"TOXIC" MOLD: DEFENSE PERSPECTIVE

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Medicine and Law Committee of the Tort Trial and Insurance Practice Section
Toxic Mold: Myth or Mayhem?

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I. INTRODUCTION

The $32 million *Ballard* verdict was the most notorious salvo in the gold rush of 2001, but by no means the most expensive. Farmers Insurance Companies reported twelve mold claims in 1999, 499 claims in 2000, and as of September 1, 2001, over 8,000 in 2001 – and expects to lose $100,000,000 on mold claims in 2001 alone.[1] State Farm, Farmers, and Allstate have all restricted sales of new policies.

The Texas Department of Insurance reports an estimated 1,050 mold claims the first quarter of 2000; by the last quarter of 2001, the number was almost 15,000.

In 2001, 70% of all mold claims nationally were filed in Texas. The cost of an average mold claim more than quintupled from the mid 1990s ($4,000) to 2000-2001 ($22,000). In 2000-2001, Texas insurers paid over 1 billion in mold claims — a cost passed directly to Texas rate payers.

This paper will trace the unintentional shift in policy language and interpretation that created the present insurance crisis and will analyze the significant issues presented by these claims.

II. THE PURPOSE AND NATURE OF INSURANCE

Insurance is nothing more than shared risk. Homeowners who cannot afford to rebuild if catastrophe should strike their house are, in effect, pooling their resources (premiums) in exchange for a promise that they are each protected (indemnity) should catastrophe strike. In its simplest form, the system only works if the total premium dollars collected exceeds the total of losses. Too many claims and not enough premiums means that someone does not get paid.

Fundamental to the nature of the insurance relationship is the principle of fortuity, which holds that in order to be covered, losses must be accidental and unknown at the time the policy is issued. Because the purpose of insurance is to protect insureds against fortuitous risks, fortuity is an inherent requirement of all risk insurance policies. *Two Pesos, Inc. v. Gulf Ins. Co.*, 901 S.W.2d 495, 502 (Tex. App.—Houston [14th Dist.] 1995, no writ). The fortuity doctrine precludes coverage for both a "known loss" and a "loss in progress." A "known loss" is a loss the insured knew had occurred prior to making the insurance contract. *Burch v. Commonwealth Mut. Ins. Co.*, 450 S.W.2d 838, 840-41 (Tex.1970). A "loss in progress" occurs when the insured is, or should be, aware of an ongoing progressive loss at the time the policy is purchased. *Two Pesos*, 901 S.W.2d at 502. Insurance coverage is precluded where the insured is or should be aware of an ongoing progressive or known loss at the time the policy is purchased. *Id.* The doctrine has its roots in the prevention of fraud; because insurance policies are designed to insure against fortuities, fraud occurs when a policy is misused to insure a certainty. *Inland Waters Pollution Control, Inc. v. Nat'l Union Fire Ins. Co.*, 997 F.2d 172, 175-77 (6th Cir. 1993). Thus, intentional losses such as those caused by the policyholder's act of arson are excluded from coverage on public policy grounds. *See Greenfield v. San Jacinto Ins. Co.*, 319 S.W.2d 134 (Tex. 1958). Further, losses which are inevitable, such as wear and tear or deterioration, are expressly excluded from coverage (HOB-Section I-Exclusions). Generally speaking, a policy covers fortuitous losses, not ordinary maintenance and predictable incidents of ownership.

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[1] All statistics are from *The Houston Chronicle*, November 10, 2001.

Consistent with these principles, the Homeowners Form B provides[2]:

SECTION I-EXCLUSIONS:

f. We do not cover losses caused by:

(1) wear and tear, deterioration or losses caused by any quality in property that causes it to damage or destroy itself.
(2) **rust, rot, mold, or other fungi.**
(3) dampness of atmosphere, extremes of temperature.

h. We do not cover loss under Coverage A (Dwelling) caused by settling, cracking, bulging, shrinkage, or expansion of foundations, walls, floors, ceilings, roofs, structures, walks, drives, curbs, fences, retaining walls, or swimming pools.

* * *

i. We do not cover loss caused by or resulting from flood, surface water, waves, tidal waves, overflow of streams or other bodies of water or spray from any of these whether or not driven by wind.

* * *

k. We do not cover loss caused by earthquakes, landslides or earth movement.

Individually, these clauses each have a particular meaning. Collectively, however, they mean the policy does not cover losses that occur gradually over time, extraordinary events that require specific coverages, or losses that occur from lack of maintenance.

III. SHIFT IN POLICY LANGUAGE AND INTERPRETATION

Prior to 1978, the standard policy did not contain an exclusion repeal provision. However, beginning in 1978, the policy was amended to contain the following language:

EXCLUSIONS (Applicable to Property Insured under Coverages A and B and Perils Insured Against) – This insurance does not cover:

k. Loss under coverage A caused by settling, cracking, bulging, shrinkage, or expansion of foundations, walls, floors, ceilings, roof structures, walks, drives, curbs, fences, retaining walls or swimming pools.

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[2] The discussion will concern the HOB. The Homeowners Form A policy is generally a named perils policy and does not include accidental discharge of water as a named peril. Therefore, unless the policy is worded to include a peril from which mold may have occurred, or it contains an endorsement providing accidental discharge of water or steam language, most mold claims will not be subject to coverage under the Form A policy. The Homeowners Form B–Tenant (HOB-T) policy generally has no "exclusion repeal provision" and no "ensuing loss" provision. As a result, the *Balandran* analysis probably does not apply to possibly allow mold coverage under this policy, nor is there coverage for mold under the "ensuing loss" provision. Due to express limitations in those policies, the new policy forms such as the HOW are beyond the scope of this paper.

> The foregoing Exclusions a, b, c, f, h, i, j and k shall not apply to Accidental discharge, leakage or overflow of water or steam from within a plumbing, heating or air conditioning system or a domestic appliance (including necessary tearing out and replacing any part of the building covered).

Under this version of the policy, the exclusion repeal provision was contained in the Coverage A provisions. In 1990, the State Board of Insurance promulgated a new "readable form" policy. The exclusion repeal provision was moved to Coverage B (personal property) and now reads as follows:

> Accidental Discharge, Leakage or Overflow of Water or Steam from within a plumbing, heating or air conditioning system or household appliance.
>
> A loss resulting from this peril includes the cost of tearing out and replacing any part of the building necessary to repair or replace the system or appliance. But this does not include loss to the system or appliance from which the water or steam escaped.
>
> Exclusions 1.a through 1.h under Section I Exclusions do not apply to loss caused by this peril.

It is the addition of repeal language in 1978, its transfer to Coverage B in 1990 and the Supreme Court decision in 1998 that created the mold crisis.

The general question of whether mold damage is now covered at all when it results from a plumbing leak is probably controlled by *Balandran v. Safeco Ins. Co. of America*, 972 S.W.2d 738, 741 (Tex. 1998). In that case, the Supreme Court of Texas interpreted the accidental discharge clause (set out in the Coverage B named perils laundry list) in conjunction with Exclusion 1.h, which ordinarily excludes foundation movement from coverage under the homeowners policy. The coverage dispute in *Balandran* arose because the accidental discharge clause contains an "exclusion repeal provision." The "exclusion repeal provision" expressly states that exclusions 1.a through 1.h do not apply to losses caused by perils covered under the accidental discharge clause.

