***Acremonium strictum* (Astrc)**
Acremonium strictum is a mold that thrives in damp indoor environments, especially where water damage has occurred—such as air conditioning systems, humidifiers, and window seals. Its presence indoors is a clear sign of chronic moisture problems. While commonly overlooked, this fungus can pose health risks: it may cause cutaneous (skin) infections in individuals with weakened immune systems and has been reported to infect those with catheters or skin injuries on the extremities. In rare cases, it can lead to deeper infections like fungal sinusitis or pneumonia. Early identification through air or surface testing is important in homes or buildings with known water issues.

***Alternaria alternata* (Aaltr)**
Alternaria alternata is a common mold frequently found both outdoors and indoors, especially in homes with water damage or high humidity. Outdoors, spore levels increase during warm seasons and can easily infiltrate indoor spaces through open doors and windows. Once inside, it may colonize damp materials and surfaces.
This mold is a well-known allergen and is strongly associated with worsening asthma and allergy symptoms in sensitive individuals. Its spores are relatively large compared to many other mold types, which means they tend to become trapped in the upper respiratory tract, particularly in the nasal passages and sinuses. That makes it difficult for the body's natural defenses to clear, promoting chronic inflammation and making individuals more susceptible to persistent or recurring sinus infections.
Detection of *Alternaria alternata* indoors is important not only as a sign of moisture intrusion but also because its presence can contribute to long-term health concerns, especially in those prone to allergies or respiratory issues.

***Aspergillus chevalieri* (Eamst)**
Aspergillus chevalieri is a xerophilic (dry-loving) mold that colonizes indoor environments with high humidity but limited free moisture. It commonly grows on organic materials like books, stored paper, textiles, and settled dust—especially in poorly ventilated areas such as attics, crawlspaces, and HVAC systems. Its presence is often linked to long-term humidity issues that may go undetected in routine inspections.
While *A. chevalieri* is not typically considered a major pathogen, it contributes to the allergenic load in indoor air and may aggravate respiratory symptoms in sensitive individuals. In rare cases, it has been associated with superficial infections, especially in immunocompromised hosts.
Importantly, *A. chevalieri* is difficult to identify visually and may not appear in standard air sampling. Molecular testing is particularly valuable in detecting this mold and confirming hidden contamination in environments where moisture has been poorly controlled over time.

***Aspergillus flavus* (Aflav)**
Aspergillus flavus is a mold that thrives in warm, humid indoor environments, particularly where moisture issues have affected building materials like drywall, wood, wallpaper, and insulation. It is commonly found in areas with water damage, such as basements, bathrooms, and HVAC systems.
This mold is notable for producing aflatoxins, potent mycotoxins that are highly toxic and carcinogenic. While aflatoxins are more commonly associated with contaminated food products, *A. flavus* can also produce these toxins on damp building materials, posing potential health risks through inhalation.
Exposure to *A. flavus* spores and aflatoxins can lead to respiratory issues, including coughing, wheezing, and shortness of breath. Prolonged exposure may impair the function of airway cilia, the tiny hair-like structures that help clear mucus and pathogens from the respiratory tract, thereby increasing susceptibility to infections. PubMed Central
Detecting *A. flavus* indoors is crucial, as its presence indicates persistent moisture problems and potential health hazards. Regular inspections and air quality testing can help identify contamination early, allowing for timely remediation to protect indoor air quality and occupant health.

***Aspergillus fumigatus* (Afumi)**
Aspergillus fumigatus is a mold commonly found in indoor environments where moisture is persistent, including bathrooms, basements, crawlspaces, and HVAC systems. Its spores are exceptionally small—typically around 2 to 3 microns—and can remain airborne for extended periods, making them easily inhaled into the deep lung tissue.
This species is one of the most clinically significant molds associated with indoor air exposure. It is known to trigger allergic reactions, worsen asthma, and, in some cases, cause serious lung infections such as invasive aspergillosis. While individuals with weakened immune systems are at highest risk, *A. fumigatus* has also been documented to cause infections in otherwise healthy individuals, particularly with high or repeated exposure.
Because the spores are microscopic and highly respirable, visual inspection and traditional sampling often fail to detect its presence. Molecular air testing using devices designed to capture fine airborne particulates, such as M-TRAP sampling cassettes, is particularly useful for confirming *A. fumigatus* in indoor air. For evaluating settled spore reservoirs on surfaces, molecular testing of dust collected using sterile swabs is recommended.
This approach is especially important in post-remediation settings. Swab sampling can confirm that previously contaminated surfaces have been properly cleaned, while M-TRAP air sampling is effective for testing the air inside containment zones before removal. Together, they provide a reliable way to verify that mold has been effectively remediated before the area is returned to normal use.

