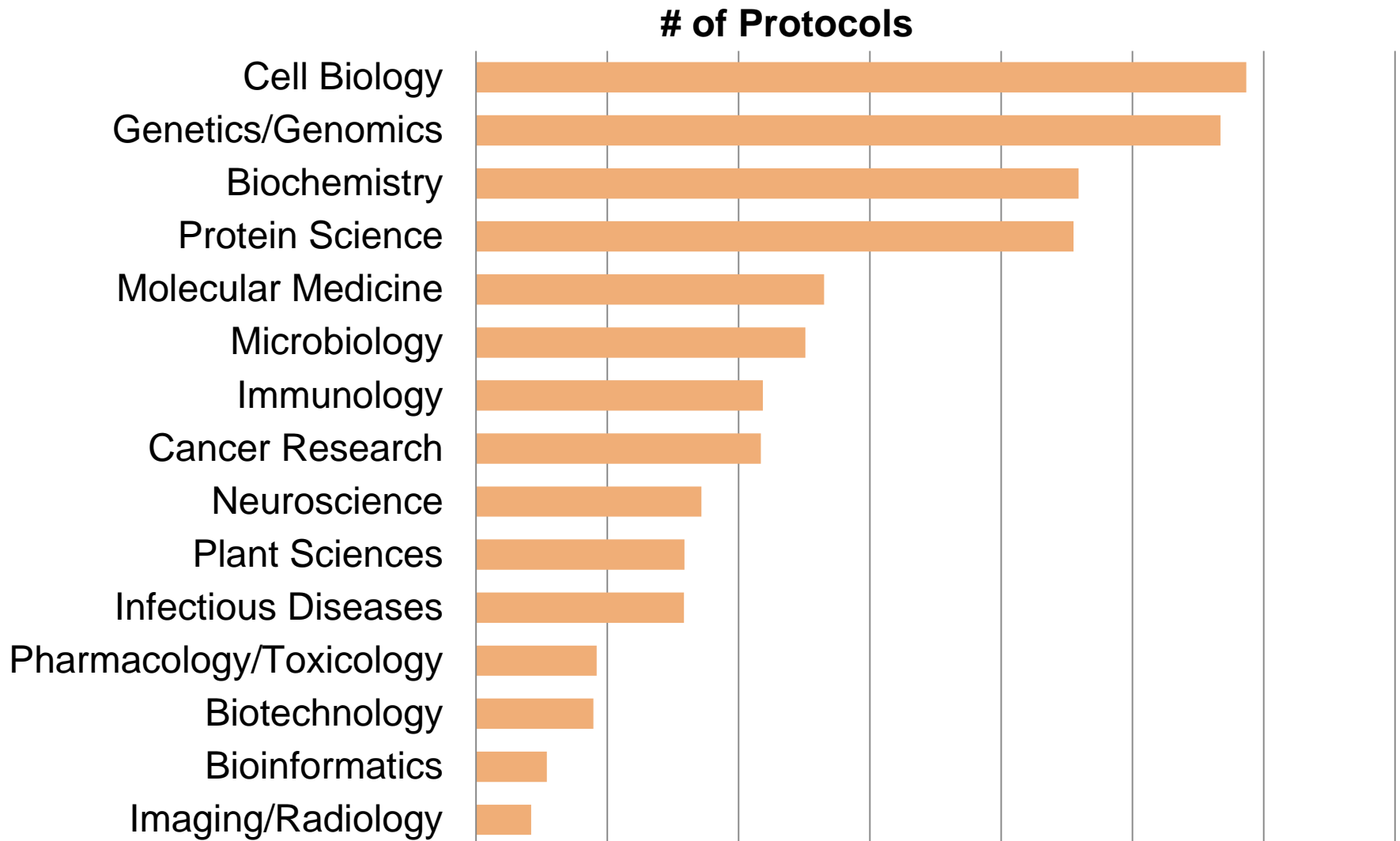


- “这本书的组织结构十分出色。实际上，许多作者都是目前常规方法的首创者，他们提供了第一手资料以及指导。这是一本非常有实践价值的手册”  
美国化学协会期刊
- ...为这个领域提供了大量详尽精确的实验室指南（同时附有非常实用的答疑解惑注释）
  - *分子生物学报 Microbiology Today*
- “...不但是在实验室中非常有价值的图书，也是生命科学图书馆中非常有用的参考工具书 “
- - *Doody's Health Sciences Book Review Journal*

- 特点：
  - 标准、规范、数据可靠
    - **Protocol鼻祖**亲历亲为(**Springerprotocols**的主编是全球**Protocol**标准的创建人)
    - 出版**500**余本广受欢迎及经同行评议的书籍；这些书籍曾在过去**20**年被全球**100+**万研究人员使用
- 收藏内容丰富
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  - 涵盖数年**Protocol**数据，不仅适用最新设备，使用老设备亦能得到同样的实验结果。
  - 新增**video** 的**protocol**!

