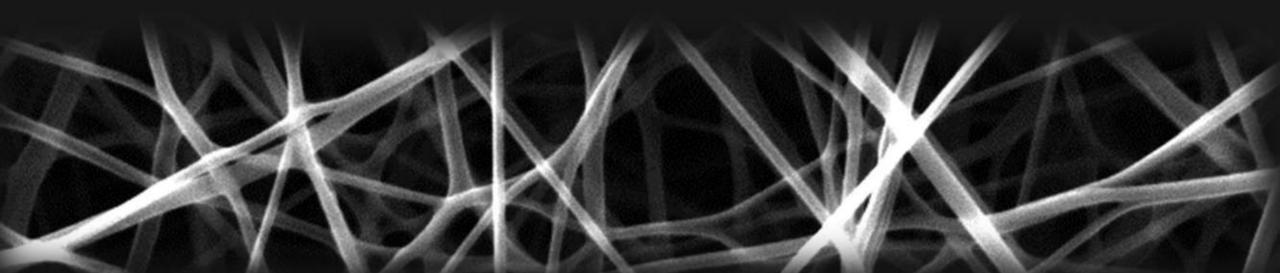


# NANOTECHNOLOGY IN MEDICINE



#### NANOMEDICINE



## CROSSING THE BARRIERS ACCESSING NEW SITES INCREASING BIOCOMPATIBILITY



#### **CURRENT SITUATION**

#### 77 MARKETED PRODUCTS

NANO-DELIVERY (44), PHARMACEUTICALS (18), BIOMATERIALS (15)

#### **70 PRODUCTS UNDER CLINICAL TRIALS**

TREATING CARDIOVASCUAR, NEURODEGENERATIVE, MUSCOSKELETAL AND INFLAMMATAROY DISEASES

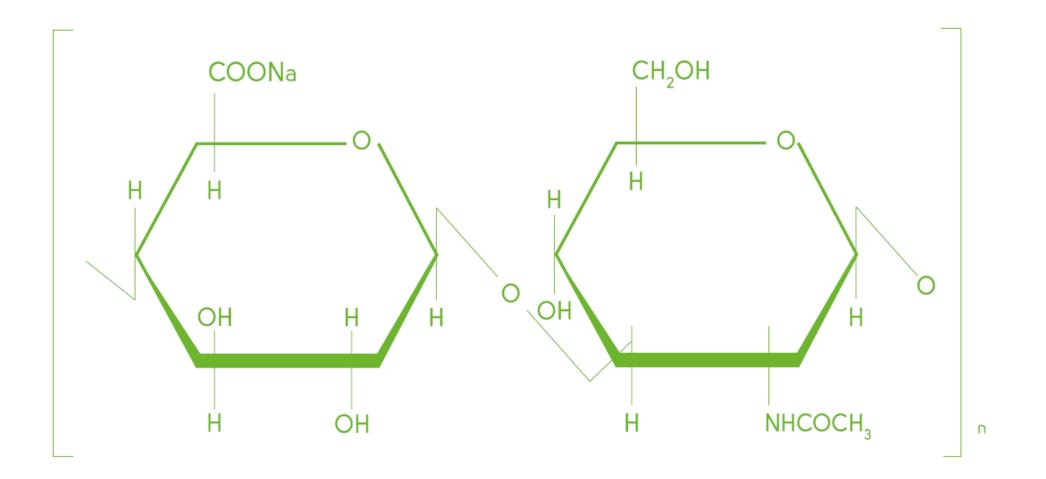








- GLOBAL LEADER IN BIOLOGY, PHYSICAL CHEMISTRY
  AND PRODUCTION OF **SODIUM HYALURONATE**
- **95%** OF PRODUCTION EXPORTED TO 50 COUNTRIES
- HIGH-TECH LABORATORIES COVERING AN AREA OF 3950 M<sup>2</sup>
- HOLDING OVER 70 PATENTS AND REGULARLY PUBLISHING

