



UNIVERSITY of NORTH TEXAS HEALTH SCIENCE CENTER

Technology Transfer & Commercialization

# Cytoprotective and Ca<sup>2+</sup> Modulating Agents

## Learn more!

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## Technology Case

2003-22  
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## Our Inventors

Dr. Peter Koulen

## Patent Status

US published Applications  
[20060142395](#)  
[20070129441](#)

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## Discovery

- N-acylethanolamines (NAEs) are cytoprotective and modulate intracellular Ca<sup>2+</sup>

## Features

- Demonstrated efficacy in lab models of stroke, ocular disease, and skin cell damage resulting from oxidative insult
- Topical treatment benefit in animal models
- Ryanodine receptor (RyR) isoform specificity
- Basal ganglia activity
- Lipophilic composition
- Readily extracted from vegetable seeds

## Benefits

- Broadly cytoprotective and neuroprotective
- Lipophilicity may enable transdermal and transcorneal applications
- Inexpensive, naturally occurring raw material source

## Opportunities

- Potential therapeutic or prophylactic against conditions where Ca<sup>2+</sup> levels play a role in cell death:
  - Stroke and traumatic head or spinal cord injury
  - Parkinson's, Alzheimer's, multiple sclerosis and other neurodegenerative diseases
  - Glaucoma, retinal ischemia and other ophthalmic disorders
  - Cardiac arrest, cardiac ischemia, and cardiac hypertrophy
  - Oxidative damage to skin and other tissues