

Rao S. Bezwada, Ph.D.

President

Bezwada Biomedical, LLC

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EXECUTIVE SUMMARY

- ❑ Invented and championed a new ultra-limp synthetic absorbable suture (for Ethicon, a J & J company) known as MONOCRYL that is being sold commercially all over the world. Total worldwide sales of MONOCRYL suture since its 1993 introduction are over \$250 million, and current annual sales are over \$60 million.
- ❑ Received J&J most prestigious R&D award, the JOHNSON MEDAL, in 1996 for the research, development and commercialization of MONOCRYL suture.
- ❑ 71 issued U.S. patents and sixteen published articles and eight presentations on polyurethane chemistry and absorbable polymers.
- ❑ Received J&J's Philip B. Hofmann Research Scientist Award in 1987 for research in the area of radiation sterilizable absorbable polymers, a new absorbable coating (polyglactaprone 90), and a new VICRYL-Like, monofilament.
- ❑ Invented a class of absorbable coatings for biomedical applications, absorbable liquid polymers, absorbable elastomers, absorbable polyoxaesters, absorbable adhesion prevention barriers, radiation sterilizable absorbable polymers and various absorbable resins for suture applications.
- ❑ Made major contributions to Johnson & Johnson's business, and contributed to the advancement of the science of synthetic absorbable polymers.

EXPERIENCE

President (2003-Present), Bezwada Biomedical, LLC

Research Fellow (1996-2003), Ethicon, Inc., Somerville, NJ

Principal Scientist (1985-1995), Ethicon, Inc., Somerville, NJ

Senior Scientist (1982-1985), Ethicon Inc., Somerville, NJ

Research Scientist (1981-1982), American Cyanamid, Bound Brook, NJ

Scientist (1977-1979), American Cyanamid, Bound Brook, NJ

Supervisor (1974-1976), American Cyanamid, Bound Brook, NJ

Chemist (1969-1973), A.J. & J.O. Pilar, Inc., Newark, NJ

EDUCATION

Stevens Institute of Technology, Ph.D., Polymer Chemistry

Stevens Institute of Technology, M.S., Chemistry

University of Madras, India, 1968, B. Tech. (Bachelor of Technology)

AWARDS:

- The **Johnson Medal** for the research, development and commercialization of MONOCRYL Suture, 1996
- **Philip B. Hofmann Research Award** for outstanding contributions to the development of new proprietary absorbable sutures, and coatings, 1987
- American Cyanamid Junior Education Award, 1979-1981
- Kannamal Krishnaswamy Memorial Prize, 1968
- State Government Scholarship, 1964-1968
- Madras Leather Club Endowment Medal, 1968
- Gold Medal for University First Rank, University of Madras, 1968

RESEARCH INTERESTS

Invent and develop new biomedical devices targeted towards coatings, new sutures, drug delivery and other novel concepts. Provide contract research in the areas of drug/device research and drug delivery research, and tissue engineering. Conduct basic and product-focused research on new absorbable polymers for biomedical devices. Conduct natural products research in identifying new chemical entities (NCE) for drug research. Invent and develop new polyurethane polymers for biomedical applications.

SKILLS/TECHNIQUES

Organic synthesis, small and medium scale polymer synthesis (ring-opening and polycondensation). Synthesis of radiolabelled polymers. Synthesis and characterization of polyurethanes as well as their structure/property relationships.

SIGNIFICANT ACCOMPLISHMENTS

Experience includes elastomers and rubber technology, leather technology, and polyurethane science. Expertise has been directed toward polymer science and organic chemistry over the past 20 years to biomaterials, especially the synthesis of new absorbable monomers and polymers for absorbable sutures and coatings.

Invented and developed a family of new, low cost, single component adhesion promoters for bonding steel cords to rubber. Five U. S. patents were awarded. Returned to school to pursue a doctorate, dissertation entitled, "Synthesis and Characterization of Model Comb-Branched Polyurethanes" (Stevens Institute of Technology), resulted in four papers and one presentation.

Reentered industry and developed a new polyurethane system for American Cyanamid (U.S. patent, "Storage Stable, One Package, Heat Curable Polyurea/Urethane Coating Compositions and Method of Preparation").

Joined Johnson and Johnson (Ethicon), and invented and developed a new class of "Radiation Sterilizable Absorbable Polymers" for biomedical applications. Discovered and developed a new class of absorbable liquid polymers and controlled delivery for drugs and wound healing agents, and a new class of absorbable elastomers.

Invented and championed a new Ultra limp Absorbable Sutures known as MONOCRYL, a new coating (Polyglecaprone 90), a new class of absorbable polymers, known as Polyoxaesters. Sixty-nine U.S. Patents have been issued and several U.S. patents are pending on absorbable polymers. Published sixteen articles and presented eight times on polyurethane chemistry and absorbable polymers.