

Breakthrough Improvement in Orthopedic & Dental Implants, Spinal Disc, Bone Void Fillers & Stents using nanotechnology

Nano Interface Technology, Inc.

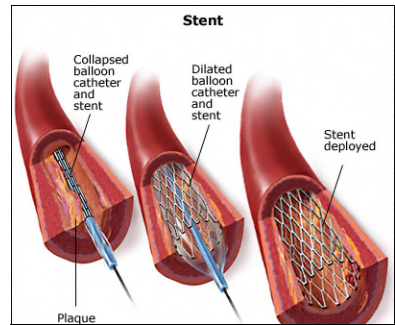
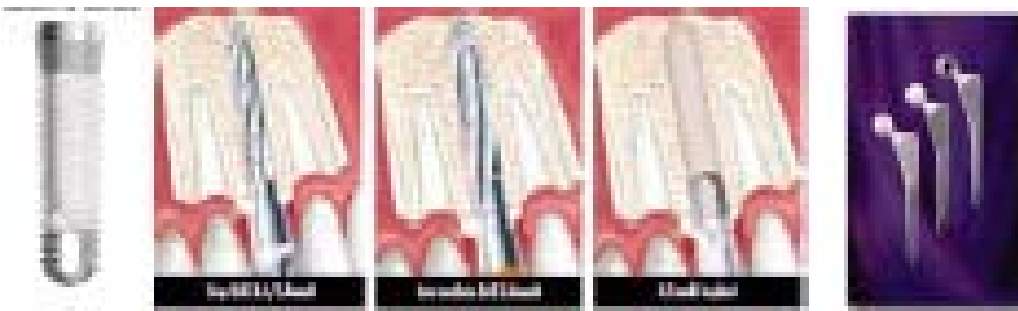
Partner: Leading Medical Device Company

Coatings or Fillers exactly match with bone minerals

Financing Sought: \$4M

C. P. Singh
President & CEO

Ocala, FL



Value Proposition – Coated Implants

Problems with Hip, Knee and Dental Implants

- Life-span of the hip, knee and dental implants: 12 years¹ (Stagnant for last 30 years).
- High revision rate of 17% for last 20 years.
- Requires prolonged use of expensive and damaging high strength painkillers.



Coating area

Quote from the 1998 FDA review on existing coated-implants

- ----- mostly HA (hydroxyapatite) in coating can vary from 30% to 66%.²
- --- the higher the amorphous concentration, the higher the extent of dissolution of the coating.

