

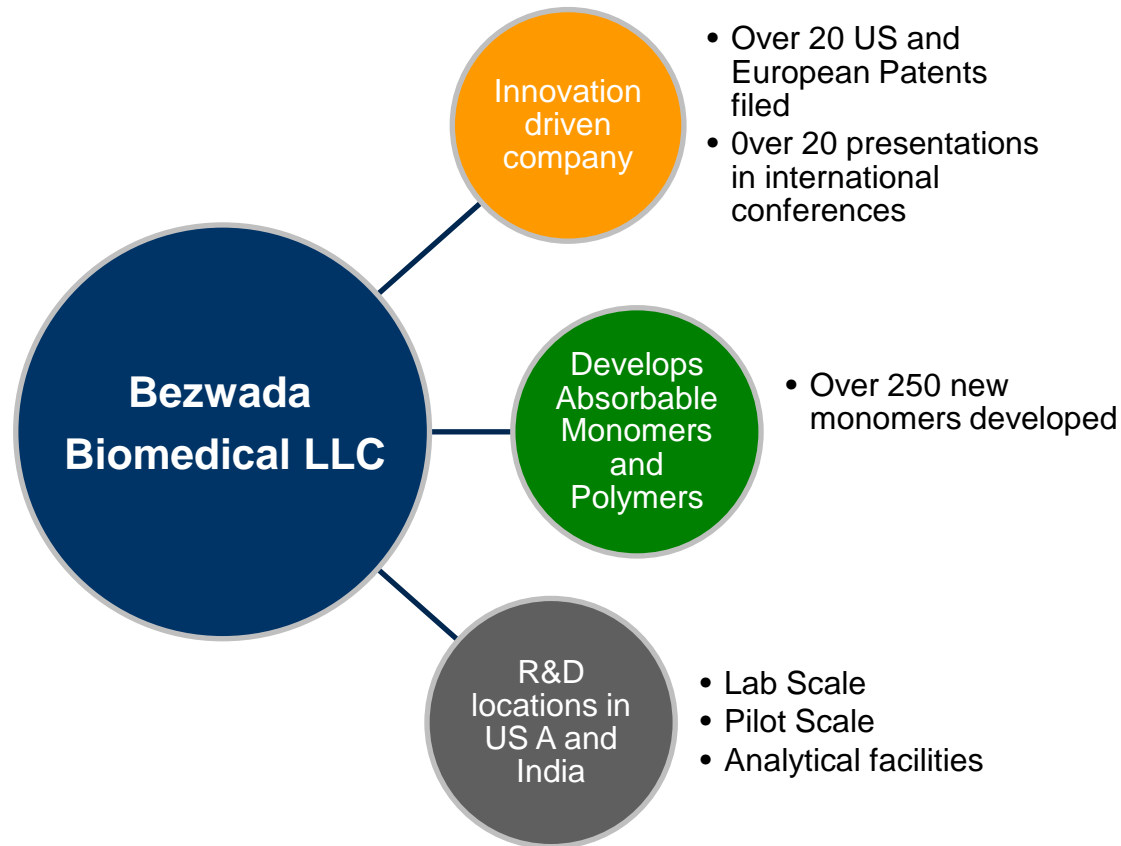
# Bezwada Biomedical LLC

## Corporate Overview & Technology Platforms

Rao S. Bezwada



# Company Overview



For more information, please visit us at  
[www.bezwadabiomedical.com](http://www.bezwadabiomedical.com)

# Our Facilities

- 15000 square feet state of the art facility in India
- 6000 square feet corporate R&D facility in New Jersey, USA

## Our lab facility in India



## Our lab facility in USA



# Our Facilities

## Our R&D labs in India



## R&D at our discovery labs in India

**Total: 25 employees**

- 3 PhD
- 6 Masters
- 8 BS level



# Our US Facilities



# Bezwada Biomedical Associates in India



# Bezwada Biomedical Associates in India



# Our Capabilities

Scale Up capabilities at our labs in India



## Pilot Plant Facilities

- 10 Gallons to 50 Gallons

## Production Units:

- 55 gallons to 500 gallons



**Bezwada Biomedical, LLC**  
A Drug Device Research Company

# Our Analytical Capabilities: US and India

**Our analytical capabilities include:**

- ✓ UV-Visible Spectroscopy
- ✓ Infrared Spectroscopy
- ✓ GC
- ✓ HPLC
- ✓ TLC
- ✓ Karl Fischer
- ✓ Differential Scanning Calorimetry
- ✓ Solution Viscometry
- ✓ Gel Permeation Chromatography



# Expansion of Bezwada Biomedical facilities in India



# Expansion of Bezwada Biomedical facilities in India



# Absorbable Technology Platforms



# Technology Platforms: Attributes and Applications

## Absorbable Polyurethanes

- **Key Attributes**
  - Derived from hydrolytically degradable isocyanates
  - Tunable physical, mechanical properties and hydrolytic degradation profile
  - Releases safe and biocompatible molecules upon degradation
- **Applications**
  - Tissue Adhesive and Sealants, Wound healing, Tissue Engineering, Coatings, Drug delivery

## Absorbable Polymers from Functionalized Drugs

- **Key Attributes**
  - Derived from drugs and safe and biocompatible molecules
  - Tunable hydrolytic degradation profile
  - Releases drug molecule as such along with safe and biocompatible molecules upon degradation
- **Applications**
  - Controlled drug delivery, Pain management, Wound healing

