New therapy for wood dust allergies

Many people are sensitive or allergic to the dust particles given off by many exotic timbers. Bud Latven discusses how Low Dose Allergen Therapy (LDA) is capable of treating such allergies effectively over time.

If you regularly work with exotic hardwoods, like the rosewoods and ebonies, and have developed persistent skin rash sensitivities, help might be on the way. For two years, I received injections of a compound extracted from the dust of dozens of exotic and domestic hardwoods in a treatment called Low Dose Allergen therapy (LDA) and am now mostly free of allergic reactions to these woods.

The hazards of dust
Allergies to wood dusts are becoming more common today as exotic woods from around the world have become easier to obtain. Websites have sprung up offering a wide variety of species delivered straight to your doorstep. But along with these beautiful woods come a host of chemical compounds, many of which have yet to be identified. These include tannins, quinones, lignans, terpenes, sterols, glycerols, resin acids, waxes, alcohols, alkaloids and many others.

In the rosewoods such as Mexican cocobolo, Brazilian kingwood and African blackwood, the key allergens are the quinones which are toxic biocides made to protect the tree against fungal and microbial invasions.

These biocides also fool the immune system into thinking they are deadly pathogens worthy of attack. In some people, continuous exposure to allergenic compounds can result in escalating reactions from dermatitis and bronchitis to more severe asthmatic reactions and even life threatening anaphylaxis. Not a matter to be taken lightly.
Woodworkers traditionally address the wood dust issue with the use of dust masks, respirators, exhaust systems and air filtration systems. These safety measures are quite effective in preventing major lung diseases by reducing broad exposure to ‘coarse’ dust particles down to about five microns in size and even ‘fine particles’ down to one micron with filtered respirators and some of the better air cleaners. The best commonly available HEPA filters will go down to about 0.3 micron, the lower limit of fine particles, with 80% efficiency.

What these don’t protect against though, are the ‘ultra-fine’ particles less than 0.1 micron in size that are produced by sanding operations. These particles are so small they can easily penetrate the skin and lungs where they are directly absorbed by the body causing immunologic reactions within hours.

I’ve worked with exotic hardwoods for many years and have often had minor annoying skin reactions. About 15 years ago I had a patch test...
done that showed that I had become sensitive to many of the exotic hardwoods, especially the rosewoods and ebonies. Since then my reactions had increased, moving from a stage of common sensitivity to a more serious stage of hypersensitivity where the slightest exposure would cause a full immune system reaction. I had a serious problem.

**LDA therapy**

After several calls to traditional allergy clinics and a bit of research, it became evident that there were no conventional allergy treatments available for wood dust in the US, as there are for more common allergens like pollens and moulds. On recommendation, I contacted the Santa Fe Centre for Allergy and Environmental Medicine under W.A. Shrader, MD, that specialises in an alternative form of allergy treatment called Low Dose Allergen therapy.

LDA is quite different from conventional ‘escalating dose’ therapy commonly used for pollens and hayfever. In conventional therapy, dose levels of an offending allergen are increased over time with the purpose of building antibodies to the allergen. This therapy can be quite effective but may take years to have the desired effect, requiring a heavy regimen of shots. Dosages generally start around 100 ppm (parts per million) and are increased to as high as 100,000 ppm or one part in 10. In addition, side effects can pose potential health risks with this type of therapy.

LDA therapy, on the other hand, uses extremely low dose levels around 0.001 ppm or one part in a trillion and has proven to be 75-80% effective in treating allergies and sensitivities to a variety of pollens, chemicals, etc. This type of therapy addresses the immune system’s T-cells. In an allergic reaction, T-cells notify mast cells to release histamines causing a cascade of allergic events. In LDA therapy, continuous low dose exposure to an allergen creates longer and longer living T-suppressor cells effectively building up a wall of protection against the offending allergen.

After consultation, it was agreed that a collection of over 50 types of woods that I work with would be made into a single compound for LDA injection therapy. This included the more reactive woods like the ebonies, rosewoods and burl woods, as well as the less reactive exotics like purpleheart, bloodwood and padauk. It also included a number of common US domestic hardwoods and soft woods as well as MDF and plywood.

**Receiving treatment**

The compound was made in three different strengths as trial doses which were injected intradermally into the forearm. These shots were administered every two months at varying doses for a year, then a little less frequently in the second year. I now receive a ‘booster’ every six months to make sure enough desensitised suppressor T-cells remain in the bloodstream. After the first few injections, I didn’t notice any changes in my reactions to the wood dust, but by the end of the first year of therapy I was mostly free of skin reactions.

I continue to work regularly with many exotic woods with little or no reactions. It is unknown whether my case is typical without a lot more trial data, but my success now offers new possibilities for others who suffer from exotic wood dust allergies.

If you think you might be interested in this type of therapy, there are a number of allergists around the US who specialise in LDA. For more information contact the Santa Fe Centre for Environmental medicine at www.drshrader.com.

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**ABOVE: ‘Fire Conic’**

by Bud Latven,

Brazilian satinwood (*Euxylophora paraensis*), African ebony (*Diospyros spp*), 610mm (24in) dia. x 610mm (24in) tall