Safeco, the defendant in *Balandran*, argued that the "exclusion repeal provision" of the accidental discharge clause applied ONLY to Coverage B (personal property), since that is the coverage under which the accidental discharge language is found in the policy. The Supreme Court reasoned, though, that the "exclusion repeal provision" would be meaningless regarding exclusion h (foundation movement) if the provision only applied to Coverage B (personal property), because exclusion h specifically states it only applies to losses under Coverage A (Dwelling).

Because of this alleged ambiguity in the policy, the Supreme Court ruled that the language in the accidental discharge provision effectively negates Exclusion 1.h, resulting in coverage for all foundation movement resulting from plumbing leaks. The Court made this finding even though the exception to the exclusion was located in the Personal Property section of the policy. As a result, it is now generally held that foundation movement caused by an accidental discharge, leakage or overflow of water or steam from within a plumbing, heating or air conditioning system or household appliance is covered under the Homeowners Form B insurance policy.

IV. PROBABLE BASIS OF COVERAGE

When an insured submits a claim for mold damage resulting from a plumbing leak, there is an argument under the reasoning of *Balandran* that the same "exclusion repeal provision" found in the accidental discharge clause effectively negates Exclusion 1.f. (which excludes mold and other fungi) in the same way it negates 1.h. Since repeal (or exception) of exclusion 1.h has been found to apply to Coverage A (Dwelling), it seems probable the Court would rule that repeal of exclusion 1.f would apply to Coverage A (Dwelling) as well.

With this in mind, most attorneys assume it probable that mold claims caused by an accidental discharge, leakage, or overflow of water or steam from within a plumbing, heating, or air conditioning system or household appliance, would be a covered loss.

V. QUESTIONABLE BASES OF COVERAGE

The Coverage B (Personal Property) provision under which the Texas Supreme Court found coverage in *Balandran* is limited to water discharge from plumbing, heating, or air conditioning systems or household appliances. In claims where the water damage which allegedly results in mold is NOT caused by any of those named perils, a different coverage analysis occurs. For those claims, the "ensuing loss" provision of Exclusion 1.f (rust, rot, mold and other fungi) must be analyzed. Unfortunately, the ensuing loss provision has undergone at least two different interpretations:

Interpretation 1: We do cover (ensuing loss) (caused by) (collapse of building or water damage). *i.e.*, water damage occurs and leads to another loss (like mold or mildew).

Interpretation 2: We do cover (ensuing) (loss caused by collapse of building) or (ensuing) (loss caused by water damage). *i.e.*, water damage is the ensuing loss that results from some other cause (like water damage occurring from rain that enters a house after a windstorm damages the house).

The Fourth Court of Appeals, in *Lambros v. Standard Fire Ins. Co.*, 530 S.W.2d 138 (Tex. Civ. App.—San Antonio 1975, writ ref'd) discussed the ensuing loss clause in an insurance policy. The court found that to "ensue" means "to follow as a consequence or in chronological succession; to result, as an ensuing conclusion or effect." *Id* at 141. The court then stated that an ensuing loss must be a loss which follows as a consequence of some preceding event or circumstance. *Id.* "If we give to the language of the exception its ordinary meaning, we must conclude that an ensuing loss caused by water damage is a loss caused by water damage where the water damage itself is the result of a preceding cause." *Id.* ""Ensuing loss caused by water damage' refers to water damage which is the result, rather than the cause, of 'settling, cracking, bulging, shrinkage, or expansion of foundations, walls, floors, ceilings....' Thus the *Lambros* court appears to be adopting Interpretation 2, a loss caused by water damage where the water damage itself ensues from something else. The court used this reasoning to deny coverage for a claim of foundation damage that was caused by water leaking under the house.

More recently, at least one court has followed the reasoning in *Lambros* and adopted Interpretation 2. *Zeidan v. State Farm Fire & Cas. Co.*, 960 S.W.2d 663 (Tex. App.—El Paso 1997, no writ). The court denied coverage for foundation settling as a result of rainwater causing earth movement. There was no actual water damage to the house, so the court concluded the ensuing loss clause could not possibly apply.

In *Merrimack Mut. Fire. Ins. Co. v. McCaffree*, the court held under similar facts that rot, mold, and termite damage is not an ensuing loss caused by water damage. The court apparently believed that to qualify, the damage would have to be characterized as a type of water damage, which it is clearly not. 486 S.W.2d 616 (Tex. Civ. App.—Dallas 1972, writ ref'd n.r.e.). The *Merrimack* court favorably cited two other cases with similar outcomes. See *Aetna Casualty & Surety Co. v. Yates*, 344 F.2d 939 (5th Cir. 1965); *Park v. Hanover Insurance Co.*, 443 S.W.2d 940 (Tex. Civ. App., Amarillo 1969). Because it found that the loss could not be covered unless it was itself a loss caused by water damage, it also appears to be adopting Interpretation 2.

Other cases, however, have applied the ensuing loss clause to cover mold and rot damage. *Employers Casualty Co. v. Hold*, 393 S.W.2d 363 (Tex. Civ. App., Houston 1965, no writ) and *Allstate Insurance Co. v. Smith*, 450 S.W.2d 957 (Tex. Civ. App., Waco 1970, no writ). The *Hold* court adopted Interpretation 1 and held that because the parties stipulated the water penetrating the wood caused the rot and deterioration, it was a covered ensuing loss. *Smith* followed similar reasoning. However, *Merrimack* subsequently considered and declined to follow these cases. It appears that *Home Ins. Co. v. McClain*, an unpublished opinion, is the only recent case to be influenced by these opinions. No. 05-97-01479-CV, 2000 WL 144115 (Tex. App.—Dallas Feb. 10, 2000) (no pub.). This line of reasoning appears to be a minority rule. Interestingly, none of the Courts have considered the policy language to be ambiguous.

The most recent case concerning the ensuing loss clause is another unpublished opinion in *Harrison v. USAA Insurance Company*, 2001 WL 391539 (Tex. App.—Austin 2001, no pet.). *Harrison* is a mold case in which the mold allegedly resulted from water seeping through caulking at the juncture of the bathtub and the tile above it.

The first issue was whether the ensuing loss provision provided coverage. The Court noted inconsistent treatment of this issue by other courts, then held:

> Harrison's argument that the ensuing loss clause provides coverage for her loss reverses the causation required by that exception. To qualify for the exception, ensuing water damage must follow from one of the types of damage enumerated in exclusion (f). *Lambros*, 530 S.W.2d at 141-42. **In other words, the ensuing loss provision covers water damage that results from, rather than causes, rotting.** *Id.* Assuming that the leaking of water into the wood constitutes water damage, the leaking preceded, rather than followed, Harrison's excluded loss. The ensuing loss provision therefore does not extend coverage to Harrison's loss.

(2001 WL 391539, 2, *emphasis added*).