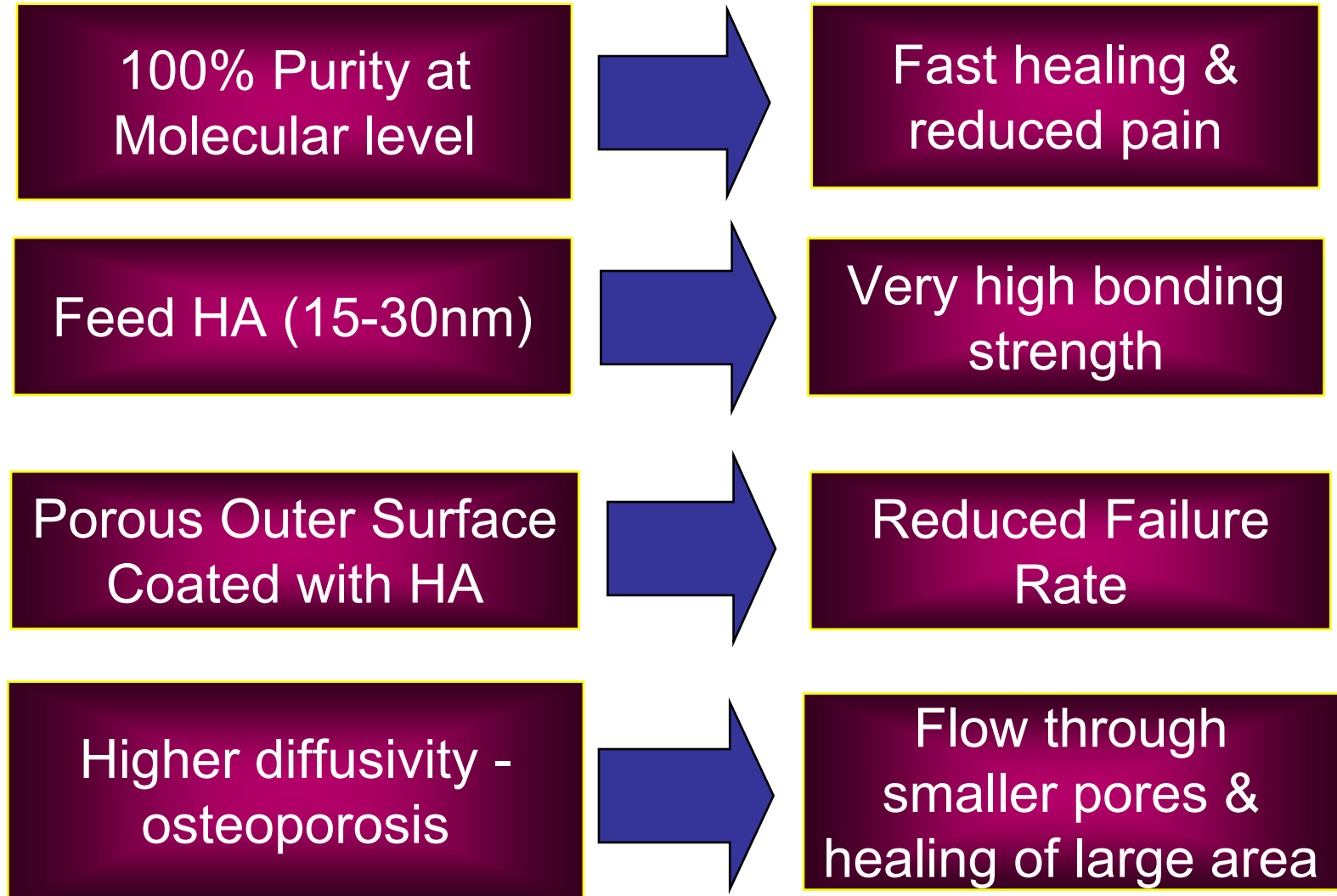
1. <http://www.wmt.com/Patients/hip/lifespan.asp>

2. <http://www.fda.gov/ohrms/dockets/ac/98/transcript/3369t2.pdf>, page 43-45, 1998

NITI's Products and its Advantages

- NITI is the leader in providing ultra-pure HA coatings to the orthopedic and dental implants.
- Well established platform technology provides ultra-pure (99.9%) HA coating as validated by the NIH review board.
- Coating materials provides **600%** increase in the binding with bone proteins as concluded by VCU researchers which is major factor for quick recovery and longer life span of implants.
- The cost of coated implants will be less than the current price.
- NanoHA derived orthopedic implants, dental implants, spinal disc, and bone void fillers.

Product differentiators and consequent advantages of Phase Pure Nano-biomaterials

