

# High-Level Accessibility Evaluation (WCAG 2.1)

Wiley Current Protocols

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**Prepared for:**

BTAA-Library Accessibility Alliance

**Prepared by:**

Emily Mason, UX Researcher  
User-Experience Lab  
CCI Research & Innovation Center (RIC)  
University of Tennessee  
uxlab@utk.edu

**Primary Point of Contact:**

Amy Forrester, RIC Assistant Director  
aforres4@utk.edu

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## SUMMARY

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This report reflects the findings of a high-level assessment of the Wiley Current Protocols platform for its conformance with the W3C Web Content Accessibility Guidelines version 2.1 (WCAG 2.1).

Overall, there are very few issues with the Wiley Current Protocols platform. There are, however, some essential WCAG 2.1 A and AA level requirements that need to be met for compliance around information and relationships and color contrast. Additionally, there are a few other issues that may improve the general usability of the site that are not direct violations of any specific SC. Below are the most critical issues to address to improve system compliance.

### Top Findings

1. **Site Navigation:** There are several instances where links do not have discernible text, meaning that these links are not being picked up by screen readers. This makes it extremely difficult for users that require the use of assistive technologies to navigate the site. Additionally, the Advanced Search page does not have a title, this can make it very difficult for users to keep track of which page they're currently on.
2. **PDF Content:** The PDF that was evaluated as a part of this report does not appear to have been set up correctly for accessibility. This can make interacting with PDF content very difficult for users with a variety of disabilities, and should be remediated in conformance with the [Section 508 guidelines for PDF accessibility](#).
3. **Information, Relationships, and Compatibility:** While the issues surrounding SC 1.3.1 and SC 4.1.2 are common issues, they can lead to significant obstacles for screen readers and site navigability. These typically are due to improper ARIA implementation. Please refer to the [WAI-ARIA Authoring Best Practices](#) guide for suitable implementation techniques.
4. **Focus Ring:** Currently, the focus state of components is inconsistent across the site. While most of them do show a focus state, in several cases the focus ring does not meet the minimum color contrast ratio of 3:1 with the background and the edge of the component. This is technically not an AA violation; however, it causes difficulty for keyboard users and vision impaired users to navigate the site. It is strongly recommended to improve the focus state for components.

## Best Practices

- ◆ Ensures landmarks are unique
- ◆ Headings levels should only increase by one
- ◆ Page should contain a level-one heading
- ◆ Elements should not have tabindex greater than zero
- ◆ Ensure elements marked as presentational are consistently ignored

## ACCESSIBILITY FINDINGS

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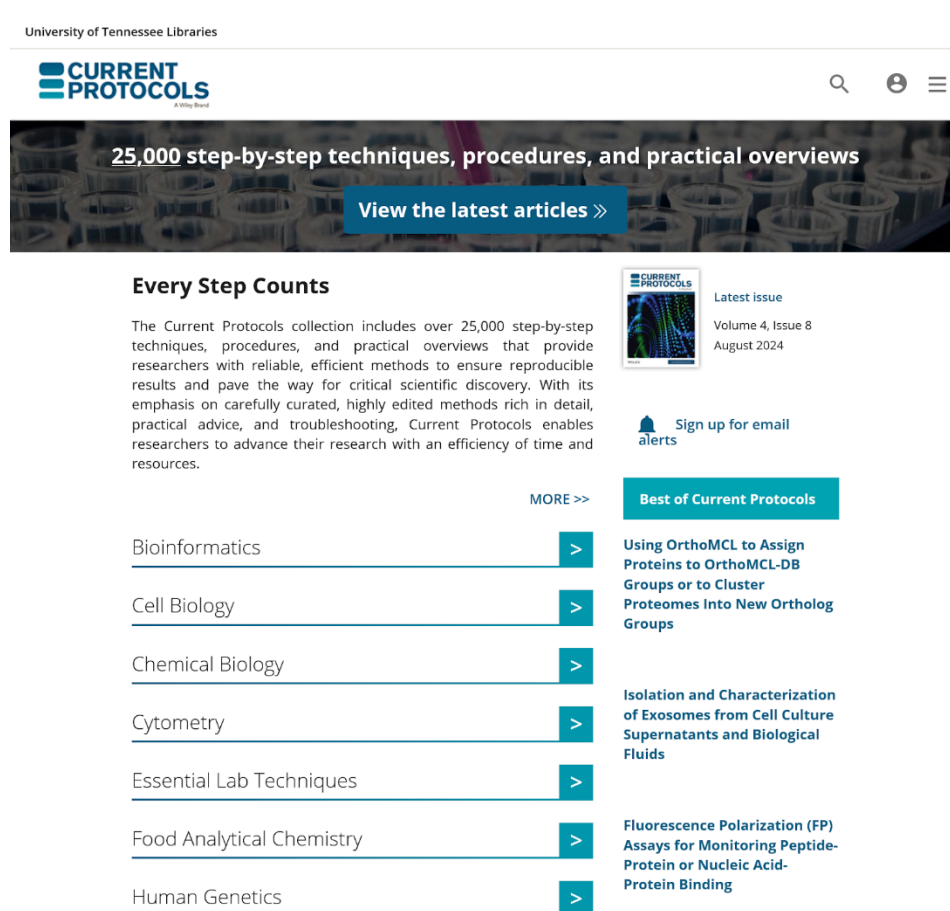
This report was conducted against the Wiley Current Protocols Platform and covers a selection of pages and features that were to be tested as a representative sample of the database's conformance to the WCAG 2.1 AA standards.