Interestingly, the Court also considered whether the leaking through the caulk was a "plumbing leak," and held that it was not.

Harrison is a well reasoned opinion that provides strong support for the argument that mold is covered when it results from a plumbing leak, but not as an ensuing loss. Unfortunately, it has not been published and cannot be cited as authority.

Until clearer guidance is given by Texas courts or the legislature, many carriers handling mold claims that follow water damage treat them as ensuing losses and cover them if the water damage which leads to the mold is otherwise covered under the policy. However, there is clear authority indicating that mold is not an

ensuing loss. Therefore, a carrier who decides to follow Interpretation 2 should be protected from bad faith, Insurance Code Art. 21.21, or Texas Deceptive Trade Practices Act ("DTPA") exposure even if that policy interpretation is subsequently held to be erroneous.[3]

Contents Coverage for Mold Loss. The difference between Coverage A (Dwelling) and Coverage B (Personal Property) mold claims is that Coverage A is all-risk insurance, while Coverage B is a named peril coverage. Coverage B, then, only provides coverage to personal property for a list of 11 specified causes of loss. Neither general water losses nor mold are listed perils. The only type of water loss specifically covered is accidental discharge from a plumbing, heating, or air conditioning system or household appliance. The "ensuing loss" provision, however, might allow coverage for ensuing mold after a listed water loss if the structure is also covered (see above discussion).

VI. ADDITIONAL COVERAGE ISSUES

A. Multiple Policy Limits

Whether one occurrence caused the alleged mold growth or whether the mold growth was caused by repeated exposures to covered events may determine whether one policy limit or multiple limits are implicated in the loss. Under the homeowner's policy, an "occurrence" is defined as "an accident, including exposure to conditions, which results in bodily injury or property damage during the policy period." Most of the Texas case law discussing the meaning of occurrence is within the context of Commercial General Liability ("CGL") policies, which generally mention repeated or continuous exposure to harmful conditions. Several different analyses are presented below, but the underlying question is whether several water intrusion events contributed to a single mold growth occurrence, or whether each water intrusion caused its own resultant mold growth.

To some extent, courts determining the number of occurrences have applied one of two different analyses to make the determination – the causation theory or the effect theory. The Fifth Circuit first applied the effect theory in *Anchor Casualty Co. v. McCaleb*, 178 F.2d 322 (5th Cir. (Tex.) 1949). There, an oil well suffered a blowout and intermittently spewed sand, mud, and oil onto several adjacent properties over a period of two days. The court stated that several wind changes during this time resulted in damage to different properties and thus was a superceding cause, and held that the damage must be analyzed from the point of view of the injured persons. The court concluded that the injury to the different properties resulting from the wind changes constituted a series of accidents. (This was decided under a CGL policy that provided a single-accident limit and a higher aggregate limit.)

Under the causation theory, exemplified in *Saint Paul Mercury Indemnity Co. v. Rutland*, 225 F.2d 689 (5th Cir. 1955), the Fifth Circuit examined the conduct forming the causative act. In *Rutland*, the collision of a truck with a train resulted in the derailing of the train and damage to sixteen railroad cars and their contents, owned by fourteen separate parties. The court held that because there was a single collision that resulted in injuries to multiple parties with no intervening cause, there was only one "accident" under the policy

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[3] The Texas Supreme Court has held that the tort of bad faith is not committed where there is a reasonable basis for the denial of the claim. *Lyons v. Miller Casualty Company*, 866 S.W.2d 597 (Tex. 1993). Numerous courts have held that where there is a bona fide controversy of law or facts, the carrier has the right to deny the claim and submit liability to the jury. *Aranda v. Insurance Company of North America*, 747 S.W. 2d 210 (Tex. 1988). In the absence of bad faith, the denial of a claim cannot give rise to a cause of action of Insurance Code Article 21.21 or the Texas Deceptive Trade Practices Act. *Emmert v. Progressive County Mutual Insurance Company*, 882 S.W. 2d (Tex. App.—Tyler 1994, no writ history).

terms and thus only one policy limit available to compensate the injured parties. The court acknowledged *Anchor*, but limited it to its facts and noted that the intervening cause of the wind was a key factor.

In Texas, the causation theory appears to have prevailed, although there is some indication that the decision of which theory to apply will be based on the facts before the court. See *Maurice Pincoffs Co. v. St. Paul Fire & Marine Ins. Co.*, 315 F. Supp. 964 (S.D. Tex. 1970) reversed by 447 F.2d 204 (5th Cir. 1971). In that case, contaminated birdseed injured a large number of buyers. The trial court applied the causation theory and held that because one batch of birdseed was contaminated at one time, there was only one occurrence. The Fifth Circuit, still applying the causation theory, disagreed and reversed, holding that because the insured's liability arose from sale of the seed and not the act of contamination, the number of sales was the key causative factor. The Fifth Circuit concluded that because portions of the batch of seed were sold to eight different distributors, there were eight occurrences under the policy. See also *Goose Creek Cons. I.S.D. v. Continental Cas. Co.*, 658 S.W.2d 338 (Tex. App.—Houston [1st Dist.] 1983, no writ) (describing causation theory as majority rule in Texas and holding that two fires started in the same night on two separate properties were two occurrences, regardless of the fact that they were probably started by the same person or group of people).

A few other cases discussing multiple occurrences did not expressly reference either of the above described theories. The relevance of these cases is somewhat limited because the courts were interpreting policies with different language from the HOB policy. *See, e.g., Bethany Christian Church v. Preferred Risk Mutual Insurance Company*, 942 F. Supp 330 (S.D. Tex. 1996) (discussing coverage for employee dishonesty expressly defining a series of employee acts as one occurrence); *Cullen/Frost Bank of Dallas v. Commonwealth Lloyds Ins. Co.*, 852 S.W.2d 252 (Tex. App.—Dallas 1993, writ denied per curiam, 889 S.W.2d 266 (Tex. 1994)) (discussing CGL policy which included continuous or repeated exposure to harmful conditions in its definition of occurrence).

Although the language found in the CGL policy is not identical to that in the homeowner policy, it is largely similar, and an argument by analogy may be in order. The *Cullen/Frost* court examined whether property damage occurring in a set of condominiums constituted one or several occurrences. The court noted that the damage complained of included drainage problems, excessive floor displacement, rotten woodwork, roof leaks, and continual elevator breakdowns. The court held that under the controlling definition of occurrence, there was a new occurrence every time the complaining party suffered damage. (Although the court did not expressly reference it, this would appear to be a use of the effect theory discussed above.) Although the controlling definition was different from the definition in the homeowner policy, the relevant portions were substantially similar. The court appeared to base its analysis on the fact that different elements of the damage manifested themselves at different times, and concluded that each manifestation of damage was a separate occurrence. See *Id.* at 258.

