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## **Indoor Mold A General Guide to Health Effects, Prevention, and Remediation**

*Kenneth W. Umbach, Ph.D.  
Pamela J. Davis, R.N., P.H.N.*

*Report in Response to A.B. 284,  
Chapter 550, Statutes of 2001*

**JANUARY 2006**

**CRB 06-001**

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ISBN 1-58703-207-4

# Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>1. INTRODUCTION .....</b>	<b>7</b>
BACKGROUND .....	7
WHAT ARE MOLDS AND FUNGI? .....	8
<b>2. HEALTH EFFECTS AND RISKS.....</b>	<b>11</b>
OVERVIEW .....	11
ALLERGIES .....	14
ASTHMA .....	15
FUNGAL INFECTIONS .....	16
TOXICITY .....	17
WEIGHING COMPETING VIEWS .....	18
SUMMARY .....	20
<b>3. ASSESSING MOLD CONTAMINATION .....</b>	<b>23</b>
VISUAL AND OLFACTORY INSPECTION .....	24
AIR SAMPLING.....	25
SURFACE SAMPLING.....	27
BULK SAMPLING .....	27
ASSESSING EXTENT OF HIDDEN MOLD GROWTH .....	28
EPIDEMIOLOGICAL INVESTIGATION .....	29
SUMMARY .....	30
<b>4. PREVENTING MOLD GROWTH .....</b>	<b>31</b>
ROUTINE PREVENTION AND BUILDING MAINTENANCE .....	31
DESIGN AND CONSTRUCTION .....	32
BUILDING MATERIALS.....	34
SUMMARY AND COMMENT .....	35
<b>5. REMEDIATING MOLD .....</b>	<b>37</b>
GUIDELINES.....	37
IDENTIFY AND FIX THE CAUSE .....	39
DETERMINE EXTENT OF MOLD GROWTH.....	39
ISOLATE AFFECTED AREAS .....	40
USE PERSONAL PROTECTIVE EQUIPMENT.....	41
PROTECT BUILDING OCCUPANTS.....	42
REMOVE DAMAGED POROUS MATERIALS .....	43
CLEANERS AND DISINFECTANTS.....	43
IS ENCAPSULATION AN OPTION? .....	44
CLEAN SURFACES IN ADJACENT AREAS .....	44
CONSIDERATIONS FOR HOMEOWNERS AND BUILDING MANAGERS .....	45
ASSISTANCE FOR LOW-INCOME HOMEOWNERS.....	46
SUMMARY .....	47
<b>6. HAZARD COMMUNICATION .....</b>	<b>49</b>
MEANS OF COMMUNICATION .....	49
TARGETING COMMUNICATIONS.....	49
<i>Homeowners</i> .....	49
<i>Renters</i> .....	50

<i>Construction Workers and Maintenance and Custodial Personnel</i> .....	50
<i>Building Occupants (Commercial and Government)</i> .....	50
SUMMARY.....	51
<b>7. POLICY OPTIONS.....</b>	<b>53</b>
EPIDEMIOLOGICAL ANALYSIS AND HEALTH IMPACT STUDIES .....	53
LICENSING.....	53
LISTING OF SERVICE PROVIDERS .....	53
BUILDING STANDARDS .....	54
EXPLICIT HAZARD WARNING REQUIREMENTS .....	54
REVIEW OF RENTERS' RIGHTS.....	54
<b>8. RECOMMENDED READING AND ADDITIONAL RESOURCES.....</b>	<b>55</b>
A. RECOMMENDED READING FOR GOVERNMENT OFFICIALS AND ENVIRONMENTAL HEALTH OFFICERS	55
<i>General/Background</i> .....	55
<i>Fungi/Mold</i> .....	56
<i>Health Effects</i> .....	56
<i>Prevention</i> .....	57
<i>Remediation</i> .....	58
<i>Hazard Communication</i> .....	59
B. ADDITIONAL RESOURCES .....	59
<i>Books, Reports, and Articles</i> .....	59
<i>Standards</i> .....	62
<i>Agencies and Organizations</i> .....	62
<b>ASSEMBLY BILL 284 (CHAPTER 550, STATUTES OF 2001) .....</b>	<b>65</b>
<b>REVIEW PANEL MEMBERS .....</b>	<b>69</b>
<b>NOTES .....</b>	<b>71</b>

# Executive Summary

## Background

During the 1990s, a series of widely publicized incidents brought attention to the potential health risks of indoor mold growth.

In response to the concerns raised by the reported incidents and by mold-related litigation, the California Legislature made a series of findings in Assembly Bill 284 (Chapter 550, Statutes of 2001) regarding indoor air pollution and the impact of indoor molds. The Legislature asked the California Research Bureau to prepare and publish a report in consultation with a review panel representing a wide range of professional and scientific expertise and experience.

We consulted with the review panel through telephone, mail, and email. The result of that process and of our review of books and articles is this report, designed to be a concise summary for a general audience. Included are a recommended reading list and an additional list of resources for those who wish to pursue topics in more depth.

Opinions and analyses on issues addressed in this report vary widely. This report is not definitive, as there are too many differing views in the literature and among the experts to permit a definitive review. The reader is advised to focus on the main points, to read the literature in the field for further information, and to seek advice of experts in connection with specific concerns about health effects, prevention, and remediation.

## What are Molds?

Fungi (plural of the Latin word *fungus*), are a large class of living organisms, one of the “kingdoms” into which biologists categorize life. They are not plants, animals, or bacteria.

Molds, which comprise a large portion of the entire range of fungi, are found nearly everywhere on Earth. Molds are made of branching filaments called hyphae, plural of the Latin *hypha*. A mass of hyphae form a mycelium. Molds extend filaments into media on which they grow (substrates), whether a thin medium, like a layer of grime, or a thick one, like a wooden two-by-four. Molds produce reproductive structures called spores that can easily become airborne and spread the contamination throughout an environment, and that can result in occupant exposures.

Molds and other fungi can survive in a very wide range of conditions. They are hard to kill, especially where they have grown into substrates, such as wallboard, but they need moisture to grow.



















































































































































