## Anti-Microbial

- **Key Attributes**
  - Based on functionalized Triclosan
  - Controllable release of Triclosan molecules along with safe and biocompatible molecules
- **Applications**
  - Anti-microbial coatings
  - Anti-microbial formulation

## NO releasing Drugs

- **Key Attributes**
  - Drug molecules and NO releasing moiety attached via hydrolytically degradable linker
  - Controllable release profiles
- **Applications**
  - Treatment of Glaucoma, Osteoarthritis, Cardio-metabolic and inflammatory disorders
  - NO releasing coatings

## Absorbable Polymers from Functionalized Phenolics

- **Key Attributes**
  - Derived from natural phenolic molecules such as flavonoids, chalcones and coumarins
  - Incorporates beneficial attributes of natural molecules in the polymer backbone
  - Tunable hydrolytic degradation profiles
- **Applications**
  - Drug delivery, cosmetics, radiation stable medical devices, anti-microbial coatings

## Absorbable Polymers from Functionalized Amino Acids

- **Key Attributes**
  - Derived from amino acids functionalized with safe and biocompatible molecules
  - Tunable physical, mechanical properties and hydrolytic degradation profile
  - Releases safe and biocompatible molecules upon degradation
- **Applications**
  - Drug Delivery, Stent and Stent Coatings, Scaffolds

# Advantages of our Technology over Prior Art

- **Controlled degradation profiles**
- **Tunable physical and mechanical properties**
- **Derived from safe and biocompatible molecules**
- **Degradation products safe and biocompatible**
- **Bioactive molecule remains unaffected**
- **Enhance Bioavailability of Drugs**
- **Increased circulation time of drug**

# Benefits to customer

- **Access to world class facilities for synthesis, characterization, scale-up and processing of both generic and novel absorbable polymers for medical applications.**
- **Molecular-design-to-manufacturing of high-purity monomers and polymers for biomedical applications.**
- **Access to new and generic high-purity absorbable polymers with physical and mechanical properties tuned to meet challenging customer specifications.**

# Our Brochures and Catalogs



Your Partner for Absorbable Polymers  
**Bezwada Biomedical, LLC**

## New Building Blocks

For Synthesis of Absorbable Polyurethanes



Hydrolyzable Isocyanates

Hydrolyzable Amines

Hydrolyzable Amide-diols

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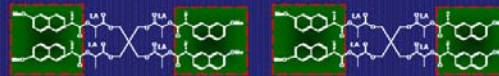
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## New Building Blocks

Functionalized Drugs for Controlled Release Applications



Functionalized Aspirin monomers

Functionalized Naproxen monomers

Functionalized Tylenol monomers

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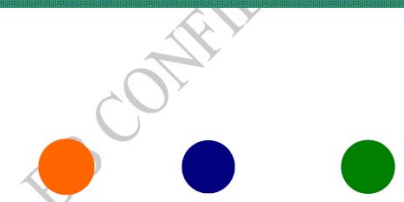
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## New Building Blocks

Functionalized Triclosan Monomers & Macromers



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## New Building Blocks

Hydrolysable Linkers and Crosslinkers

Hydrolyzable Linker and Crosslinker Amines

Hydrolyzable Linker and Crosslinker Amide-diols

Hydrolyzable Linker and Crosslinker Acrylates

Hydrolyzable Crosslinker Amine-acids

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## New Building Blocks

Functionalized Amino Acid Monomers

Functionalized Tyrosine Monomers

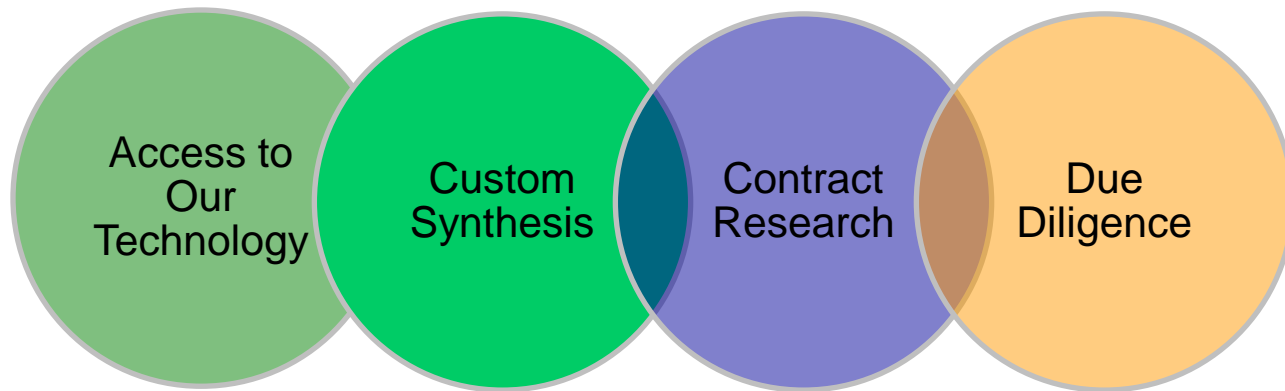
Functionalized Lysine Monomers

Hydrolytically Degradable Polymers  
 from Functionalized Amino Acids

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# What can we offer



Thank You