The most apposite Texas case discussing multiple occurrences and their actual effect on policy limits is *State Farm Lloyds v. Williams*, 960 S.W.2d 781 (Tex. App.—Dallas 1997, writ dismissed). In that case, the insured shot two of his family members, killing one and injuring another. The insured had liability coverage through State Farm Lloyds in the amount of $300,000 per occurrence. The claimants, the injured victim and the relatives of the deceased victim, claimed they were entitled to a total recovery of $600,000 because the two shootings were two separate occurrences. State Farm contended that there was only one occurrence because the injuries arose from a single "fit of violence." The court found that there were two separate occurrences because the two victims were not injured by a single bullet. Their injuries each separately gave rise to liability

on the part of the insured. Although the court did not expressly state it in its opinion, it appears that the court found the appropriate policy limit to be $600,000 because of the two occurrences.

The problem with the cause and effect theories is that they are typically applied in a liability context, where the conduct of a party is at issue, which is more amenable to such analysis. This was not the case in *Anchor*, where the event examined was an oil well blowout. However, an event consisting of mold growth would seem to be particularly unsuitable for analysis under either theory. Please note, though, in almost all of the cases dealing with how many policy limits apply, the court selected the theory that gave rise to the most coverage.

An Austin Federal Court recently ruled, however, that the policy unambiguously limited the homeowner to one limit. In *Moore v. State Farm Lloyds*, Case No. A-02-CA-591-55, Judge Sparks ruled:

> The declarations page of each policy sets forth the limit of liability for each item covered under the policy; under the 2002 policy, the limit of liability for Coverage A Dwelling was $174,900. Under the "Loss Settlement" subsection, the policy states: "Our limit of liability for covered losses to dwelling and other structure(s) under Coverage A (Dwelling) . . . will be at replacement cost settlement subject to the following: . . . our payment will not exceed the smallest of the following: (1) the limit of liability under this policy applicable to the damaged or destroyed building structure(s). . . ." 2000 Policy, at 6. The Plaintiffs contend the limit of liability set forth in the contract applies to each claim. The only provision of the policy they present to support their interpretation is a statement in the "Conditions" section of the policy that states "we will not be liable in any one loss: . . . for more than the applicable limit of liability." 2000 Policy, at 5. "Loss" is not defined in the contract. This phrase does not mean the company is liable for the applicable limit of liability for each claim made during the policy period; it merely states State Farm is not liable beyond the limit of liability for any loss. Additionally, the declarations page does not say the limit of liability is per claim, while it specifically states the liability for Coverage C personal liability is for each occurrence and the liability for Coverage D medical payments to others is for each person. The Court holds it is not reasonable to construe the limit of liability set forth in various places in the policy as a per-claim limit or a per-loss limit. Interpreting a limit of liability to be a per-claim limit would require better evidence of the parties' intent to bypass the common meaning of a limit of liability, a concept used in insurance policies in many different contexts. The Court finds the insurance policy is not ambiguous, and the limit of liability is exactly what it sounds like: a limit of liability for the covered dwelling for the covered period. Accordingly, State Farm did not breach its contract by failing to pay more than the limit of liability, and partial summary judgment is appropriate.

(*See attached*, Op. at 4, 5).

The *Moore* case thus raises the possibility the declarations page and loss settlement provisions will control over the "occurrence" issues discussed in the earlier cases.

A related question which has not been addressed by the courts is how a mold loss is allocated between insurers if Texas courts begin allowing (1) multiple policy limits on claims where multiple covered water damage occurrences cause mold; (2) the date of loss to be considered the date the mold manifests; and (3) more than one insurer has insured the premises during the time the water damage occurrences have happened.

Should the insurer at the time of manifestation be obligated for the entire loss -- even if it implicates more than one policy limit?

Although not directly addressed in Texas case law, a somewhat analogous line of cases deals with a single claim caused by a continuace occurrence over the course of multiple consecutive liability insurers' policy periods – such as repeated, continuous exposure to a toxic substance like asbestos or silica, or benzene. In some of those cases, the courts found the subject insurance policies did not provide for a reduction of the insurer's liability limits if an injury occurred only partially during a policy period. Therefore, each insurer who had contracted to cover all sums the insured was legally obligated to pay, was responsible up to its policy limit for such a loss. When more than one policy applied to the loss, the "other insurance" clause of the respective policies would apply to apportion the actual amount of the loss between the applicable policies. *See Keene Corp. v. Ins. Co. of North America,* 667 F.2d 1034 (D.C. Cir. 1981) *cert. denied*, 455 U.S. 1007, 102 S.Ct. 1644, 71 L.Ed.2d 875 (1982); *American Physicians Ins. Exch. v. Garcia,* 876 S.W.2d 842, 854-55 (Tex. 1994); *Tex. Prop. and Cas. Ins. Guaranty Assoc. v. Southwest Aggregates, Inc.*, 982 S.W.2d 600, 606 (Tex. App.—Austin 1999, no pet.); *CNA Lloyds of Tex. v. St. Paul Ins. Co.*, 902 S.W.2d 657, 661 (Tex. App.—Austin 1995, writ dism'd by agr.). This may be how courts would treat mold claims if it appears mold has been growing but hidden over a period of time in which more than one policy applied to the premises.

Finally, it does not logically seem there could be any loss in excess of policy limits to any one house or structure at any given time unless one loss had been completely repaired before the second occurred. To some extent, this logic is supported by *State Farm Fire & Casualty v. Griffin*, 888 S.W.2d 150 at 157 (Tex. App.—Houston [1st Dist.] 1994, no writ), in which the court upheld State Farm's reduction of a total fire loss claim by approximately $16,000 which represented the amount of a previous water damage claim that had been paid but not repaired at the time of the fire. There are differences in the *Griffin* case, though, that a court may use to distinguish it from a mold claim. For example, *Griffin* dealt with an Actual Cost Value policy, not Replacement Cost Value, and *Griffin* also dealt with identifiable damage which had been paid for and not repaired at the time of the second loss.

B. Personal Injury Claims

Although there is little law in this area, it appears relatively clear that health care costs potentially associated with mold exposure are not covered losses. First, the insuring agreement covers physical loss to the described property and does not cover illness regardless of causation. Second, the science with respect to health effects of mold is simply not well-defined enough for causation of health problems alleged to be related to mold exposure to be proven with any reasonable degree of certainty. This was the situation in the recent *Ballard* case in Austin where the trial judge refused to allow evidence of health effects because of the lack of reliable scientific evidence linking health problems to mold and his decision was upheld on appeal. See *Allison v. Fire Ins. Exchange*, 2002 WL 31833440 (Tex. App.—Austin 2002). Essentially, under the current State of the Science, Plaintiffs cannot meet their burden under *Merrell Dow Pharmaceuticals, Inc. v. Havner*, 953 S.W.2d 706 (Tex. 1997). The Texas Medical Association recently issued a statement that no limit had been proven (*see attached*).

However, assuming the causation issue is resolved, Plaintiffs may attempt to make personal injury claims as tort claims resulting from an alleged breach of the duty of good faith and fair dealing.

C. Duties of Homeowners

A separate issue which should be considered in any mold claim is the extent to which the policyholder inadvertently made the damage worse. Under Condition 3.a of the policy, the insured has a duty to protect the property from further damage and to make reasonable repairs to protect the property. It is common knowledge that mold generally requires damp conditions in order to proliferate, and that water-damaged wood or other cellulose materials, if left unrepaired, are likely to harbor fungal growth.