- 所有指南皆被**PubMed/Medline**索引，提供摘要
  - 极大地方便广大读者检索实验室指南
- **SpringerProtocols**，于**2008**年**1**月正式推出功能强大的新平台
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## Discoverability

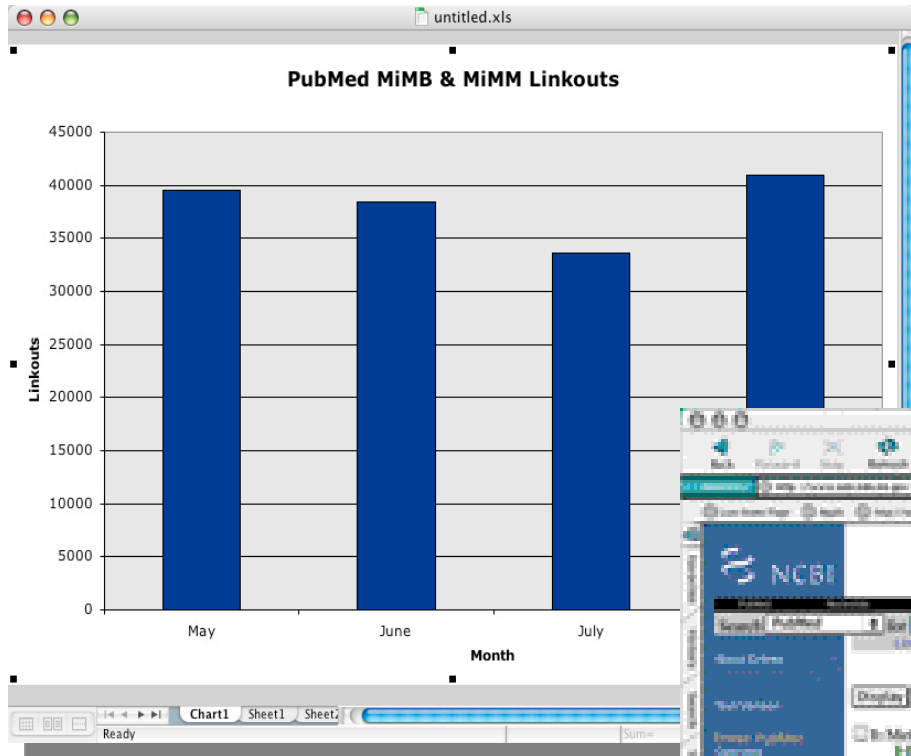
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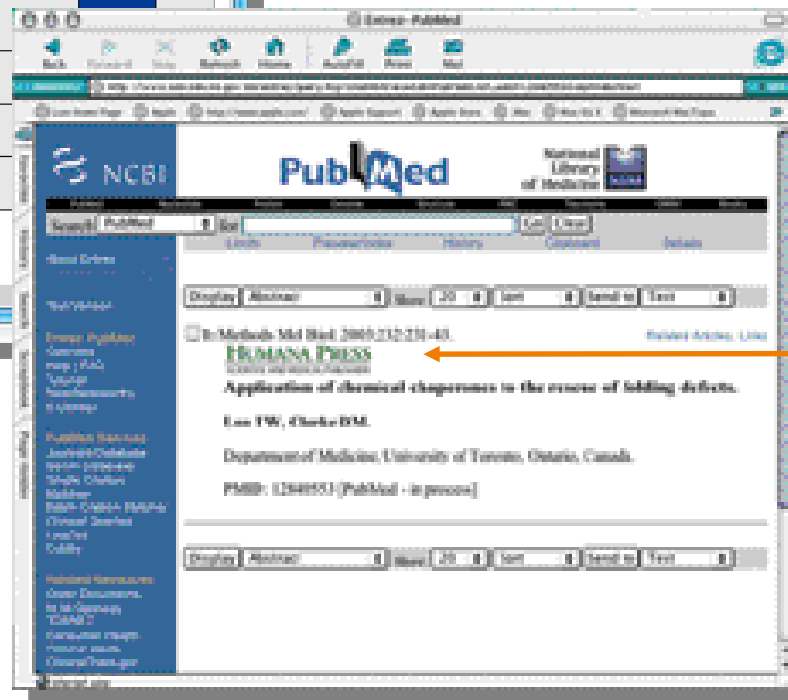
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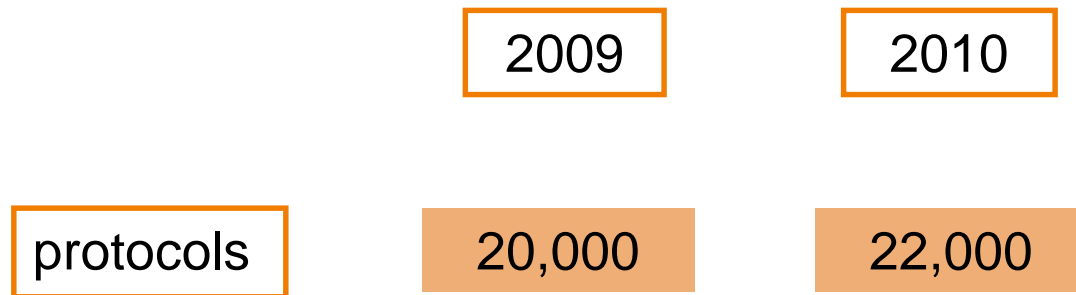