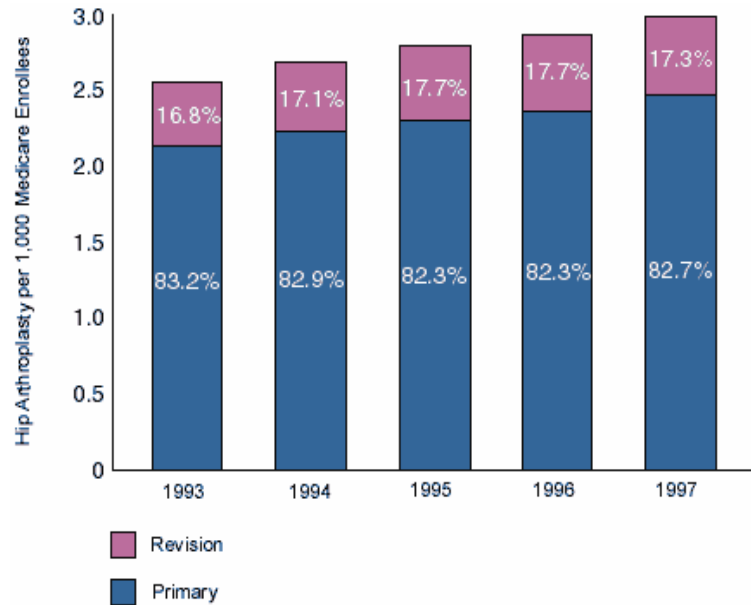


Competitive Landscape

Implants	Non-coated, Competitors	Arc based Coating Process - Competitors	NITI ¹
Technology,	Non-coated	HA coating	Ultra-pure HA
Purity of the Coatings	No coatings	30% - 66% (Impurities leads to dissolution of coatings)	99.9%
Temperature		2000°C (High temp leads to corrosion)	100 – 300°C
Lifespan of implants	12 years	12 - 15 Years	20 Years ²
Revision/Pain	17%/High	15% / medium	<7% / low ²
Cost of Hip Implants	\$2,500	\$5,000	\$4,000-\$4,500

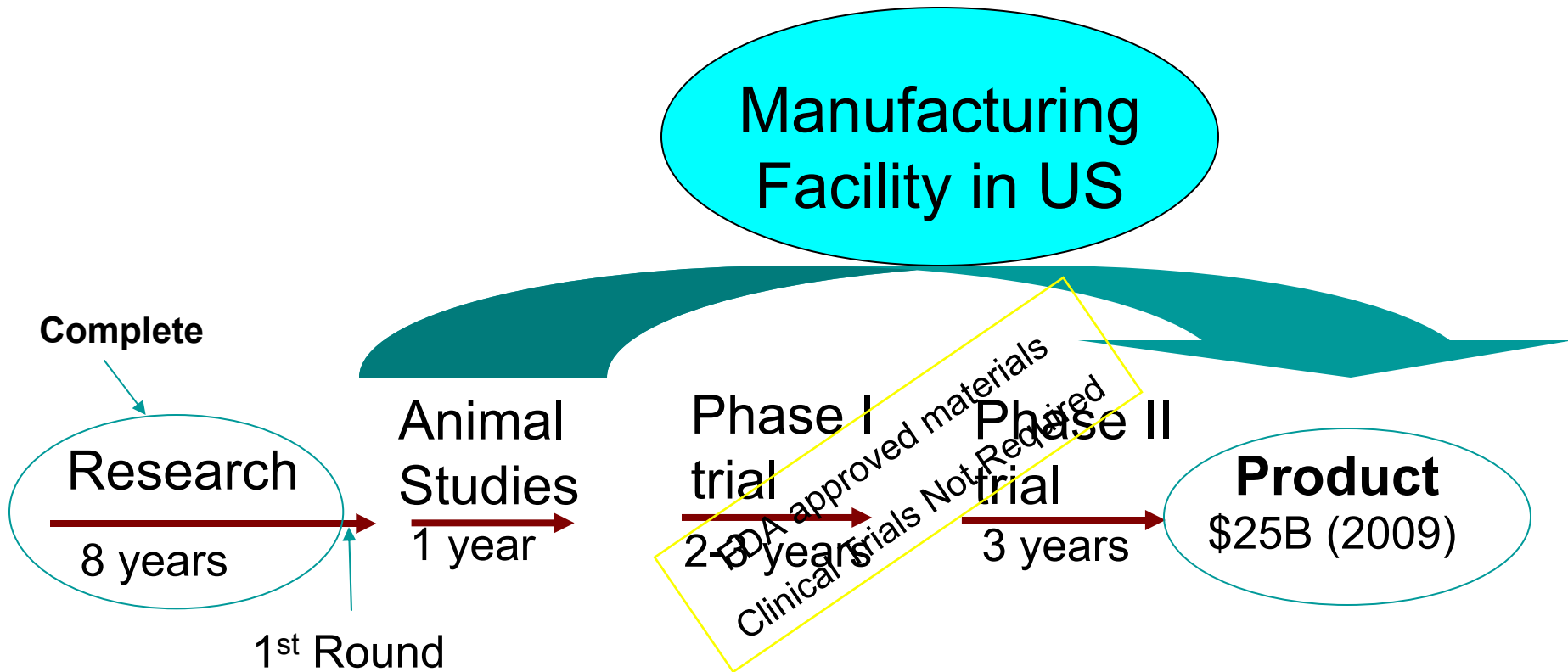
1. NITI's Coating materials provides **600%** increase in the binding with bone proteins as concluded by VCU researchers which is major factor for quick recovery & longer life span of implants.
2. Projection based on literature.