In particular, if a water loss occurred in the area of the mold in the past and the repairs were not made or were made incompletely, Condition 3.a may apply to the claim. In order to protect itself from future mold claims, and perhaps to allow reliance on Condition 3.a for potential future mold claims arising out of water loss claims, an insurer could send a cover letter to the insured with its payment on all water loss claims explaining that mold, mildew, or rot can result from water loss that is not completely and promptly repaired. In such a letter, the insured should be alerted to his/her duty to protect the property from further damage and should be encouraged to perform all repairs promptly before mold, mildew, or rot can begin.

D. When Did the Loss Occur

Since mold is an organism that develops over time, it may be difficult to determine when a loss occurred for purposes of determining what policy applies. It has generally been held in Texas that an insurable loss to property occurs when the injury or damage to property is manifested. *State Farm Mut. Auto. Ins. Co. v. Kelly,* 945 S.W.2d 905, 910 (Tex. App.—Austin 1997, writ denied); *Cullen/Frost Bank v. Commonwealth Lloyd's,* 852 S.W.2d 252, 258 (Tex. App.—Dallas 1993, writ denied); *Dorchester Dev. Corp. v. Safeco Ins. Co.,* 737 S.W.2d 380, 383 (Tex. App.—Dallas 1987, no writ). Therefore, it will be important to pinpoint when the loss or damage manifested in order to determine date of loss and the applicable policy.

Since there is usually no policy language nor is there any legal authority setting out a time period beyond which a loss under a policy may be made (i.e., that all claims must be made within one year of occurrence), it is possible with mold claims for manifestation to appear years after a plumbing leak or as the result of a plumbing leak that has gone undetected over a period of time. Although there is no hard and fast limitations rule limiting the policyholder's ability to bring such claims, policy Condition 3.a requires the insured to take reasonable steps to protect the property. If there is evidence the insured knew of a water or plumbing problem and did not comply with the duties set out in Condition 3.a, this failure may result in the claim not being covered under the policy.

Regarding lawsuits which may be brought by policyholders for breach of contract, most homeowners' policies do shorten the usual legal four year breach of contract limitations period to two years and one day after the "cause of action accrues." In *Jett v. Truck Ins. Exchange*, 952 S.W.2d 108 (Tex. App.—Texarkana 1997, no writ), the court upheld the validity of the shortened two years and one day limitations period contained in a fire policy. This limitations period governs any breach of contract claim or bad faith claim, and begins to run on the date the insurer denies coverage. *See Pena v. State Farm Lloyds,* 980 S.W.2d 949 (Tex. App.—Corpus Christi 1998, no writ)(limitations for breach of an insurance policy begins to run when the loss is denied); *Murray v. San Jacinto Agency, Inc.*, 800 S.W.2d 826, 828 (Tex. 1990) (limitations for a bad faith claim accrues on the date the insurer denies coverage).

Given the moist, humid climate in many areas of Texas, it is quite possible to encounter mold or mildew claims in which there has been a water damage loss, but mold or mildew has appeared in areas

unrelated to the prior loss location. In such claims, the concurrent cause doctrine may apply. The concurrent cause doctrine provides that when a covered and a non-covered peril combine to cause the claimed damage, the insured is entitled to recover only that portion of the damage caused solely by the covered peril. See *Wallis v. United Services Automobile Association*, 2 S.W.3d 300, 303 (Tex. App.—San Antonio 1999, writ denied) (citing *Travelers Indem. Co. v. McKillip*, 469 S.W.2d 160, 163 (Tex.1971). The doctrine grows out of the basic insurance contract principle that insureds are only entitled to recover for damages covered by the policy. *See Employers Casualty Co. v. Block*, 744 S.W.2d 940, 945 (Tex.1988) overruled in part on other grounds, 925 S.W.2d 696 (Tex.1996). Therefore, the burden is on the insured to present evidence by which the jury can allocate the damage caused by the covered peril. *See Lyons v. Millers Casualty Ins. Co. of Texas*, 866 S.W.2d 597, 601 (Tex.1993).

Causation questions will undoubtedly arise on many of the claims. As is the case with any claim, the insureds have the duty to demonstrate they have a claim covered under their policy, or that the damage claimed was caused by a plumbing leak and is covered. It is well established that insureds are not entitled to recover under an insurance policy unless they prove their damage is covered by the policy. See *Employers Casualty Co. v. Block*, 744 S.W.2d 940, 944 (Tex.1988) overruled in part on other grounds by *State Farm Fire & Cas. Co. v. Gandy*, 925 S.W.2d 696 (Tex.1996). Thus, under the concurrent cause doctrine, if a covered and a non-covered peril combine to cause the claimed damage, the insured has the burden to present evidence by which the jury can allocate the damage caused by the covered peril. *Lyons*, 866 S.W.2d at 601. Likewise, the insured has the burden of proof regarding whether several water intrusion events contributed to a single mold growth occurrence, or whether separate water intrusions caused separate resultant mold growths.

The insurer, however, has the burden of proof as to any avoidance or affirmative defense that must be affirmatively pleaded under the Texas Rules of Civil Procedure. This includes any language of exclusion in the policy and any exception to coverage claimed by the insurer. See Tex. Ins. Code Art. 21.58. However, the burden of proof shifts back to the insured to establish an exception to the exclusion which will create coverage. See *Telepak v. United Services Auto. Assoc.*, 887 S.W.2d 506, 507-08 (Tex. App.—San Antonio 1994, writ denied); *The Millers Cas. Ins. Co. of Texas v. Lyons*, 798 S.W.2d 339, 345 (Tex. App.—Eastland 1990) *affirmed* 866 S.W.2d 597 (Tex. 1993).

VII. CONCLUSION

The 1978 amendments, 1990 revisions and 1998 Supreme Court decision in *Balandran* have had unintended consequences for the insurance industry. The standard Homeowners Form B was ill equipped to address the growing number of mold claims, and even though the policy forms have changed, a large number of suits involving the HOB remain. To complicate matters, the *Ballard* verdict has so intimidated insurers, many are paying claims they do not owe, raising premiums for homeowners and postponing clarification of these important issues.

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BY _____

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

JOHN R. MOORE and SUZANNE LEIGH BRADFORD,

Plaintiffs,

-vs-

Case No. A-02-CA-591-SS

STATE FARM LLOYD'S,

Defendant.

ORDER

BE IT REMEMBERED on the 27th day of March 2003 the Court called the above-styled cause for hearing, and the parties appeared through counsel of record. Before the Court are Defendant's Motion for Partial Summary Judgment [#6], Plaintiffs' response [#8] and Defendant's reply [#11], as well as Plaintiffs' cross-motion for partial summary judgment [#14]. Having considered the motions and responses, the case file as a whole, the arguments of counsel at the hearing and the applicable law, the Court enters the following opinion and orders.