***Aspergillus nidulans* (Anidu2)**
Aspergillus nidulans is a mold species commonly found in indoor environments, particularly in areas with moisture issues such as damp walls, ceilings, and HVAC systems. Its presence often indicates water intrusion or poor humidity control within a building.
While *A. nidulans* is widely recognized for its role in scientific research on eukaryotic cell biology, it can also pose health risks. Inhalation of its spores may lead to respiratory irritation and allergic reactions in sensitive individuals. Although infections are rare, *A. nidulans* has been associated with serious health conditions in immunocompromised individuals, particularly those with chronic granulomatous disease (CGD). In such cases, it can cause invasive infections, including osteomyelitis and pulmonary aspergillosis.
Detecting *A. nidulans* indoors is crucial, as its presence indicates persistent moisture problems and potential health hazards. Regular inspections and air quality testing can help identify contamination early, allowing for timely remediation to protect indoor air quality and occupant health.

***Aspergillus niger* (Anigr)**
Aspergillus niger is a common mold species identifiable by its dark-colored spores. It thrives in damp or humid indoor environments, frequently colonizing areas such as bathrooms, kitchens, and HVAC systems where moisture accumulates. Its presence often indicates underlying moisture issues or water damage within a building.
While often dismissed as a typical "black mold," *A. niger* can pose health risks. Exposure to its spores may lead to respiratory irritation, allergic reactions, and has been associated with otomycosis—a fungal ear infection—particularly in individuals with compromised immune systems or in tropical climates. In rare cases, it can cause more severe infections, especially in immunocompromised individuals.
Detecting *A. niger* indoors is crucial, as its presence indicates persistent moisture problems and potential health hazards. Regular inspections and

molecular air quality testing can help identify contamination early, allowing for timely remediation to protect indoor air quality and occupant health.

***Aspergillus ochraceus* (Aochr1)**

Aspergillus ochraceus is a mold species commonly found in indoor environments, particularly in areas with moisture issues such as damp walls, ceilings, and HVAC systems. Its presence often indicates water intrusion or poor humidity control within a building.

This mold is notable for producing ochratoxin A (OTA), a potent mycotoxin that is nephrotoxic, immunosuppressive, and potentially carcinogenic. OTA exposure has been linked to kidney damage and other serious health effects in humans and animals. *A. ochraceus* can colonize building materials like drywall, ceiling tiles, and insulation following water damage, making early detection and remediation crucial.

Detecting *A. ochraceus* indoors is essential, as its presence indicates persistent moisture problems and potential health hazards. Regular inspections and air quality testing can help identify contamination early, allowing for timely remediation to protect indoor air quality and occupant health.

***Aspergillus parasiticus* (Apara)**

Aspergillus parasiticus is a mold species commonly found in outdoor environments, particularly in soil and decaying plant material. However, it can also colonize indoor environments, especially in areas with high humidity and moisture issues. It thrives on organic materials such as damp walls, carpets, pillows, and other cellulose-rich substrates.

This mold is notable for producing aflatoxins, particularly aflatoxin B_1, which is one of the most potent naturally occurring carcinogens. Exposure to aflatoxins can lead to serious health issues, including liver damage and cancer. While ingestion of contaminated food is the most common exposure route, inhalation of airborne spores in indoor environments poses additional health risks.US EPA

Although *A. parasiticus* is less commonly associated with aspergillosis compared to other Aspergillus species, it can still cause infections, particularly in immunocompromised individuals. Symptoms may include respiratory issues and, in severe cases, systemic infections.

Detecting *A. parasiticus* indoors is crucial, as its presence indicates persistent moisture problems and potential health hazards. Regular inspections and molecular air quality testing can help identify contamination early, allowing for timely remediation to protect indoor air quality and occupant health.

***Aspergillus penicillioides* (Apeni2)**

Aspergillus penicillioides is a xerophilic mold species that thrives in dry indoor environments with low water activity, such as ductwork, attics, and on materials like paper and textiles. Its presence often indicates chronic low-level moisture problems, even in areas that appear dry.

