SINTX Technologies

Corporate Overview

February 2021

SINTX Technologies Inc.

SINTX Technologies is a leading manufacturer of silicon nitride.

Silicon nitride…

- Is favorable to human cells and promotes bone fusion
- Discourages bacterial adhesion on its surface
- Inactivates viruses—including the SARS-CoV-2 virus

SINTX has investigated silicon nitride heavily, with over 130 peer-reviewed scientific papers and presentations.

We are publicly traded on the NASDAQ **(SINT)**

Vision

We are passionate about leveraging our expertise in the high-tech ceramics industry to create new, innovative opportunities in multiple sectors.

We have poured a tremendous amount of resources into the research and development of our hallmark silicon nitride material. We have leveraged the capability of this unique material to improve the quality of life for people all over the world—as well as expand into multiple industries.

Corporate History

1996 – Surgeon-Scientist collaboration → "Amedica Corporation", Salt Lake City

2008 – First silicon nitride spine fusion device implanted; >35,000 since then

2009 – Moved into current facility

2010 - Acquired US Spine to gain product breadth

2014 – IPO of Company; Nasdaq- AMDA (now, SINT)

2018 – Divested retail spine to CTL-Medical (Dallas based orthopedic device company); re-named the Company "SINTX Technologies, Inc."

2000 | 2010 | 2020

1996 to 2005 – Development of ceramic hip system as well as biocompatibility data for spine fusion devices

2006 to 2008 – Series of FDA 510(k) clearances for silicon nitride VBR and spinal fusion implant

2010 to 2018 – Launched multiple new silicon nitride spinal implants – including several devices incorporating porous silicon nitride – and gained regulatory clearances in Europe, Brazil, and Australia

2020 – Discovery that SINTX's silicon nitride inactivates SARS-CoV-2 – virus which causes COVID-19

Today – SINTX is a commercial ceramic company focused on identifying new opportunities for its silicon nitride technology: Biomedical, Industrial, Antipathogenic

Experienced Management Team

B. Sonny Bal, MD, JD, MBA, Ph.D

Chairman of the Board
Chief Executive Officer

- Orthopedic Surgeon and Attorney
- Ceramic Scientist and Investigator
- CEO since 2014, Board since 2012

Bryan J. McEntire, MBA, Ph.D.

Chief Scientific Officer

- 40 years research in advanced ceramics
- Senior roles in ceramics and materials companies

David O'Brien

Chief Operating Officer

- 30 years of operations, manufacturing, and engineering experience with medical devices and ceramics

Donald Bray

Vice President Business Development

- 35 years background and experience in technical ceramics and business development
- Proven track record of securing federal, state, and local funds in support of technology development

Michael Marcroft

Vice President Business Development

- 20+ years of experience in medical technology business development & marketing
- Global corporations and startups

Focus Markets

Biomedical

- Used in over 35,000 human spine implantations
- Expanding with composites and coatings

Antipathogenic

- Antibacterial, antifungal, and antiviral applications
- Developing PPE, filters, and surfaces

Industrial

- Able to withstand extreme conditions
- Used in aerospace, bearings, and drilling

Advantages of Silicon Nitride in Spinal Fusion

Faster Bone Healing

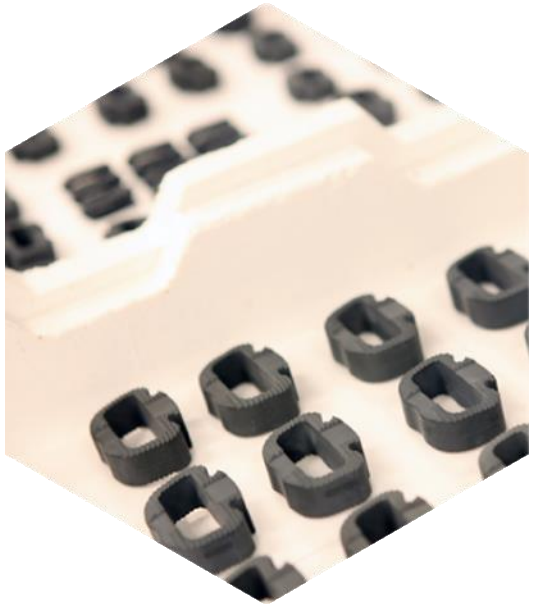
- Unique surface nanostructure and chemistry
- Enhances cell response for faster bone fusion