The resource was reviewed using a combination of manual and automatic review tools and assistive technologies, including the WAVE Accessibility Assessment tool, Axe Accessibility Assessment tool, WCAG Color Contrast Checker, and NVDA screen reader. PDF content was tested against Section 508 requirements using Adobe Acrobat's accessibility tools and manual analysis. All problems identified by automatic tools were verified manually. This evaluation was performed using Firefox on Windows 11.

Below are the errors revealed during the accessibility evaluation of the Wiley Current Protocols platform. Each result shows a summary of accessibility issues and the reason it was flagged. Screenshots are included.

# 1. Initial Interface

**Test Case:** Test initial interface/landing page to ensure menus, sub-menus, search box, images, icons, etc. are accessible. <https://currentprotocols-onlinelibrary-wiley-com.utk.idm.oclc.org/>



**SC 1.3.1:** Certain ARIA roles must be contained by particular parents.

**Location(s):**

1. `<li role="menuitem" aria-label="Current Protocols" class="dropdown menu-parent">`
2. `<li role="menuitem" aria-label="For Authors" class="dropdown menu-parent">`
3. `<li role="menuitem" aria-label="About" class="dropdown menu-parent">`

**Reason flagged:**

- Required ARIA parents role not present: menu, menubar, group

**SC 1.3.1:** `<ul>` and `<ol>` must only directly contain `<li>`, `<script>`, or `<template>` elements.

**Location(s):**

1. `<ul class="pull-left rlist--inline">`
2. `<ul class="rlist--inline pull-right">`

**Reason flagged:**

- List element has direct children that are not allowed: [role=menuitem]
- List element has direct children that are not allowed: div

**SC 1.4.3:** Elements must meet minimum color contrast ratio thresholds.

**Location(s):**

1. `<div class="doi-access">free access</div>`
2. `<h2 class="side-section-header">Best of Current Protocols</h2>`

**Reason flagged:**

- Element has insufficient color contrast of 3.71 (foreground color: #d66310, background color: #ffffff, font size: 9.8pt (13px), font weight: bold). Expected contrast ratio of 4.5:1
- Element has insufficient color contrast of 3.05 (foreground color: #ffffff, background color: #00a3b2, font size: 10.5pt (14px), font weight: bold). Expected contrast ratio of 4.5:1

**SC 2.4.4:** Links must have discernible text.

**Location(s):**

1. `<a href="https://twitter.com/Curr_Protocols" target="_blank"><i class="icon-twitter-round"></i></a>`
2. `<a href="https://currentprotocols-onlinelibrary-wiley-com.utk.idm.oclc.org/doi/10.1002/cpps.51"></a>`

**Reason flagged:**

- Element does not have text that is visible to screen readers
- aria-label attribute does not exist or is empty
- aria-labelledby attribute does not exist, references elements that do not exist or references elements that are empty
- Element has no title attribute

**SC 4.1.2:** Buttons must have discernible text.

**Location(s):**

1. `<button role="tab" class="owl-dot active"><span></span></button>`
2. `<button role="tab" class="owl-dot"><span></span></button>`

**Reason flagged:**

- Element does not have inner text that is visible to screen readers
- aria-label attribute does not exist or is empty
- aria-labelledby attribute does not exist, references elements that do not exist or references elements that are empty
- Element has no title attribute
- Element's default semantics were not overridden with role="none" or role="presentation"