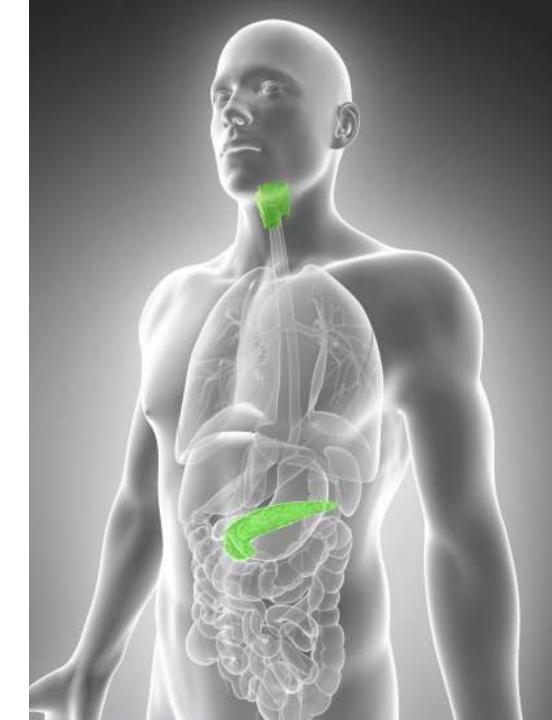


#### HYALURONIC ACID



#### HYALURONIC ACID

- ESSENTIAL COMPONENT OF ECM
- MAINTANS OSMOTIC PRESSURE
- REGULATES CELL DIVISION
- PROMOTES HEALING
- LUBRICATES CARTILAGE
- PREVENTS OXIDATIVE DAMAGE