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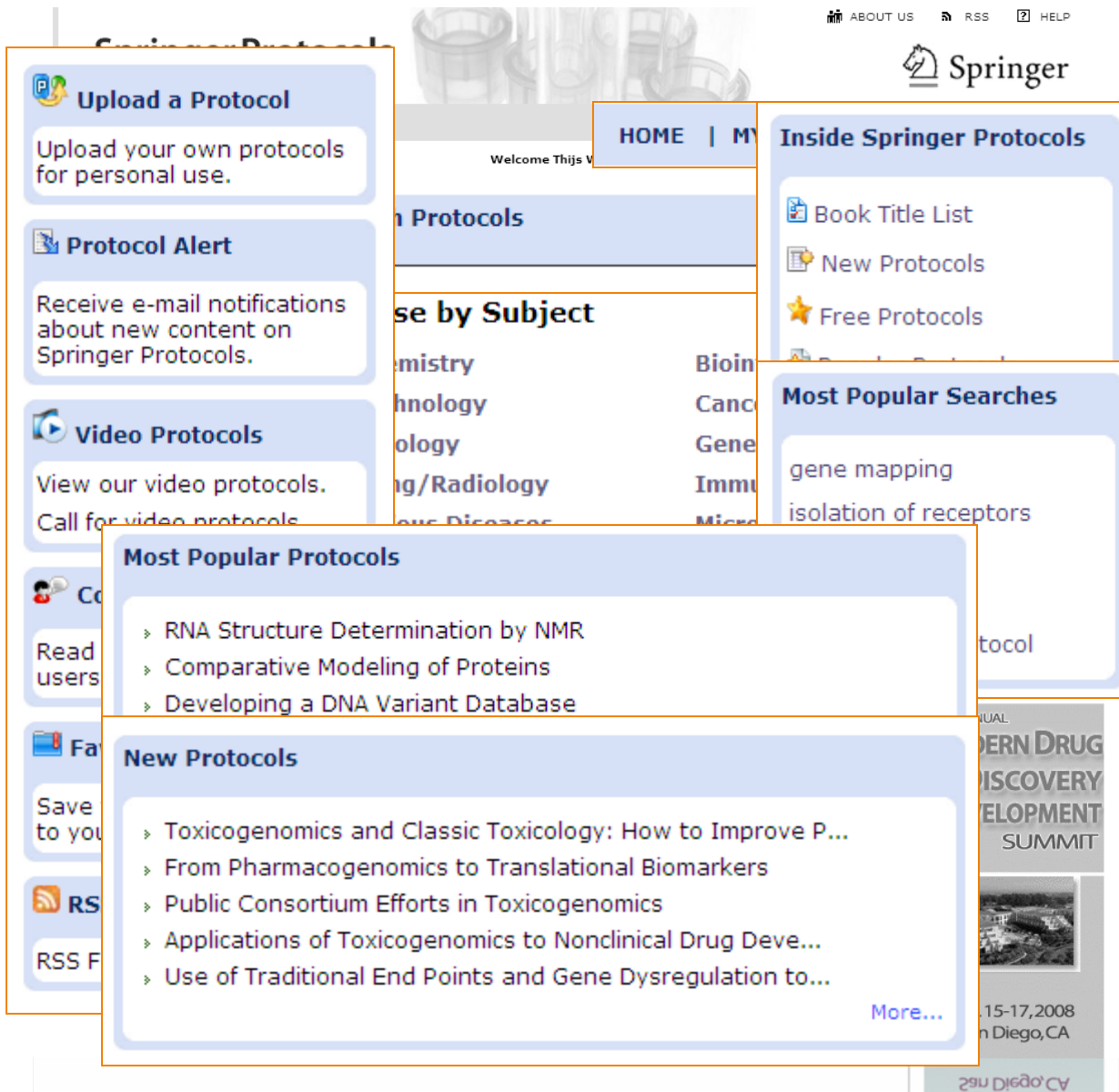
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## Largest collection of protocols