Antipathogenic Properties

- Resistant to bacteria, viruses, and fungi
- Confirmed independently

Superior Radiographic Imaging

- Easy to see on x-ray, CT, and MRI
- No image distortion



Strong, Active IP Portfolio

12 Patents Issued

56 Patent Applications

Current focus is on patent applications for:

- Antibacterial and antipathogenic applications for silicon nitride
- Silicon nitride composites & coatings used in medical implants
- Silicon nitride manufacture and formulation processes

Deep Manufacturing Expertise

We have a state-of-the-art manufacturing facility and headquarters in Salt Lake City:

- 30,000 sq. ft. FDA registered, ANVISA registered, and ISO certified facility
- Vertically integrated for rapid prototyping and development
- R&D and product development laboratories
- Rigorous quality control process

Manufacturing Process

Powder

Press

Mill

Furnace

Implants

Leadership in R&D

Unmatched Scientific Achievements

- Over 130 peer-reviewed scientific publications, conference proceedings, or patent applications
- More than 85 technical and scientific presentations

ACS APPLIED MATERIALS & INTERFACES
Research Article
Cite This: ACS Appl. Mater. Interfaces XXXX, XXX, XXX−XXX
www.acsami.org

Silicon Nitride: A Bioceramic with a Gift

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Contents lists available at ScienceDirect
Journal of the Mechanical Behavior of Biomedical Materials
journal homepage: http://www.elsevier.com/locate/jmbbm
ELSEVIER

3D-additive deposition of an antibacterial and osteogenic silicon nitride coating on orthopaedic titanium substrate

Matteo Zanocco[a,b], Francesco Boschetto[a,b], Wenliang Zhu[a], Elia Marin[a,c], Bryan J. McEntire[d], B. Sonny Bal[d], Tetsuya Adachi[c], Toshiro Yamamoto[c], Narisato Kanamura[c], Eriko Ohgitani[b], Kengo Yamamoto[e], Osam Mazda[b], Giuseppe Pezzotti[a,b,e,f,*]

Leadership in R&D

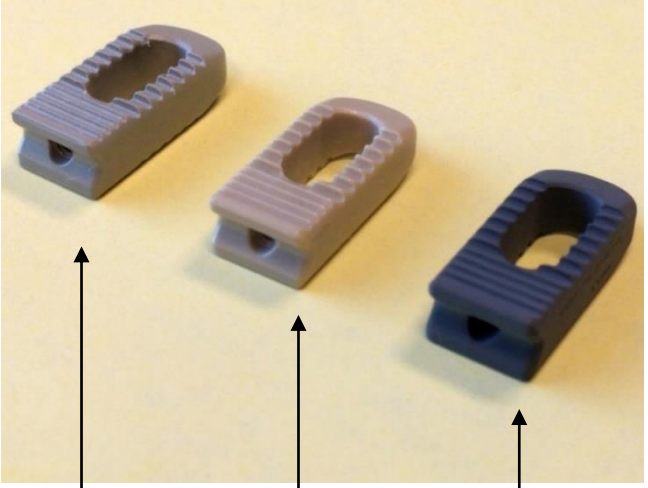
Innovating into the Future

- Polymer/Silicon nitride composites
  - PEEK, PEKK, polyurethane, polycarbonate, etc.
- Coatings of silicon nitride on other materials
  - PEEK, titanium
- Enhanced formulations
- Metal-Silicon nitride composites (Nitranium®)