Revision rate of hip and knee implants



- The total revisions in the US is about 100,000 per year (17%) out of 600,000 procedures. The revision rate is constant at 17% for last 20 years.
- The minimally invasive procedure developed by the orthopedic surgeons has helped patients, but revision rate has not decreased due to the lack of better coatings of the prosthesis.
- If our ultra-pure coating helps in reducing revision from 17% to 12%, there will be 28,000 fewer revisions. **That will save Medicare $28,000 \times \$40,000 = \$1.12B$ per year.**
- **Will large companies adapt new technology which will reduce # of implants sold?**
Yes, Partnering company will capture larger market share due to the better product.

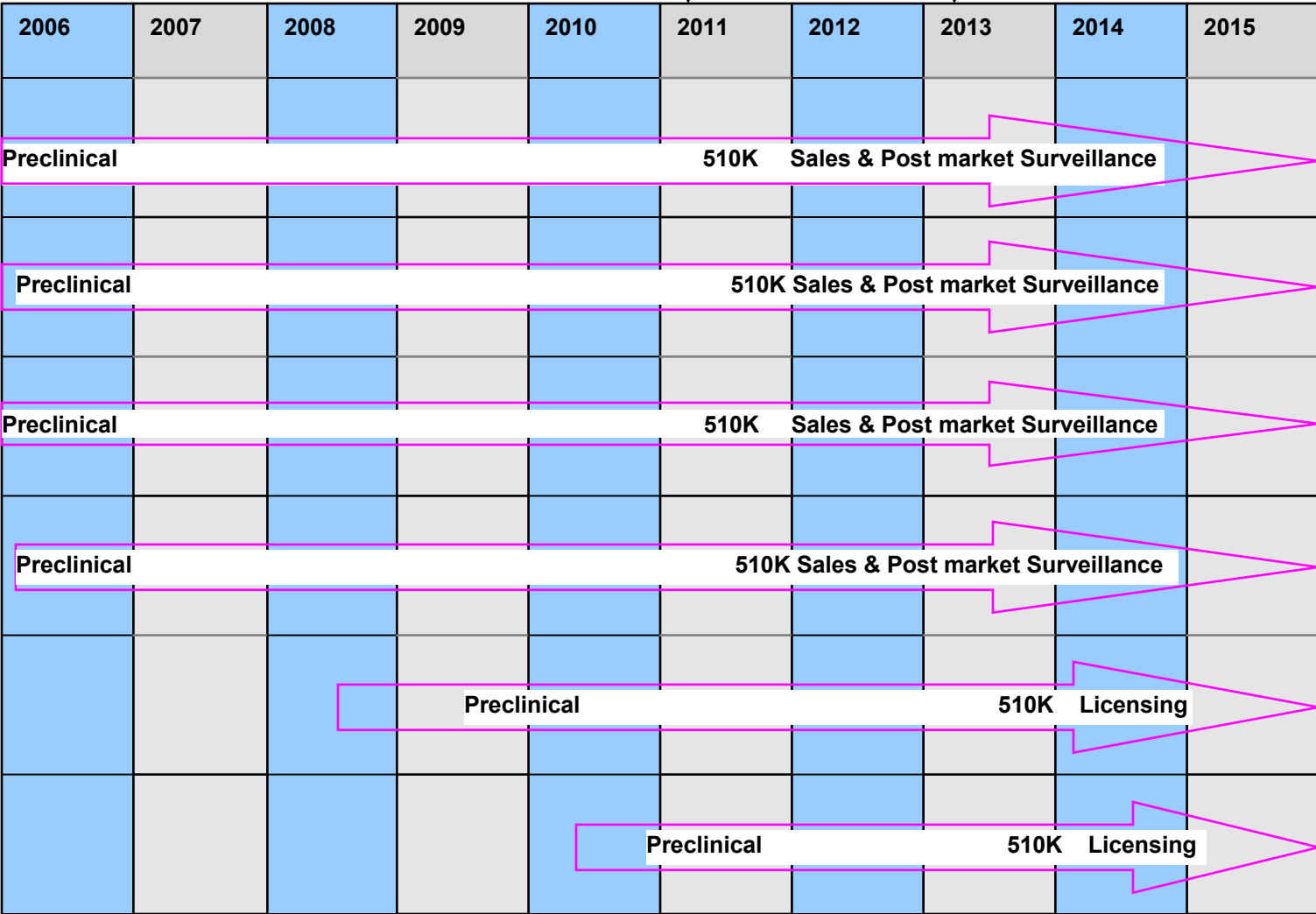
Fast-track Nanotechnology-based FDA approved coatings materials for the implants