- SpringerProtocols database adds about 2,000 protocols every year
- The SpringerProtocols database keeps the alternative version, when a protocol is being updated. This allow labs without latest equipment to produce the same experiment with older equipment or methods

# PLATFORMS



The screenshot shows the Springer Protocols homepage with the following sections highlighted:

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- 17.4.2 How Many Cells to Co...
- 17.4.3 How Much RNA will I ...
- 17.4.4 Determine the Qualit...

### References



## Laser Microdissection Sample Preparation for RNA Analyses

By: Christopher J. Vega<sup>2</sup> 

**Affiliation(s):** (2) Leica Microsystems, Bannockburn, IL







**Book Title:** [Apoptosis and Cancer: Methods and Protocols](#)

**Series:** Methods in Molecular Biology | **Volume:** 414 | **Pub. Date:** Oct-11-2007 | **Page Range:** 241-252 | **DOI:** 10.1007/978-1-4939-9550-0\_17

Gene expression analysis provides an insight into the biomolecular characteristics of a given cell type. However, compositions hinder gene analysis studies from most microdissection (LMD) technique allows for the unambiguous cell population. However, preserving RNA integrity can be the deliberately limited amount of starting material, so cell. General laboratory procedures for reducing ribonucleases in reagents and in the laboratory environment, are recommended downstream RNA isolation and quantitation. Quality RNA sections made from flash-frozen and paraffin-embedded histological stains such as hematoxylin and eosin (H&E) provide visualization of the cells of interest. Following RNA integrity should precede downstream analysis.

**Key Words:** Laser microdissection - laser capture microdissection - RNA - sample preparation - RNase

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independently of their surrounding. That is, the unique expression profile of a cell will not be obscured by expression levels contributed from neighboring cells. Neighboring cells are not without value as they can be captured separately to provide comparative studies, for example, expression variations in cancerous tissue versus normal tissue.

### Suppressing Ribonuclease Activity

Preparing samples, to protect RNA from degradation, is paramount to the RNA isolation for gene expression analyses. The ribonuclease (RNase) family of enzymes cleaves the cleavage of nucleotides in RNA leading to degradation. Unfortunately, RNases are ubiquitous. The ubiquitous nature of these molecules makes working with the purpose of isolating RNA, a challenging endeavor.

Reducing the effects of RNases within solutions and upon laboratory equipment are essential. RNases are resilient. Bearing this in mind, RNases will not be eliminated.

SP: Full-text protocol

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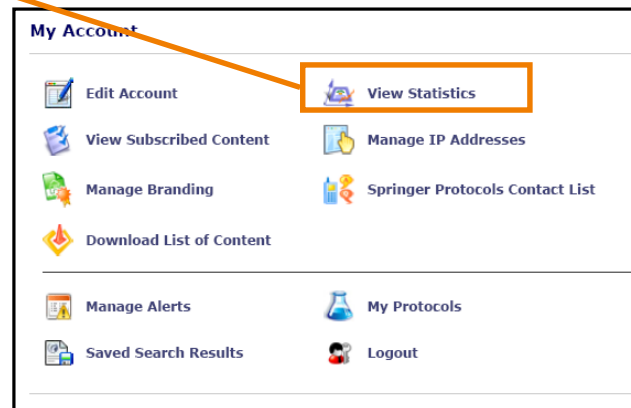
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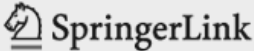
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**John M. Walker<sup>2</sup>**  
 (2) Division of Biosciences, University of Hertfordshire, Hatfield, UK  
 Abstract

The preparation of fixed-concentration polyacrylamide gels has been described in Chapter 5. However, the use of polyacrylamide gels that have a gradient of increasing acrylamide concentration (and hence decreasing pore size) can sometimes have advantages over fixed-concentration acrylamide gels. During electrophoresis in gradient gels, proteins migrate until the decreasing pore size impedes further progress. Once the "pore limit" is reached, the protein banding

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 John M. Walker

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## Summary

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  - 2,000 added annually
    - 1,000 updated
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