While not known to produce major mycotoxins, *A. penicillioides* can act as an allergenic trigger, potentially causing respiratory irritation and allergic reactions in sensitive individuals. It has also been implicated in rare cases of keratomycosis (fungal eye infections).

Detecting *A. penicillioides* indoors is crucial, as its presence indicates persistent moisture problems and potential health hazards. Regular air testing and molecular air quality testing can help identify contamination early, allowing for timely remediation to protect indoor air quality and occupant health.

***Aspergillus restrictus* (Arest)**

Aspergillus restrictus is a highly xerophilic mold that thrives in indoor environments with low water activity but ongoing humidity issues. It is often found colonizing materials like insulation, gypsum board, ceiling tiles, and other porous building components affected by long-term moisture intrusion. Unlike fast-growing molds that form visible colonies quickly, *A. restrictus* grows slowly and is easily missed during visual inspections. However, its presence is a strong indicator of chronic hidden moisture problems, especially in poorly ventilated or intermittently damp spaces like wall cavities and attics.

While not a major toxin producer, *A. restrictus* spores contribute to the allergenic load in indoor air and may trigger respiratory irritation and sensitization, particularly in sensitive individuals.

Because it is difficult to detect visually or through culture-based methods, molecular air testing is essential for identifying *A. restrictus* in indoor environments. In spaces prone to hidden moisture issues, ongoing surveillance using systems like WhisperCare® continuous air monitoring provides an ideal solution for tracking mold contamination trends monthly or quarterly and ensuring that remediation efforts remain effective over time.

***Aspergillus sclerotiorum* (Asclr)**

Aspergillus sclerotiorum is a rare but meaningful mold species that grows under selective indoor conditions—particularly in microenvironments with fluctuating or borderline humidity. It tends to colonize discreet materials or layers where subtle moisture gradients exist over long periods, such as behind baseboards, inside old insulation, or in corners of poorly ventilated spaces.

Although infrequently encountered in typical visual mold assessments, its detection can signal chronic, low-level moisture dynamics that foster a unique fungal profile. *A. sclerotiorum* is not commonly associated with acute health risks, but it contributes to the overall allergenic and fungal burden in indoor environments.

Its inclusion in the ERMI molecular panel makes it a valuable indicator species—highlighting moisture-related contamination that would likely be missed during standard inspections. Molecular air or dust testing is the most reliable way to detect its presence and evaluate the long-term fungal ecology of a building.

***Aspergillus sydowii* (Psydo3)**

Aspergillus sydowii is found in damp indoor environments and is often detected in dust samples from water-damaged buildings. It can cause allergic sensitization and has been recovered from HVAC systems and old insulation. Its blue-green colonies can blend into surfaces, making detection through molecular testing especially useful for long-standing contamination.

***Aspergillus terreus* (Aterr2)**

Aspergillus terreus is a mold species commonly found in soil, compost, and decaying vegetation. While it has beneficial applications in biotechnology, such as the production of certain medications, it also poses health risks in indoor environments. Notably, *A. terreus* is responsible for approximately 15% of invasive aspergillosis cases, a serious fungal infection that predominantly affects immunocompromised individuals.

In indoor settings, *A. terreus* can colonize areas with moisture issues, including HVAC systems, damp insulation, and water-damaged building materials. Its spores are small and can become airborne, leading to potential respiratory exposure. Additionally, this species has been associated with superficial infections such as onychomycosis (nail infections) and otomycosis (ear infections).

Due to its potential for airborne dissemination and surface colonization, detection of *A. terreus* in indoor environments benefits from molecular testing methods. Air sampling using devices like M-TRAP cassettes can effectively capture airborne spores, while swab sampling of surfaces helps identify contamination on building materials. These methods are particularly useful in post-remediation assessments to ensure that cleaning

efforts have successfully removed the mold and that the area is safe for reoccupation.
Early identification and remediation of *A. terreus* are crucial, especially in environments housing individuals with weakened immune systems. Implementing regular monitoring can aid in maintaining indoor air quality and preventing potential health issues associated with this mold species.