Products Pipeline

Series A

IPO



Team Members

C. P. Singh, Ph.D. – President & CEO,

- 18 years of experience in nanotechnology & chemical engineering (Naval Research Laboratory and Institute for Surface Chemistry, Stockholm).
- 10 years of planning & management skills
- Was Part-time Faculty at the Johns Hopkins University
- 20 years ago, evaluated and led team 30 to make \$25M chemical factory profitable.
- Developed project design, planning and techno-economic feasibility study of large variety of \$20M - \$700M chemical companies.

Maya Sinha, BS (Pharmacy), VP - 12 Years of experience in Pharmaceutical & Nanotech.

Dr. K. L. Mittal, Editor, J of Adhesion Science & Technology – 35 years of research experience

Other Research Team Members and Advisors:

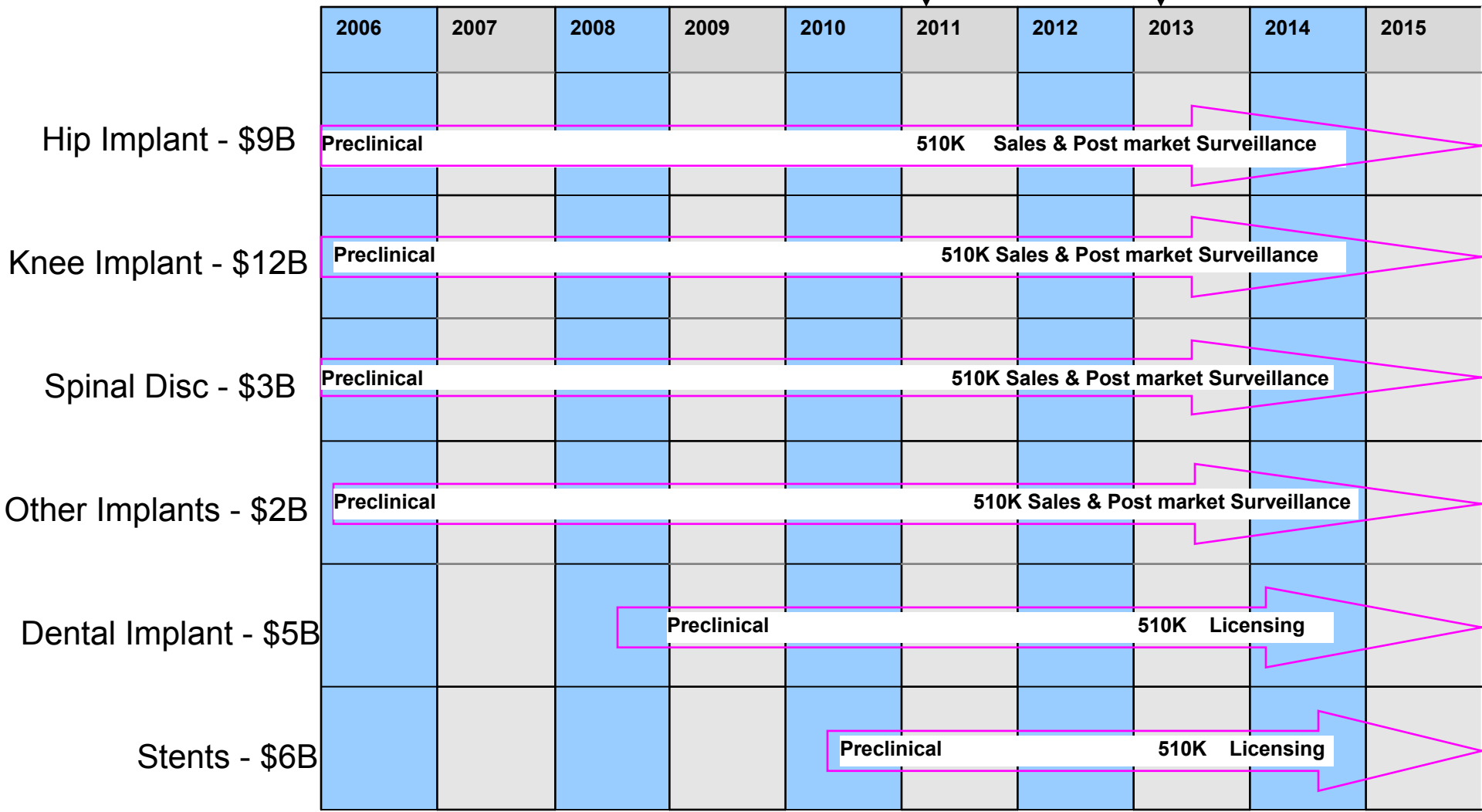
- **Professor Robert C. Cammarata, Johns Hopkins University**
- Dr. Ajay Kumar, MD, President of IMA, VP Commonwealth Medical Association
- **Professor Peter Moon, Virginia Commonwealth University**
- **Dr. S. B. Qadri, Naval Research Laboratory**
- Dr. Steven Jefferies, Temple University (Former VP – Dentsply International)
- Professor John Texter, Eastern Michigan University
- Dr. SKS Marya, Director of Orthopedics & Joint Replacement, Max Healthcare, New Delhi
- Dr. Raju Vaishya, Sr. Consultant, Dept of Orthopedics & Joint Replacement, Indraprastha Apollo Hospital, New Delhi