### SC 4.1.2: Frames must have an accessible name.

#### Location(s):

1. `<iframe src="https://www.diversityinresearch.careers/widget/bootstrap/job/#i=458" id="mdgxWidgetiFrame" style="width: 100%; border: 0; height: 400px; background: 0" frameborder="0"></iframe>`

#### Reason flagged:

- Element has no title attribute
- aria-label attribute does not exist or is empty
- aria-labelledby attribute does not exist, references elements that do not exist or references elements that are empty
- Element's default semantics were not overridden with role="none" or role="presentation"

## 2. Search Results

**Test Case:** From the initial landing page, conduct a search for: molecular analysis. Test search results page, including filters/refine search. Filter “Published In” to “Immunology.” Sort by Date

The screenshot shows the search results page for 'molecular analysis' on the University of Tennessee Libraries website. The page displays 612 results for 'molecular analysis' anywhere published in 'Current Protocols in Immunology'. The results are categorized into 'ARTICLES & CHAPTERS (612)' and 'COLLECTIONS (23)'. The page includes a search bar, a 'Filters' button, a 'Refine Search' dropdown, and a 'Relevance' sort option. The first result is 'Molecular Analysis of Mouse T Cell Receptor Expression Using PCR' by Casey J. Fox, Jayne S. Danska, published in Current Protocols in Immunology | Volume 22, Issue 1, first published on 01 May 2001. The second result is 'Unbiased Molecular Analysis of T Cell Receptor Expression Using Template-Switch Anchored RT-PCR' by Maira F. Quigley, Jorge R. Almeida, David A. Price, Daniel C. Douek, published in Current Protocols in Immunology | Volume 94, Issue 1, first published on 01 August 2011. Both results include a 'Full Access' icon and a 'FIND TEXT' button.

**SC 1.3.1:** Certain ARIA roles must be contained by particular parents.

**Location(s):**

`<li role="menuitem" aria-label="Current Protocols" class="dropdown menu-parent">`

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2. `<li role="menuitem" aria-label="About" class="dropdown menu-parent">`

**Reason flagged:**

- Required ARIA parents role not present: menu, menubar, group

**SC 1.3.1:** `<ul>` and `<ol>` must only directly contain `<li>`, `<script>`, or `<template>` elements.

**Location(s):**

`<ul class="pull-left rlist--inline">`

1. `<ul class="rlist--inline pull-right">`
2. `<ul class="rlist--inline search-result__nav">`

**Reason flagged:**

- List element has direct children that are not allowed: [role=menuitem]
- List element has direct children that are not allowed: div
- List element has direct children that are not allowed: [role=presentation]

**SC 1.4.3:** Elements must meet minimum color contrast ratio thresholds.

**Location(s):**

1. `<span>Filters</span>`

**Reason flagged:**

- Element has insufficient color contrast of 3.05 (foreground color: #ffffff, background color: #00a3b2, font size: 10.5pt (14px), font weight: normal). Expected contrast ratio of 4.5:1

**SC 2.4.4:** Links must have discernible text.

**Location(s):**

1. `<a href="https://twitter.com/Curr_Protocols" target="_blank"><i class="icon-twitter-round"></i></a>`

**Reason flagged:**

- Element does not have text that is visible to screen readers
- aria-label attribute does not exist or is empty



- aria-labelledby attribute does not exist, references elements that do not exist or references elements that are empty
- Element has no title attribute

**SC 4.1.2:** Interactive controls must not be nested.

**Location(s):**

1. `<li id="pane-67065c09-4a88-49cd-934c-ac707951d35c0" role="tab" class="tab__pane quick-search-pane__anywhere active" aria-selected="true">`

**Reason flagged:**

- Element has focusable descendants

### 3. Individual Results

**Test Case:** Test individual search result landing page & test actual document (PDF, video, etc.).  
<https://currentprotocols.onlinelibrary.wiley.com/doi/10.1002/cpz1.1001>

The screenshot shows the top portion of a Wiley Current Protocols article page. At the top left is the 'CURRENT PROTOCOLS' logo with 'A Wiley Brand' underneath. To the right are search, share, and menu icons. Below the logo, the text reads 'Current Protocols / Volume 4, Issue 3 / e1001' and 'PROTOCOL'. The main title is 'Murine Models of *Cryptococcus* Infection'. Below the title is the author 'Adithap Hansakon, Pornpimon Angkasekwinaï' with an email icon. Further down, it says 'First published: 08 March 2024' and provides the DOI link 'https://doi.org/10.1002/cpz1.1001'. It also notes 'Published in the Immunology section'. At the bottom of this section is a dark blue bar with the text 'Read the full text > | About' and navigation arrows.