Background

This case is a homeowners' insurance coverage dispute involving claims of mold growth in the Plaintiffs' Austin residence. The Plaintiffs, John Moore and Suzanne Leigh Bradford, reside in Travis County, Texas. *See* First Am. Compl. at ¶ 1. The Plaintiffs obtained homeowners' insurance coverage for their residence from the Defendant State Farm Lloyd's ("State Farm") with a policy effective August 26, 1999 to August 26, 2000 ("the 2000 policy"). *See* Plaintiffs' Response, Ex. A. They renewed their policy for another year, effective August 26, 2000 to August 26, 2001 ("the 2001

policy"), and then another year after that ("the 2002 policy"). *See* Plaintiffs' Response, Ex. B; Defendant's Motion, Ex. B-1.

On or about May 23, 2000, the Plaintiffs notified State Farm of two water damage claims resulting from leaks in the children's bathroom and the roof. On May 30, 2000, John Moore wrote a letter to a State Farm claims agent informing him he had confirmed the stachybotris mold species was growing in the house. *See* Plaintiffs' Response, Ex. C-1. On June 5, 2000, State Farm tendered $5,328.75 to repair the bathroom leak and $9,511.85 to repair the roof leak. *Id* , Ex. C-2 & C-3. The Plaintiffs did not use that money to make repairs.

In July 2001, State Farm reopened Plaintiffs' two claims and sent a new adjuster to inspect the Plaintiffs' residence who noticed three additional leaks associated with the hot water heater, master bathroom shower and washing machine. *See* First Am. Compl. at ¶¶ 18-19. In August 2001, the Texas Lead Institute conducted indoor air quality testing at Plaintiffs' residence and submitted a mold remediation plan to State Farm on October 2, 2001. *Id.* at ¶ 21. Moore obtained bids for mold remediation and submitted them to State Farm. The bids exceeded $242,000. *Id.* at ¶ 24. State Farm maintained it would pay no more than $174,900, the limit of liability under the 2002 policy. *Id.* The Plaintiffs later demolished their house and rebuilt it.

On August 5, 2002, the Plaintiffs sued State Farm in the 200th District Court of Travis County, Texas. State Farm removed the case to this Court on September 13, 2002 on the basis of diversity jurisdiction. In their First Amended Complaint filed March 3, 2003, the Plaintiffs assert claims for breach of contract and violations of the Texas Insurance Code and a declaratory judgment claim. Both parties move for summary judgment on the Plaintiffs' claim that State Farm breached its contract with the Plaintiffs by failing to make full payment on the claims.

Analysis

I. Summary Judgment Standard

Both parties move for partial summary judgment. Summary judgment may be granted if the moving party shows there is no genuine issue of material fact and it is entitled to judgment as a matter of law. *See* FED. R. CIV. P. 56(c). In deciding whether to grant summary judgment, the Court construes all facts and inferences in the light most favorable to the nonmoving party. *Hart v. O'Brien*, 127 F.3d 424, 435 (5th Cir. 1997), *cert. denied*, 119 S. Ct. 868 (1999). The standard for determining whether to grant summary judgment "is not merely whether there is a sufficient factual dispute to permit the case to go forward, but whether a rational trier of fact could find for the nonmoving party based upon the record evidence before the court." *James v. Sadler*, 909 F.2d 834, 837 (5th Cir. 1990).

Both parties bear burdens of producing evidence in the summary judgment process. *See Celotex Corp. v. Catrett*, 106 S. Ct. 2548 (1986). First, "[t]he moving party must show that, if the evidentiary material of record were reduced to admissible evidence in court, it would be insufficient to permit the nonmoving party to carry its burden of proof." *Hart*, 127 F.3d at 435. The nonmoving party must then "set forth specific facts showing a genuine issue for trial and may not rest upon the mere allegations or denials of its pleadings." *Id.* Additionally, "[n]either 'conclusory allegations' nor 'unsubstantiated assertions' will satisfy the non-movant's burden." *Wallace v. Texas Tech Univ.*, 80 F.3d 1042, 1047 (5th Cir. 1996).

II. Limit of Liability

State Farm moves for summary judgment that it was only obligated to pay the limit of liability under the policy and therefore did not breach the contract by refusing to pay more than $174,900. The Plaintiffs also move for summary judgment that the limit of liability was per-loss and thus State Farm is liable for the policy limit for each water damage claim.

The insurer's liability is based on the contract, and the provisions of the contract govern the insured's recovery. *State Farm Fire & Cas. Co. v. Griffin*, 888 S.W.2d 150, 156 (Tex. App.– Houston [1st Dist.] 1994, no writ). An insurance contract such as the homeowners' insurance policies at issue in this case is a contract of indemnity, under which the insurer is only liable for the amount of actual losses the insured suffers. *Griffin*, 888 S.W.2d at 156 n.5. When the actual losses exceed the limit of liability set forth in the policy, the insured may not recover more than that limit. *Vesi v. Gulf Ins. Co.*, 809 S.W.2d 531, 534 (Tex. App. – Dallas 1991, writ denied). Accordingly, the question before the Court is whether the policy unambiguously sets forth a limit of liability. The general rules of contract construction apply to insurance policies. *E.g., Barnett v. Aetna Life Ins. Co.*, 723 S.W.2d 663, 665 (Tex. 1987). If the terms of the contract are ambiguous, the Court must construe the policy liberally in favor of the insured. *Barnett*, 723 S.W.2d at 666.

The declarations page of each policy sets forth the limit of liability for each item covered under the policy; under the 2002 policy, the limit of liability for Coverage A Dwelling was $174,900. Under the "Loss Settlement" subsection, the policy states: "Our limit of liability for covered losses to dwelling and other structure(s) under Coverage A (Dwelling) . . . will be at replacement cost settlement subject to the following: . . . our payment will not exceed the smallest of the following: (1) the limit of liability under this policy applicable to the damaged or destroyed building structure(s) . . . ." 2000 Policy, at 6. The Plaintiffs contend the limit of liability set forth in the contract applies to each claim. The only provision of the policy they present to support their interpretation is a statement in the "Conditions" section of the policy that states "we will not be liable in any one loss: . . . for more than the applicable limit of liability." 2000 Policy, at 5. "Loss" is not defined in the contract. This phrase does not mean the company is liable for the applicable limit of liability for

each claim made during the policy period; it merely states State Farm is not liable beyond the limit of liability for any loss. Additionally, the declarations page does not say the limit of liability is per claim, while it specifically states the liability for Coverage C personal liability is for each occurrence and the liability for Coverage D medical payments to others is for each person. The Court holds it is not reasonable to construe the limit of liability set forth in various places in the policy as a per-claim limit or a per-loss limit. Interpreting a limit of liability to be a per-claim limit would require better evidence of the parties' intent to bypass the common meaning of a limit of liability, a concept used in insurance policies in many different contexts. The Court finds the insurance policy is not ambiguous, and the limit of liability is exactly what it sounds like: a limit of liability for the covered dwelling for the covered period. Accordingly, State Farm did not breach its contract by failing to pay more than the limit of liability, and partial summary judgment is appropriate.

In accordance with the foregoing:

IT IS ORDERED that Defendant's Motion for Partial Summary Judgment [#6] is GRANTED, and the Plaintiffs TAKE NOTHING in their breach of contract claims against State Farm Lloyds based on the alleged failure of State Farm to make full payment on Plaintiffs' water damage claims;

IT IS FURTHER ORDERED that Plaintiffs' Cross-Motion for Partial Summary Judgment [#14] is DENIED.