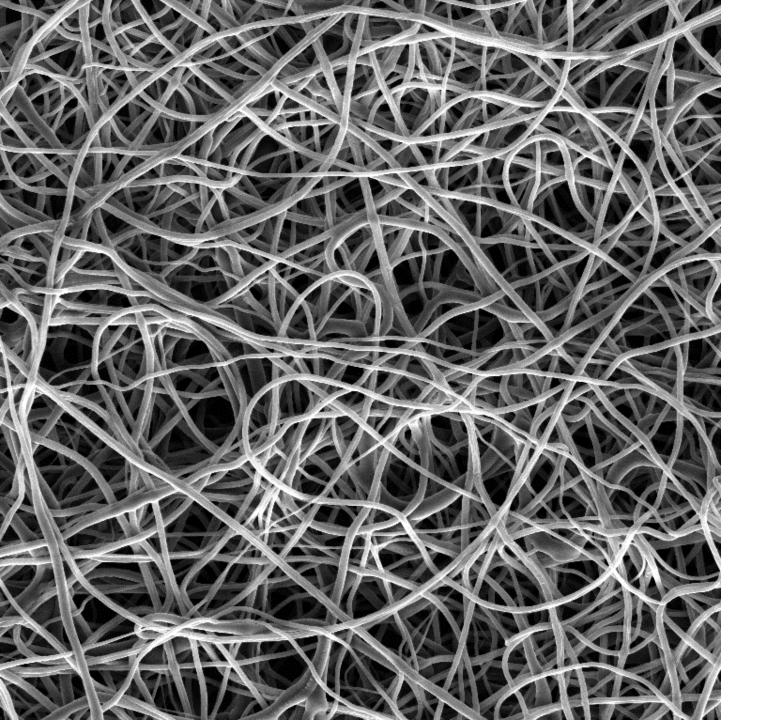






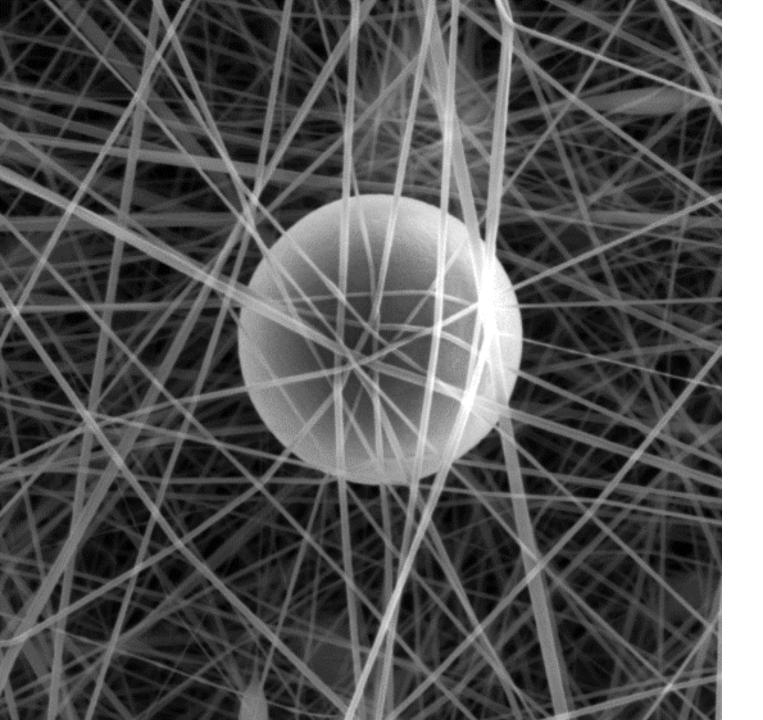


# **4SPIN®**



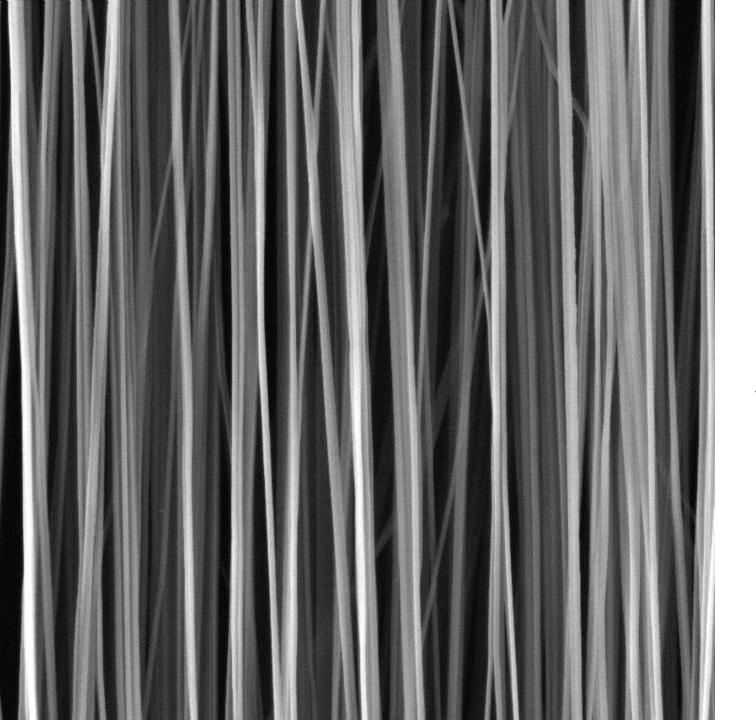
#### BIOPOLYMERS





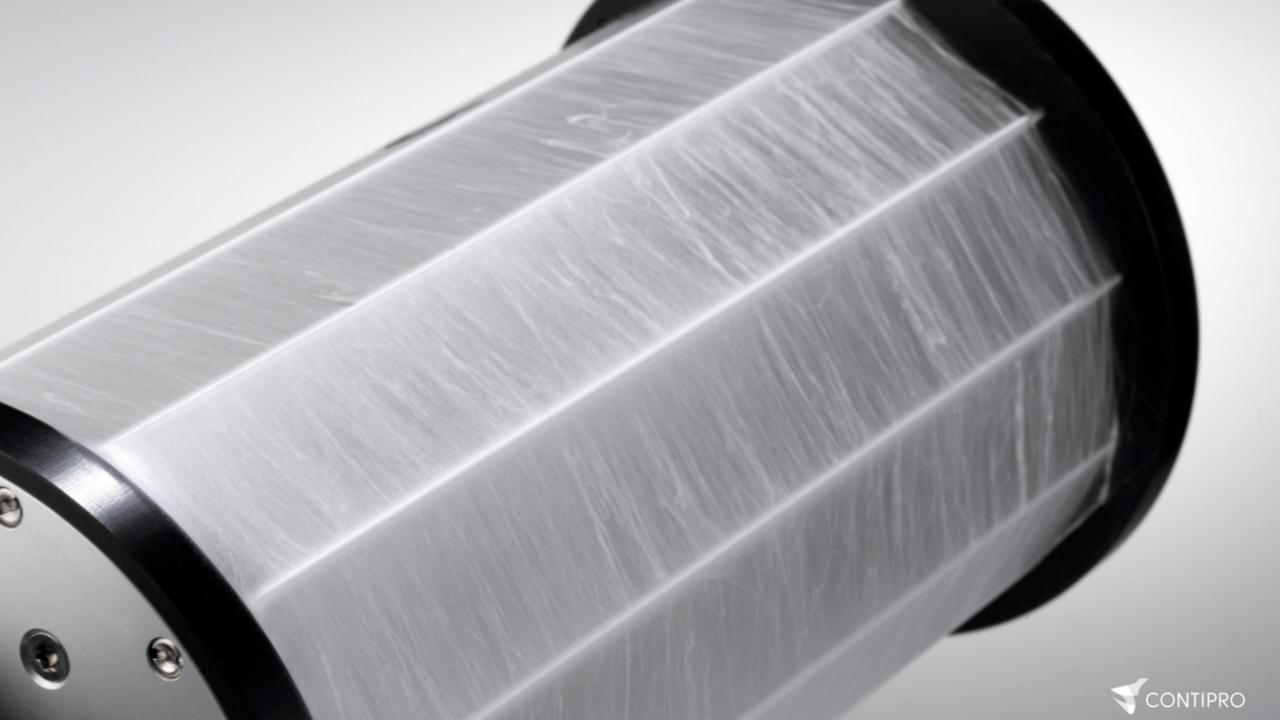
#### COMPOSITES





#### ALIGNED NANOFIBERS







#### RESEARCH AND DEVELOPMENT COOPERATION

#### ACADEMIC INSTITUTIONS COMMERCIAL ENTITIES UNIVERSITIES



#### INTERNATIONAL RESEARCH PROJECTS



POST-HEART ATTACK TREATMENT



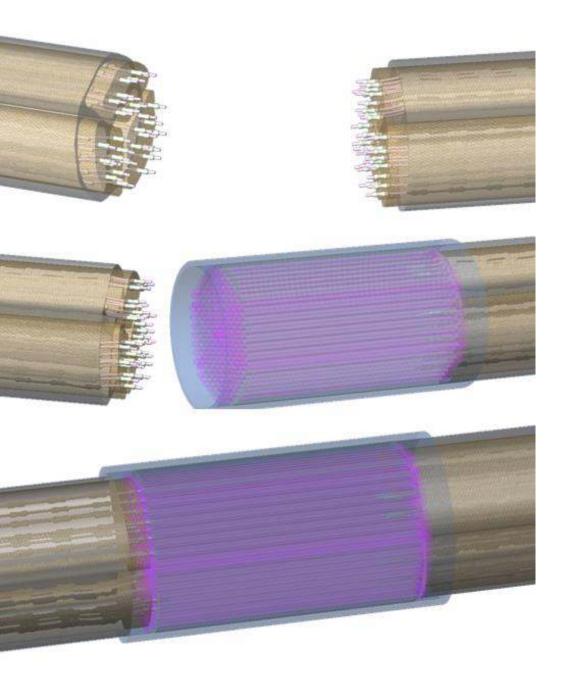
AVOIDING ADVERSE IMMUNE REACTIONS FOLLOWING IMPLANT SURGERY



TREATMENT OF SPINAL CORD INJURIES