#### Abstract

*Cryptococcus* is recognized as one of the emerging fungal pathogens that have major impact on diverse populations worldwide. Because of the high mortality rate and limited antifungal therapy options, there is an urgent need to understand the impact of dynamic processes between fungal pathogens and hosts that influence cryptococcal pathogenesis and disease outcomes. With known common limitations in human studies, experimental murine cryptococcosis models that can recapitulate human disease provide a valuable tool for studying fungal virulence and the host interaction, leading to development of better treatment strategies. Infection with *Cryptococcus* in mice via intranasal inhalation is mostly used because it is noninvasive and considered to be the most common mode of infection, strongly correlating with cryptococcal disease in humans. The protocols described in this article provide the procedures of establishing a murine model of *Cryptococcus* infection by intranasal inhalation and assessing the host immune response and disease progression during *Cryptococcus* infection. © 2024 Wiley Periodicals LLC.

**Basic Protocol 1:** Murine model of pulmonary cryptococcal infection via intranasal inhalation

**Basic Protocol 2:** Assessment of the pulmonary immune response during *Cryptococcus*

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**Reason flagged:**

- Required ARIA parents role not present: menu, menubar, group

**SC 1.3.1:** `<ul>` and `<ol>` must only directly contain `<li>`, `<script>`, or `<template>` elements.

**Location(s):**

1. `<ul class="pull-left rlist--inline">`
2. `<ul class="rlist--inline pull-right">`

**Reason flagged:**

- List element has direct children that are not allowed: [role=menuitem]
- List element has direct children that are not allowed: div

**SC 2.4.4:** Links must have discernible text.

**Location(s):**

1. `<a href="https://twitter.com/Curr_Protocols" target="_blank"><i class="icon-twitter-round"></i></a>`

**Reason flagged:**

- Element does not have text that is visible to screen readers
- aria-label attribute does not exist or is empty
- aria-labelledby attribute does not exist, references elements that do not exist or references elements that are empty
- Element has no title attribute

**PDF Document Analysis:**

<b>PDF Area Assessed</b>	<b>Failed Issues</b>
<b>Document</b>	Tagged PDF Primary Language Title
<b>Page Content</b>	Tagged Content Tagged Annotations Tab Order Character Encoding <i>Navigation Links (skipped, no links)</i>
<b>Forms</b>	<i>None</i>
<b>Alternate Text</b>	Figures Alt Text Nested Alt Text Associated with Content Hides Annotation Other Elements Alt Text
<b>Tables</b>	Rows TH and TD Headers Regularity <i>Summary (skipped)</i>
<b>Lists</b>	List Items Lbl and Lbody
<b>Headings</b>	Appropriate Nesting

## 4. Advanced Search

**Test Case:** Test navigation to the advanced search page (this can be accessed by clicking into the “Search” box in the upper-right corner of the screen and selecting “Advanced Search.” Test the Advanced Search page.

**SC 1.3.1:** Certain ARIA roles must be contained by particular parents.

**Location(s):**

1. `<li role="menuitem" aria-label="Current Protocols" class="dropdown menu-parent">`
2. `<li role="menuitem" aria-label="For Authors" class="dropdown menu-parent">`
3. `<li role="menuitem" aria-label="About" class="dropdown menu-parent">`

**Reason flagged:**

- Required ARIA parents role not present: menu, menubar, group

**SC 1.3.1:** `<ul>` and `<ol>` must only directly contain `<li>`, `<script>`, or `<template>` elements.

**Location(s):**

1. `<ul class="pull-left rlist--inline">`
2. `<ul class="rlist--inline pull-right">`

**Reason flagged:**

- List element has direct children that are not allowed: [role=menuitem]
- List element has direct children that are not allowed: div

**SC 2.4.2:** Documents must have <title> element to aid in navigation.

**Location(s):**

1. `<html lang="en" class="pb-page" data-request-id="d4851db9-8b7d-47e7-bd27-bb44344809ec">`

**Reason flagged:**

- Document does not have a non-empty <title> element

**SC 2.4.4:** Links must have discernible text.

**Location(s):**

1. `<a href="https://twitter.com/Curr_Protocols" target="_blank"><i class="icon-twitter-round"></i></a>`

**Reason flagged:**

- Element does not have text that is visible to screen readers
- aria-label attribute does not exist or is empty
- aria-labelledby attribute does not exist, references elements that do not exist or references elements that are empty
- Element has no title attribute

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