SIGNED this the 31st day of March 2003.

SAM SPARKS
UNITED STATES DISTRICT JUDGE

REPORT OF COUNCIL ON SCIENTIFIC AFFAIRS

CSA Report 1-I-02

Subject: Black Mold and Human Illness

Presented by: O. Edwin McClusky, MD, Chair

Over the past several years, increasing public attention has focused on a potential or suspected role in human illness from the mold *Stachybotrys chartarum*, commonly known as "black mold," particularly in association with water-damaged buildings. In Texas, this attention has been manifest not in scientific or medical publications, but rather in the lay press and in an increasing number of insurance claims filed for mold remediation of homes and workplaces. Texas Medical Association's Council on Scientific Affairs has been asked to update the "state of the medical science" in this important area.

To study this issue, the council conducted a search of medical and scientific literature and contacted Texas and national experts/specialists. After reviewing available data, the council has concluded that public concern for adverse health effects from inhalation of *Stachybotrys* spores in water-damaged buildings is generally not supported by published reports in medical literature.

Recommendation: Approval of the attached policy paper on black mold and human illness.

Related 2002-03 Strategic Priority: Expend political capital to promote and strengthen Texas' public health infrastructure.

HOUSE ACTION: Approved conclusions and recommendations as policy; filed remainder of report.

BLACK MOLD AND HUMAN ILLNESS
SEPTEMBER 2002

INTERACTIONS OF HUMANS WITH AGENTS IN THEIR ENVIRONMENT

Living organisms capable of causing infection or other types of illnesses are everywhere in our environment. In addition to molds and other fungi, these include bacteria, viruses, protozoa, and helminthes. Infections are by far the most common forms of human illness produced by exposure to these organisms. These are generally combated or prevented by our natural host defenses, which include protein antibodies and cell-mediated immunity. In recent times, anti-microbial drugs have substantially augmented these natural defenses against environmental agents.

The human immune and inflammatory systems protect us from a multitude of these and other agents in our environment, usually by one or more of the following four general types of immune reactions: [1]

1. Type I reactions are mediated by IgE antibodies and are the cause of most "allergic" reactions. Approximately 8 to10 percent of the population have adverse symptoms due to Type I reactions to pollens, dust, mold, animal dander, or food.
2. Type II (cytotoxic) reactions target molecules on the surface of cells and initiate processes leading to the death of that specific cell (hemolytic anemia).
3. Type III reactions are "immune-complex" reactions in which a protective antibody attaches to an antigen and initiates an inflammatory reaction (glomerulonephritis).
4. Type IV reactions (cell-mediated immunity) is important in immunity to foreign tissues (organ transplantation), certain infectious agents (tuberculosis), chemicals (contact dermatitis), and in cancer biology.

Once specificity is provided by the immune system, effector systems are responsible for neutralization or eradication of the environmental agent. This is accomplished by inflammatory cells, cytokines, and other chemical mediators.

Still, a minority of persons develop an illness or other adverse manifestation from contact with environmental agents. These adverse effects might take the form of allergies or other immune reactions, or autoimmunity. Autoimmunity, for which there are clear genetic and other factors, is generally thought to be caused by failure of the immune system to recognize parts of the body as "self."

POTENTIAL HEALTH ISSUES RELATED TO MOLD EXPOSURE

In theory, there are five ways in which molds could produce or aggravate human illness or otherwise contribute to symptoms:

1. Type I immune reactions, which can lead to allergic rhinitis (nasal discharge, sneezing, conjunctivitis) or asthma (bronchospasm, wheezing, mucous secretion and plugging).
2. Irritation to mucous membranes through mold production of volatile organic compounds (VOCs) in a manner analogous to non-mold irritants, e.g., tobacco smoke, gas/kerosene stove emissions, ozone.
3. Type III immune reaction, examples including hypersensitivity pneumonitis, which includes "farmer's lung" (lung tissue inflammation occurring from exposure of an inhaled antigen), and allergic aspergillosis (a rare lung tissue inflammation involving both airways and tissues in the lungs).[3]

4. Toxic reaction from mold products (mycotoxins).
5. Toxic reaction from microbial byproducts (endotoxins).[4]

Infectious health issues related to mold exposure can occur in both normal and immuno-compromised individuals. Normal persons may experience the overgrowth of candida normally found in vaginal and oral cavities after treatment with antimicrobial drugs that alter the dominant normal microbial flora. Another example is chronic dermatophyte infection of skin (athlete's foot) or nails. Immunocompromised individuals often have true infections with tissue damage when microbes that may be present in the body or environment overgrow and invade body tissues. Examples include re-activation of tuberculosis, histoplasmosis, coccidiomycosis, and invasive candidiasis.

The prior reported occasional syndromes associated with residential fungal exposure primarily have been hypersensitivity pneumonitis.[5-10] Human colonization by other environmental fungi also has been reported to cause chronic allergic sinusitis.[11] The cases of hypersensitivity pneumonia reports are case reports; only one has described *Stachybotrys* as the causal agent.[5]

Ingestion of mycotoxins in foods has been of concern for some time, and there are widespread efforts to protect our food supplies from such agents. Inhalation exposure outside of agricultural or industrial settings has been thought to be insufficient to produce much morbidity.[12]

Several molds commonly found in homes, including *Stachybotrys,* are capable of producing mycotoxins. In vitro (laboratory only), some mycotoxins are capable of blunting the phagocytic removal of particulate matter. Our knowledge about mycotoxins is very incomplete regarding dose-health effects relationships, how to measure them in environmental samples, or to detect them in patient samples.[12]

STACHYBOTRYS LITERATURE SUMMARY

A summary of available literature on *Stachybotrys* reveals that it is commonly found in water-damaged buildings and dwellings, as are many other molds. However, there is no convincing evidence that *Stachybotrys* is a significant or even proven pathogenic antigen in either traditional allergic reactions (Type I hypersensitivity) or the rare forms of hypersensitivity pneumonitis (Type III hypersensitivity). The only report in the peer-reviewed medical literature suggesting a potentially significant causative role for *Stachybotrys* in human illness is a report of pulmonary hemorrhage in infants thought to be (but not proven to be) caused by *Stachybotrys* mycotoxin. Re-examination of this presumed outbreak has identified shortcomings in the implementation and reporting of the investigation. These reviews have "led CDC to conclude that a possible association between acute pulmonary hemorrhage/hemosiderosis in infants and exposure to molds, specifically *Stachybotrys chartarum,* commonly referred to by its synonym *Stachybotrys atra,* was not proven."[13] The original report was based on suggestive epidemiological evidence rather than proof.[14]

The "state of the science" is perhaps best expressed by Dearborn in his paper "Health Effects of Molds and Mycotoxins" at the 55th Annual Meeting of the American Academy of Allergy and Immunology, March 2002.[12]

> There are major limitations to our better understanding of the potential health impact of chronic toxigenic mold exposure. The exposures are to multiple fungi with varied amounts and types of mycotoxins. Most of the symptoms are rather subjective and difficult to objectively measure. While quantitative identification of fungi in indoor environments is improving, quantification of

even some of the mycotoxins is at best expensive. Epidemiologic studies are greatly hampered by the lack of either acute or chronic biomarkers of exposure. Controversy, overreaction, and inadequate public health prudence will continue until these challenges are adequately addressed.

