



UNIVERSITY of NORTH TEXAS HEALTH SCIENCE CENTER

Technology Transfer & Commercialization

## IOP-Lowering Compounds

### Learn more!

Robert McClain, PhD  
Associate Vice President  
[rmcclain@hsc.unt.edu](mailto:rmcclain@hsc.unt.edu)  
817-735-2618

### Technology Case

2003-68

### Our Inventors

Dr. Thomas Yorio  
[yoriot@hsc.unt.edu](mailto:yoriot@hsc.unt.edu)

Dr. Adnan Dibas

### Patent Status

US published Application  
[20060111388](https://patents.google.com/patent/20060111388)

3500 Camp Bowie Blvd  
Fort Worth, TX 76107  
Phone: 817-735-5147  
FAX: 817-735-5485  
[techtransfer@hsc.unt.edu](mailto:techtransfer@hsc.unt.edu)

## Discovery

- Phenanthroline compounds are a potential treatment for glaucoma.

## Features

- Compounds effective at lowering intraocular pressure in the rat Morrison model of glaucoma
- Phenanthrolines have antioxidant properties
- Phenanthrolines are widely-used analytical chemistry reagents and are currently manufactured in large scales for analytical purposes|

## Benefits

- Alternative treatment may avoid side effects associated with existing glaucoma drugs
- Ability of phenanthrolines to scavenge reactive oxygen species (ROS) may provide neuroprotection to optic nerve cells
- Existing knowledge, use, and manufacturing of phenanthrolines will shorten the commercialization pathway for phenanthroline-based glaucoma drugs

## Opportunities

- About 2% of the population ages 40-50 and 8% over 70 have elevated IOP, a leading symptom of glaucoma
- An estimated 3 million Americans have glaucoma; the disease is responsible for over 7 million visits to doctors each year
- Glaucoma is the second leading cause of blind in the world and is the leading cause of blindness in African-Americans
- No cure exists for glaucoma; current treatments are limited in effectiveness and by serious side effects in some patients