



# Valley Pain Specialists, PC

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## Moroccan Plant Holds Secret for New Pain Medication

A dog hopped on three legs secondary to bone cancer, the pain was so bad he would not let his fourth paw touch the floor. As the owner braced for euthanasia a novel new medication was utilized. A fiery sap from a Moroccan plant was injected into the dog's spinal column and the dog walked on all fours again for several months.

Researchers have found that vanilloid found in the plant Euphorbia called resiniferatoxin (RTX), can accomplish two revolutionary feats. First, RTX can poison certain nerve cells that control a type of heat related, inflammatory pain, apparently eliminating one of the body's pain sensing systems. RTX is proven to eliminate hot, burning, sharp, stabbing sensations. RTX is an extremely potent analog of capsaicin, yet it does not harm other nerves, for example the sharp pain from stepping on a tack. Secondly, RTX induce apoptosis of tumor cells by inhibiting mitochondrial respiration. In essence, the substances suffocate tumor cells. Research has recently begun further research in this field.

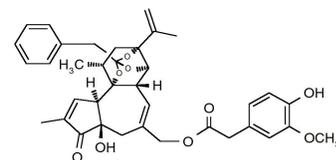
Capsaicin, the chemical found in hot peppers, stimulates a receptor which results in

excessive calcium intake. RTX lets 1,000 times more calcium into a cell. Touched to neurons, RTX spurs a flood of calcium that shatters the cells' walls and quickly kills them.

Getting RTX to just the right cells requires an injection similar to the pain relieving epidural steroid injections, but deeper into the spinal column. RTX temporarily burns before it deadens pain, so the injection does require anesthesia.

Advantages of RTX include its ability to selectively target only pain sensitive C-fiber nerves. Most of the current treatments for moderate to severe chronic pain cannot provide universal relief, and other treatments are non-selective and/or can cause serious side effects. Unfortunately, RTX is only in phase two of clinical trials therefore, it could be 5-7 years before FDA approved in humans. Veterinary use is only 2-3 years away.

Adverse reactions to the RTX and spinal injection could include infection, bleeding, nerve damage, and lack of relief.



**Resiniferatoxin**

*For Information and Referrals:*

**(610) 954-9040**

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