***Aspergillus unguis* (Aungu)**
Aspergillus unguis is a mold well adapted to indoor environments where cellulose-based materials and elevated humidity are present. It is commonly found colonizing wood, fiberboard, and similar porous substrates, especially in poorly ventilated spaces such as basements, crawlspaces, and attics. Its presence indoors is typically a sign of sustained high humidity or intermittent moisture problems.
While *A. unguis* is not considered among the most aggressive pathogens, it can contribute to the overall allergenic burden in indoor air and may cause irritation or sensitization in susceptible individuals. Importantly, its colonization of structural materials may create conditions favorable for more serious molds to establish.
A. unguis grows slowly and can blend into wood and other materials making detection by visual inspection often difficult. Molecular testing methods are recommended for accurate identification. Swab sampling from contaminated or previously wet surfaces is particularly effective, while air sampling using M-TRAP cassettes can assist in detecting airborne spores, especially when disturbance of colonized materials is possible.
Identifying *A. unguis* through molecular testing can help building owners and occupants recognize early signs of moisture control issues and prevent escalation to more significant mold contamination problems.

***Aspergillus ustus* (Austs2)**
Aspergillus ustus is a soil-associated mold species that is also commonly detected in indoor environments, particularly where dust accumulates or moisture is inconsistently controlled. It produces brownish-tan spores and colonies that may appear powdery or suede-like on building surfaces.
Although not one of the most aggressive colonizers, its presence indoors suggests the persistence of organic dust or humidity-related microhabitats. This species is rarely pathogenic, but it has been reported in cases involving cutaneous infections and nail colonization (onychomycosis), particularly in immunocompromised individuals. While *Aspergillus fumigatus* remains the primary cause of invasive aspergillosis, *A. ustus* has occasionally been identified in systemic infections, underscoring the need for caution in healthcare and residential settings with at-risk occupants.
*M*olecular detection of *A. ustus* through dust swab sampling is recommended because *A. ustus* often resides in settled dust or colonizes low-visibility surfaces. Air sampling using an M-TRAP may be appropriate when active mold disturbance is suspected, or in post-remediation settings where clearance confirmation is required.

***Aspergillus versicolor* (Avers2-2)**
Aspergillus versicolor is a slow-growing, variable-colored mold often found in settled dust from damp or chronically humid indoor environments. Its colonies can appear green, white, or orange, depending on the surface and age of the growth, making it visually inconsistent and easily overlooked. It frequently colonizes drywall, ceiling tile backing, carpeting, and textiles—especially in low-light or poorly ventilated areas.
This species is notable for its ability to produce sterigmatocystin, a mycotoxin structurally related to aflatoxins and considered a possible human carcinogen. While *A. versicolor* is not typically linked to acute infections, long-term exposure to its spores or metabolites has been associated with respiratory irritation, allergenic sensitization, and potential systemic effects, particularly in sensitive individuals.
versicolor is included in the ERMI (Environmental Relative Moldiness Index) molecular panel due to its significance in evaluating mold burden in water-damaged homes. Detection is most reliable through molecular testing methods. Swab sampling of dust reservoirs can confirm its presence in flooring, furniture, or textiles, while M-TRAP air sampling is appropriate when airborne dissemination is suspected or during post-remediation verification.

Aureobasidium pullulans (Apull) - COMING SOON

***Candida albicans* (Calbi)**
Candida albicans is a yeast-form fungus that typically forms smooth, creamy white colonies. It is a common commensal organism residing on human skin and mucous membranes, including the gastrointestinal and genitourinary tracts. Under certain conditions, such as immunosuppression or antibiotic use, it can overgrow and cause infections like oral thrush, vaginal candidiasis, and systemic candidemia.
In indoor environments, *C. albicans* can colonize damp and poorly ventilated areas, particularly on organic materials. Its presence in such settings may indicate persistent moisture problems and potential health risks for occupants. Detection in environmental samples is effectively achieved through molecular methods, including swab sampling of surfaces and dust reservoirs. Air sampling may be considered in specific scenarios where aerosolization is suspected.
Given its clinical significance and potential for environmental persistence, accurate identification of *C. albicans* in indoor spaces is crucial for assessing exposure risks and implementing appropriate remediation strategies.