Key Technology Development

Silicon Nitride – Polyether Ether Ketone ("PEEK") Composite

- Extruded compound of PEEK and silicon nitride which can be machined into implants
- Combines familiarity and machinability of PEEK with silicon nitride
- Antibacterial and osteogenic properties are in between pure PEEK and pure silicon nitride
- Covered under US Patent 10,806,831
- Planning submission for FDA Master File in early 2021



PEEK/15% Si_3N_4 Composite | **100% PEEK** | **100% ß-Si_3N_4**

2021 Key Objectives

Develop new lines of revenue

- New markets
- New non-spine products
- Pursue M&A opportunities

Support spine partner CTL Amedica

- Expand into Asia and Mexico
- Collaborations in marketing, new products, new technologies

Continue robust R&D program

- Maintain leadership, monitor competitive landscape
- Co-develop new products with external partners

Biomedical Catalysts for Growth in 2021

Spine – Wide range of applications

Arthroplasty – Agreement with global medical device manufacturer to develop orthopedic implant coatings

Dental – Collaboration with global dental company to produce silicon nitride implants

Craniomaxillofacial – $1.6 million grant application to NIH in spring 2021 for 3D printed implants; collaboration with Texas A&M School of Dentistry and Drexel University

Antipathogenic Catalysts for Growth in 2021

Proven to kill wide range of bacteria, fungi, and viruses, including SARS-CoV-2

Antipathogenic properties of material can be leveraged through a wide range of products including masks, filters, and surfaces

Partnership Agreements

- O2TODAY - Antipathogenic face masks
- Iwatani Corporation - Cell phone cases

Several additional prospective partnership agreements in process

Industrial Catalysts for Growth in 2021

Aerospace – Preferred material due to mechanical robustness and ability to perform at high temperatures

Automotive – Extends contact fatigue life through material strength, toughness, and resistance to chemical & thermal factors

Energy – Corrosion resistance of material can help extend the life of solid oxide fuel cells

Cutting Tools – Enables high cutting speeds and feeds

Thank You

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We are SINTX.

Cap Table Review

Summary of Cap Table as of Nov 30, 2020	
Warrants Outstanding	1,016,790
Options Outstanding (as of Sept 30, 2020)	515,394
Total Potentially Dilutive Securities	1,532,184
Common Shares Outstanding (as of Nov 30, 2020)	24,551,059
Series B Outstanding (as converted)*	19,306
Series C Outstanding (as converted)**	34,428
Total Shares & Potentially Dilutive Securities	26,136,977
Total Debt Outstanding	$ -

*26 Series B outstanding. Assuming conversion rate of 742.54:1.

**51 Series C outstanding. Assuming conversion rate of 675.05:1.

Disclaimer

Forward-Looking Statements

This presentation contains forward-looking statements about SINTX Technologies, Inc. (the “Company”). These forward-looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements relate to the Company’s financial results, products, product candidates, the expected timing of the regulatory approval of our product candidates, regulatory processes and objectives, potential benefits of the Company’s product candidates, intellectual property and related matters, all of which involve known and unknown risks and uncertainties. Actual results may differ materially from the forward-looking statements discussed in this presentation.

Accordingly, the Company cautions investors not to place undue reliance on the forward-looking statements contained in, or made in connection with, this presentation. The forward-looking statements contained in this presentation are further qualified by the detailed discussion of risks and uncertainties set forth in the Company’s Annual Report on form 10-K filed with the Securities and Exchange Commission (SEC) on March 26, 2020, and in the Company’s other filings with the SEC which can be obtained on the Company’s website at www.sintx.com or on the SEC website at www.sec.gov. The forward-looking statements contained in this document represent the Company’s estimates and assumptions only as of the date of this presentation and the Company undertakes no duty or obligation to update or revise publicly any forward-looking statements contained in this presentation as a result of new information, future events or changes in the Company’s expectations.

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