Terr expressed a similar opinion in a review that examined and critiqued the published literature on *Stachybotrys*. This review found *Stachybotrys* to be a minor component of the indoor mycoflora, found on certain building material surfaces in water-damaged buildings. However, airborne spores are present in such low concentrations that they are unlikely to cause illness.[15]

Page and Trout reported in 1998 on a MEDLINE search strategy that located 13 articles on fungi, mycotoxins, and the indoor environment. They concluded that the literature contained inadequate evidence to support a causal relationship between symptoms or illness among building occupants and exposure to mycotoxins. They recommended, "that research involving the identification and isolation of specific fungal toxins in the environment and in humans is needed before a more definitive link between health outcomes and mycotoxins can be made."[16]

In summary, the hypothesis that exposure to molds and their toxic products may lead to adverse health effects can be made. However, the proposition that molds in indoor environments may lead to adverse health effects through mechanisms other than infection and allergic/immunologic reactions is an untested impression.

EVIDENCE REQUIRED TO VALIDATE AN ENVIRONMENTAL AGENT AS CONTRIBUTORY TO HUMAN ILLNESS

Koch's postulates are one method to test the concept that molds in the indoor environment may be health hazards. Formulated in 1882, the postulates remain the standard of proof for infectious or toxic agents and would be the logical and favored form of proof of causation of human illness by *Stachybotrys*.

In short, these postulates hold that:

- A pathogenic organism or agent should be associated significantly more often with the illness or syndrome than similar but non-pathogenic organisms;
- A pathogenic organism or agent should produce the same or substantially similar pathology in appropriate animal models;
- The animal model host must become consistently affected using a natural route (even exposure to a known human pathogen does not uniformly lead to disease in all humans); and
- The return of the suspected causative agent to a human host should produce consistently the features of the illness or syndrome.[2]

Scientific and medical knowledge is built using both direct and indirect evidence. Evidence is indirect if two or more bodies of evidence are required to relate the exposure or intervention of interest to the principal health outcome. More recent methodology has augmented the strength of associations and statistical inferences regarding disease etiology, diagnosis, therapy or interventions, prognosis, and outcomes.[3] These evidence categories, in decreasing order of validity, include:

- Primary studies in humans, particularly large, randomized controlled trials as well as meta-analyses of randomized controlled trials, are recognized as best (small trials are less valid). Nonrandomized

controlled trials, cohort or longitudinal studies, case-control studies, case series, and reports are less robust, especially the latter two;

- Non-human studies (laboratory studies, animal studies); and
- Syntheses (systematic reviews).

EVALUATING THE ROLE OF STACHYBOTRYS IN "SICK BUILDING SYNDROME"

Bernstein has suggested an approach to suspected building-related illness that includes:[17]

(1) a thorough history (duration and nature of symptoms, home environmental and workplace history, past medical history, family history);
(2) a physical exam;
(3) exclusion of more common infectious causes;
(4) phenotyping the patient as atopic versus non-atopic (skin testing to seasonal and perennial allergens including a mold panel [or corresponding serologic testing], spirometry pre-/post-bronchodilator);
(5) chest x-ray or high-resolution CT of chest (to determine if pulmonary findings consistent with hypersensitivity pneumonitis are present and require additional evaluation);
(6) supportive testing including serologic testing for specific IgG, IgE, or IgA to mold (including *Stachybotrys*), hypersensitivity pneumonitis screen (precipitating antibodies), and consideration of humoral and cell-mediated immune system evaluation;
(7) environmental assessment including walkthrough, air sampling, and measurement of known perennial allergens, irritants (VOCs and chemicals [nitrous dioxide, sulfur dioxide, ozone]), dew point, and mycotoxins;
(8) measurement of total symptom scores in and out of the environment;
(9) measurement of peak expiratory flow rates in and out of the environment event every 2-3 hours while awake and correlation with environmental exposure measurements; and
(10) consideration of specific provocation test (nasal challenge preferred to the more risky bronchoprovocation).

Evidence-based effective interventions for reducing specific types of allergen loads include bedding encasements (dust mites, cat dander, mold), HEPA filtration (cat and dog dander), HEPA vacuum (cat and dog dander, dust mites, cockroach), dehumidification (<50 percent) with air conditioning or dehumidifiers (dust mites, mold, cockroach), and thorough cleaning (cockroach).[18]

Other common but less proven methods for reducing allergen loads include air conditioning or other measure to filter outdoor air, removal of carpets, hot (>130° F) washing of bedding, repair of leaky basements, and changes in home and building design. Patient compliance with these measures usually runs 35 percent or less.[18]

CSA CONCLUSIONS

Adverse health effects from inhalation of *Stachybotrys* spores in water-damaged buildings is not supported by available peer-reviewed reports in medical literature.

The probability or possibility of causation or exacerbation of a medical condition due to exposure to mold in indoor environments currently exists only for the following:

- Traditional Type I immune reactions (allergies, with correlation of symptoms with exposure and in vitro demonstration of IgE antibodies by allergy skin tests or RAST test for specific IgE antibodies in blood samples); and
- Rare Type III immune reactions (hypersensitivity pneumonitis), pulmonary hemorrhage in infants associated with mycotoxins.

Further, for *Stachybotrys* or other molds to be implicated in other disease models, the following must be present:

- Peer-reviewed medical literature should show clearly that such mold or mold by-product has produced clinical manifestations similar to those displayed by the patient;
- Evidence of personal causation of the type described by references 17 and 18 must exist.

RECOMMENDATIONS

The Council on Scientific Affairs recommends that TMA:

(1) support the need for continued scientific research regarding the impact of molds on human health, especially the effects of mycotoxins;
(2) educate our membership regarding this issue, including the use of Koch's Postulates as the means to validate illness caused by *Stachybotrys*, through information in TMA publications and on the TMA web site;
(3) communicate the information in this paper to the appropriate state governmental agencies, such as the Texas Attorney General, Texas Department of Health, Texas Department of Insurance, and others;
(4) support that remediation of water damage in homes and other buildings should generally be based on non-clinical factors, unless clear medical evidence, as described in this paper, exists to demonstrate the role of *Stachybotrys* in a particular case of illness; and
(5) provide educational information on this topic on the TMA web site for interested clinical personnel as well as the general public.

OTHER PHYSICIAN REVIEWERS

Robert Bonham, MD, Dallas (Otolaryngology)
William Fawcett, MD, Beaumont (Allergy, Asthma and Immunology)
John Holcomb, MD, San Antonio (Pulmonology)
Robert Jacobs, MD, San Antonio (Allergy, Asthma and Immunology)
Bobby Lanier, MD, Fort Worth (Allergy, Asthma and Immunology)
Richard Yates, MD, Tyler (Infectious Diseases)

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