***Candida auris* (Cauri)**
Candida auris is an emerging, multidrug-resistant yeast that forms smooth colonies ranging from white to pale pink. Unlike other *Candida* species that commonly affect mucosal surfaces, *C. auris* primarily colonizes the skin and can persist on surfaces in built environments, particularly in healthcare settings. In residences and care facilities, its ability to survive on bedding, furniture, and high-touch surfaces makes it a concern when contaminated environments may expose vulnerable individuals.
While healthy people typically do not become ill from *Candida auris*, it poses a serious risk in environments housing immunocompromised occupants. Spread from contaminated surfaces can lead to outbreaks in healthcare environments and potential transmission between individuals.
In indoor environmental investigations, detection of *Candida auris* requires sensitive molecular methods due to its resilience and ability to persist in dust and on surfaces. Surface swab sampling is the preferred approach for confirming contamination, while airborne monitoring can also play an important role in risk assessment. Molecular air sampling with M-TRAP cassettes has been successfully deployed in sensitive and occupied spaces, including dressing rooms and set areas of New York City Broadway theaters, to protect actors, stagehands, and support staff by assessing air quality without disrupting normal use. This same approach is valuable in healthcare and residential environments where clean air and surfaces must be verified prior to re-occupancy or clearance.

***Chaetomium globosum* (Cglob)**
Chaetomium globosum is a mold strongly associated with severe and chronic water damage. It produces dark-colored fruiting bodies and spores, typically appearing olive-brown to nearly black as colonies mature. This mold commonly colonizes building materials such as drywall, wallpaper backing, and wood in persistently damp environments.
Its presence indoors is a significant indicator of advanced, often hidden water intrusion. *C. globosum* is capable of degrading cellulose-based materials and is frequently found in structures that have sustained prolonged leaks or flooding.
Due to its inconspicuous early growth and preference for concealed cavities, *C. globosum* is best identified using molecular testing methods. At Assured Bio Labs, it is included in several of our targeted fungal DNA panels, and detection is performed using swab sampling from affected

surfaces or materials. Molecular testing provides the sensitivity needed to detect this species before visible signs emerge, making it essential for assessing contamination in water-damaged buildings.

***Cladosporium cladosporioides* svar. 1/2 (Cclad1 / Cclad2)**
Cladosporium cladosporioides svar. 2, along with svar. 1, represents a variant (a genetically distinct form) of one of the most common saprobic molds in the environment. Differentiating between these variants can provide important insights into mold ecology and exposure assessment, particularly since they may vary in abundance or behavior indoors.
Colonies typically appear olive-green to dark brown, with spores that are also darkly pigmented, allowing them to persist on surfaces and in dust. Although widespread outdoors, *C. cladosporioides* readily colonizes damp indoor environments, especially on window sills, wall surfaces, textiles, and HVAC diffusers, where condensation and intermittent moisture occur. Its spores are produced in higher quantities under moist conditions, making it a frequent contributor to indoor dust and airborne spore loads.
While often dismissed as a common allergen, *C. cladosporioides* has been associated with more serious health effects in sensitive individuals. Documented conditions include allergic rhinitis, asthma exacerbation, keratitis, sinusitis, skin infections, onychomycosis (nail infections), and in rare cases, deeper tissue and spinal fluid infections.
Visual differentiation of *C. cladosporioides* svar. 2 from svar. 1 is not possible, and accurate identification relies on molecular detection. A molecular test like the SIM panel, targeting fungal DNA, is the most reliable method for detecting this mold indoors. Swab sampling from dust reservoirs or colonized surfaces is recommended to confirm its presence and evaluate the potential allergenic and exposure risk.

***Cladosporium herbarum* (Cherb)**
Cladosporium herbarum is one of the most common molds found in both outdoor and indoor air. Colonies and spores are olive-green to dark brown and frequently appear in settled dust and on damp surfaces such as window sills, HVAC diffusers, fabrics, and wallpaper.
Indoors, its presence is often linked to elevated moisture and condensation issues, particularly where warm, humid air contacts cool surfaces. *C. herbarum* is a major allergenic mold strongly associated with asthma, allergic rhinitis, and hypersensitivity reactions. It is considered one of the primary fungal contributors to airborne allergen exposure worldwide.
For exposure assessment, molecular air sampling with M-TRAP and the SIAM panel is preferred, as airborne spores represent the greatest inhalation risk. Swab sampling of dust and surfaces supports source identification but is secondary, as spores on surfaces must become airborne to directly impact air quality and health.