- **Need to add 8-16 more team members**

Products Pipeline

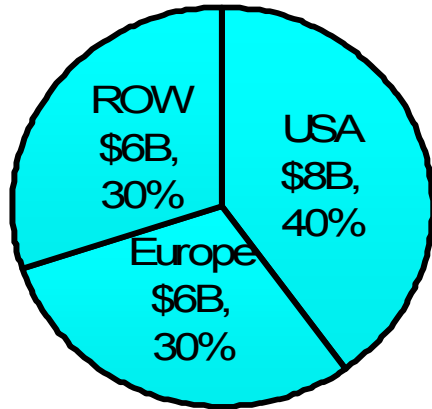
Series A

IPO

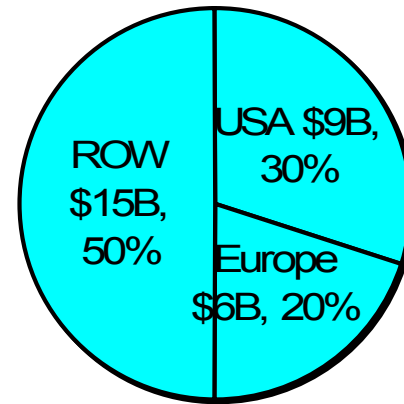


Major Change in Market Dynamics

2006 - \$20B



2012 - \$30B



- ROW market will grow to \$15B by 2012 due to the growth in rich, aging, & overweight population in India and medical tourism to Asia. A major cut by Medicare will have detrimental effect on the orthopedic procedures in the USA. <http://www.healthleadersmedia.com/viewfeature/200134.html>
- Indian government is tightening the regulations for inferior products. The large medical device companies, which use the components made in China will lose market share in India.

http://timesofindia.indiatimes.com/Companies_may_have_to_pay_for_shoddy_goods/articleshow/2551010.cms

- It opens market opportunity for small companies which sell 100% US made medical devices. NITI will enter into the Indian market in 2009.