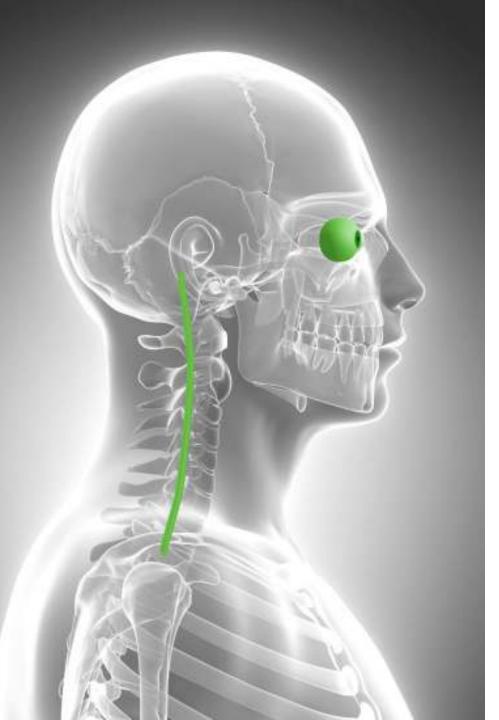
NOVEL BIOMIMETIC NERVE PROSTHESES





- BIOMIMETIC NERVE PROSTHESES
- HIGH THROUGHPUT MANUFACTURING







- PERIPHERAL NERVE REPAIR
- 1,000,000 PATIENTS PER YEAR



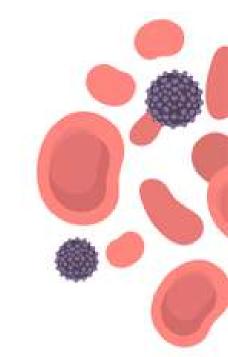
### PROSPECTS OF NANOMEDICINE

- FASTER DIAGNOSIS OF MANY DISEASES
- REPAIRING TISSUES INSIDE THE HUMAN BODY
- TARGETING ORGANS WITHOUT DESTROYING HEALTHY TISSUES



### FUTURE OF NANOMEDICINE

- KEY ENABLING INSTRUMENT FOR NEXT LEVEL DRUGS
- PROVIDING IMPORTANT NEW TOOLS
- IMPROVED AND COST EFFECTIVE HEALTHCARE







THE R R R R. P. LEWIS

 $D_{-}$ 

THE

1 11 - 1