***Cladosporium sphaerospermum* (Pspha)**
Cladosporium sphaerospermum is common worldwide. This species can be isolated from plants, soil, food, paint, textiles, insulation, floor dust, mattress dust, humidifiers and from humans and other animals. Spores of this species are best identified with DNA analysis as they are difficult to identify with a microscope. *C. sphaerospermum* is one of the most commonly isolated indoor air fungi. This species is allergenic and has caused documented bronchial lesions and skin infections.

***Cryptococcus neoformans* (Crypto)**
Cryptococcus as a genus is a dangerous pathogenic but is not transmittable from person to person. *C. neoformans* can be a major threat to human health because this species can cause severe forms of meningitis and meningoencephalitis. Cryptococcus infection causes cryptococcosis an infection in either the skin, pulmonary system, or central nervous system. Cryptococcosis is very fatal and often seen as an opportunistic pathogen in immunocompromised patients (especially HIV+ patients). It can be found in many different environments but identification of it in your home could indicate birds or bats as it is commonly isolated from pigeon and bat excreta.

***Epicoccum nigrum* (Enigr)**
One of the most common indoor fungi, *Epicoccum nigrum* is also widely distributed in nature. It can be found growing in and on soils, sand, dead/decaying plant tissue, saline environments, textiles and moldy paper. At this time, *E. nigrum* is not known as a pathogen, but this species can cause allergies Due to the nature of E. nigrum growing well on plants, it can be a risk for air quality in greenhouses and may expose workers to high allergen counts.

***Histoplasma capsulatum* (Histo)**
Histoplasma capsulatum is a fungus that occurs widely in soil or on vegetation contaminated by bat or bird droppings, so identification of this in your home may indicate unwanted pests. *H. capsulatum* has health risks associated with it. This fungus causes histoplasmosis, a subclinical infection that often does not come to the attention of the person involved unless they are immunocompromised or become immunocompromised decades later and the infection emerges.

***Mucor amphibiorum* complex (Muc1)**
This complex consists of 12 species within a broad class of fungi called zygomycetes. Testing for this genus helps indicate the presence of molds that commonly grow in tropical climates, are pathogenic to reptiles, and are rarely pathogenic to humans. Of these species, the ones that are most often identified in human Mucor infections, or zygomycosis, are *M. indicus* and *M. circinelloides*. Underlying diseases in humans include cancer and leukemia, antibiotic or prednisone use, diabetes, deferoxamine and deferoxamine therapy, transplantation, burn wounds and the associated forms of immunosuppressive therapies. Mucor species are commonly found in soils and terrestrial environments. Mucor species are often used in the food industry in the making of beers and soybean products.

***Paecilomyces variotii* (Pvari)**
Known to be heat resistant and can, therefore, be found most in warm and arid environments. It is also very common in air, animal feed, seawater, wood pulp in paper mills, creosote-treated wood, walls, wallpaper, house dust, compost, leather, optical lenses, synthetic rubber, photographic paper, moldy cigars, ink, optical lenses, PVC and kerosene. It is a common contaminate in sauces and other foods due to its ability to withstand boiling temperatures, but it is rarely seen as causing illness in individuals. *P. variotii* has been known as a pathogen in birds and mammals but also appears to be a dangerous human pathogen that affects the organs. It is a rare infectious pathogen but may be an emergent concern as an opportunistic pathogen in immunocompromised patients with catheters.

***Penicillium brevicompactum* (Pbrev)**
A common indoor mold that grows in water-damaged materials, *P. brevicompactum* can produce mycotoxins like mycophenolic acid. It's often detected in homes with hidden moisture problems, including under carpeting or in walls. Its fast growth and allergenic potential make it a species of concern for indoor air quality.

Penicillium chrysogenum (Pchry) - COMING SOON

***Penicillium citrinum* (Pcitr)**
Penicillium citrinum is commonly found in soils, air and the environment. *P. citrinum* is also a common decomposer, especially of citrus fruits. It is commonly found in the environment and generally safe but can be an opportunistic pathogen in immunocompromised individuals. It produces a mycotoxin called citrinin which causes gastrointestinal upset and kidney and liver damage in humans and animals. Its spores can cause allergic

reactions in individuals sensitive to them as well and can worsen asthma, hay fever, and other respiratory issues.