Marketing of Implants in India

Future Partner: Leading Medical Device Company

Growth rate in India = 35-40%, Growth rate in US and Europe = 7-10%

Projected Indian market	2006	2007	2008	2009	2010
# of Hip & Knee implants	160,000	216,000	290,000	390,000	530,000

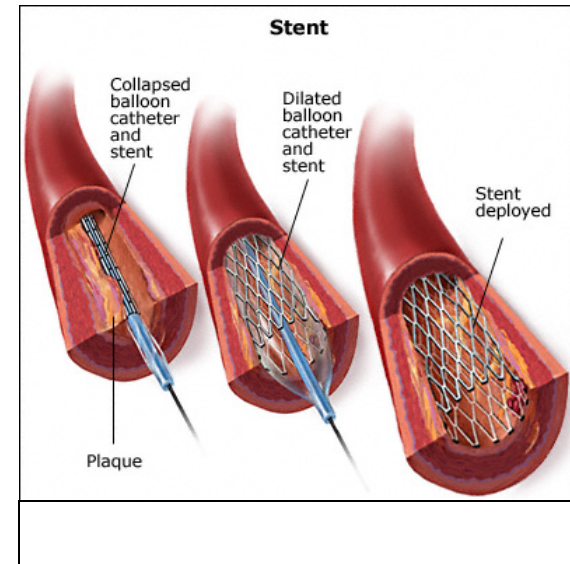
Noncoated Hip & Knee Implants	Total Price ¹
Multinationals - 80% market share - Unit Cost	\$2,500
Partner/NITI – Unit Cost	\$2,350
1 st Year - 8,000 Implants	\$18.8M
2 nd Year - 16,000 Implants	\$37.6M
3 rd Year - 40,000 Implants	\$94M

1. The prices can vary anywhere from \$2,500 to \$8,000 for the various types of hip and knee implants.

Innovative solution to the problem of the drug-coated stents

- Drug-coated stent prevents restenosis -- a re-narrowing of the artery around the stent due to the post-procedural trauma.

- The drug-eluting stents is susceptible to "late stent thrombosis"- leading to higher mortality. The main reason for late stent thrombosis is lack of early endothelialization of the stents.



- The hydroxyapatite and drug coated stent can be fine tuned to prevent re-stenosis and "late stent thrombosis".
- A competitor is not looking into impurity aspect of hydroxyapatite in the coatings & they are using sol-gel technology which failed in dental and orthopedic implants.

Big Picture of the Opportunity

Products	Problem	Solution	Market
Hip, Knee & Dental Implants,	Sever pain, No improvement in lifespan of Implants in last 20 yrs	Ultra-pure HA coatings to reduce pain & increase life span of the implants	\$20B
Spinal disc & Bone void fillers	Infection from bone graft & high manufacturing cost	Synthetic ultra-pure HA – no infection, low cost & Consumer friendly	\$4B
Drug coated Stents	Late stent Thrombosis	HA-coated stents to increase endothilization leading to reduced late stent thrombosis	\$6B

Total market size = \$30B (\$40B by 2012)

Growth rate = 15% - 30%

Series A = \$4M (\$500K per Quarter for 2 years)

Return: 5x - 10x in 5 yrs with 1% market penetration (\$300M)

Summary

Company	<i>Breakthrough Improvement in Orthopedic Implants, Dental Implants, Spinal Disc, Bone Void fillers and Stents</i>
Team	<i>Have made chemical industry profitable. Expertise in Nanotech, Management, Pharmaceuticals, Materials & Chemical industries</i>
Opportunity	<ol style="list-style-type: none"><i>1. \$15B market of orthopedic implant with 25% growth rate due to removal of several painkillers</i><i>2. \$10B market for licensing of coating technology to the stent & dental implants manufacturers</i>
Product	<ol style="list-style-type: none"><i>1. First capture noncoated implant market in India.</i><i>2. Then introduce proprietary HA-coated orthopedic and dental implants</i>
Business Model	<i>Multiple revenue streams – sales & two licensing</i>
Competition	<i>A difficult problem solved through innovation in nanotech</i>
Financials	<i>Slow growth 1% (\$300M), Exponential growth in revenue</i>
1st Round Fund (\$4M)	<i>Animal Studies, 510Ks, IP protections and Manufacturing facility in the US.</i>

Innovation leads to Market Success

The orthopedic surgeons have developed minimally invasive surgery which has reduced hospitalization time - leading to saving of Billions of Dollars. However, the lifespan of hip, knee and dental implants has not increased in the last 30 years. The orthopedic surgeons are like fighter jet pilots; their success depends whether they have 70's fighter jet or 21st century stealth bomber.

Thank you

Contact Information

C. P. Singh

Nano Interface Technology, Inc.

Ocala, FL

E-mail: niti@nanointerfacetech.com