Penicillium corylophilum **(Pcory)**
Typically found in damp environments, *Penicillium corylophilum* can grow on wallpaper, insulation, and various building materials. While not highly toxigenic, it may trigger respiratory issues in sensitive individuals and is a marker of moisture problems that may not be visually obvious.

Penicillium crustosum **(PenGrp2)**
Known for producing the toxin penitrem A, *Penicillium crustosum* appears in dust and building materials after water damage. Its colonies are powdery and blue-green, and its presence can be indicative of broader indoor contamination, especially in structures with past flooding or plumbing issues.

Penicillium expansum **(Pexpa)**
Penicillium expansum is a psychrophilic blue mold that is common throughout the world in soil. It causes blue mold of apples, one of the most prevalent and economically damaging post-harvest diseases of apples. It produces an array of mycotoxins that are detrimental to human health, including patulin.

Penicillium fellutanum/charlesii **(Pfell2)**
Penicillium fellutanum grows in soil and on seed surfaces and can tolerate extreme dryness and salinity.

Penicillium purpurogenum **(Ppurp)**
This vibrant red-producing species is found in mold-contaminated materials including damp drywall, insulation, and textiles. *P. purpurogenum* is not commonly associated with major health effects but is a reliable indicator of damp conditions requiring remediation.

Penicillium spinulosum (glabrum) **(Pspin2)**
Penicillium spinulosum (glabrum) is a commonly occurring indoor fungus, but it can also be found contaminating foods (particularly fruit and fruit products) and growing in compost and aggressively on computer diskettes in high humidity. P. glabrum also grows well on the corks of wine bottles and elicits allergic responses in individuals that work with wine corks. *P. spinulosum* can grow on wet plasterboard, and such growth can yield mycotoxin production, the health effects of which are under debate.

Penicillium variabile **(Pvarb2)**
Penicillium variabile is widely distributed in soils and prefers an acidic pH and lower temperatures. This species produces mycotoxins but is not currently known as a pathogen.

Powdery Mildew ***(Erysiphales)*** **(PM)**
Powdery mildew (PM) thrives in warm, dry climates and requires fairly high relative humidity to spread. The optimum conditions for powdery mildew development are warm days followed by cool, humid nights. PM is a fungus that is a common infection of angiosperm plants. It poses a risk to farmers worldwide as it causes water and nutrient loss in plants and can negatively affect photosynthesis, respiration, transpiration, and yield; although it rarely kills its host.

Rhizopus stolonifera **(Rstol) - COMING SOON**

Scopulariopsis brevicaulis **(SCbrv)**
This mold grows in conditions with moderate moisture and is often associated with decaying wood, paper, or dusty environments. *Scopulariopsis brevicaulis* spores are often picked up in settled dust and can indicate chronic dust accumulation and potential respiratory irritants in sensitive individuals.

Stachybotrys chartarum **(Stac)**
Often referred to as “black mold,” *Stachybotrys chartarum* grows in cellulose-rich materials like drywall and insulation that remain wet for extended periods. It produces potent mycotoxins and has been linked to chronic health issues, especially in infants and immunocompromised individuals. It requires high moisture to grow, so its detection strongly suggests serious water damage.

Total Penicillium/Aspergillus **(PenAsp)**
There are many different species in these groups that are commonly found and have different growth patterns and preferences. Testing for the total *Pen/Asp* in a sample is a good way of indicating general air quality. Significantly high numbers of Total *Pen/Asp* spores in an indoor sample can indicate poor air quality. In an outdoor sample, significantly high numbers may be considered normal and as an indicator of allergy season. Like all molds, people who are allergic to these spores may have worsened allergies, asthma, or hay fever when their spores are prevalent in the air.

Trichoderma viride **(Tviri)**
Commonly found on wet wood, wallpaper, and particleboard, *Trichoderma viride* is a fast-growing mold that competes with other fungi in water-damaged environments. Though not highly toxigenic, it signals active mold growth and microbial competition in damp indoor spaces.

Universal Fungi (Ufun) - COMING SOON

Wallemia sebi **(Wsebi)**
This unique xerophilic fungus thrives in dry indoor dust and low-moisture environments like HVAC ducts, baseboards, and carpets. While not known for toxin production, *Wallemia sebi* is strongly associated with chronic exposure to indoor air allergens, particularly in homes with poor filtration or dust buildup.