

Supine Is What They Do

Ground-Breaking Spinal Cord Injury Study Gives Hope

Where Does Artisanal Surgery Go in the AI World?

How 'Political' Are Orthopedic Surgeons?

# Orthopedics • This Month **SPINE**

SPRING 2024

2023  
Orthopedics This Week  
**Spine**  
technology  
Awards

# BEST NEW **SPINE** **TECHNOLOGIES**

# Introducing **INTEGRATE**<sup>®</sup>-C

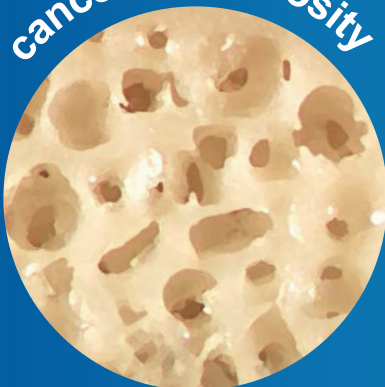
with **H**ydroxy**A**patite **P**orous **P**oly**E**theretherketone

**Integrate** (verb): to combine two or more things in order to become more effective

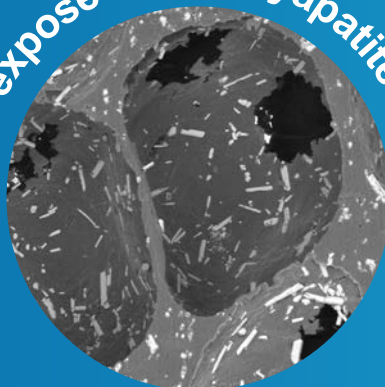
Powered by the HAPPE<sup>®</sup> platform, INTEGRATE<sup>®</sup>-C is the first interbody fusion device to offer cancellous porosity with fully integrated hydroxyapatite through the entire implant height, combined with radiolucency and bone-like mechanical properties.



cancellous porosity



exposed hydroxyapatite



+

=

bone ingrowth



## The winning formula.



**HAPPE**  
S P I N E



HAPPE SPINE  
2851 Charlevoix Drive • Suite 327 • Grand Rapids, MI 49546  
© 2024 HAPPE SPINE, LLC. All rights reserved.  
HAPPE and INTEGRATE are registered trademarks of HAPPE Spine, LLC.



# Best New Spine Technologies *for 2023*

Here are the best new spine surgery technologies for 2023.

Every year, *Orthopedics This Week* convenes a panel of top surgeons to review dozens of new technology submissions from around the world.

This award was inaugurated more than a decade ago to recognize the remarkable inventors, engineering teams, surgeons and their companies who have created the most innovative, enduring, and practical products to treat back care.

To win the *Orthopedics This Week* Best New Technology Award for spine care, a new technology must meet the following criteria:

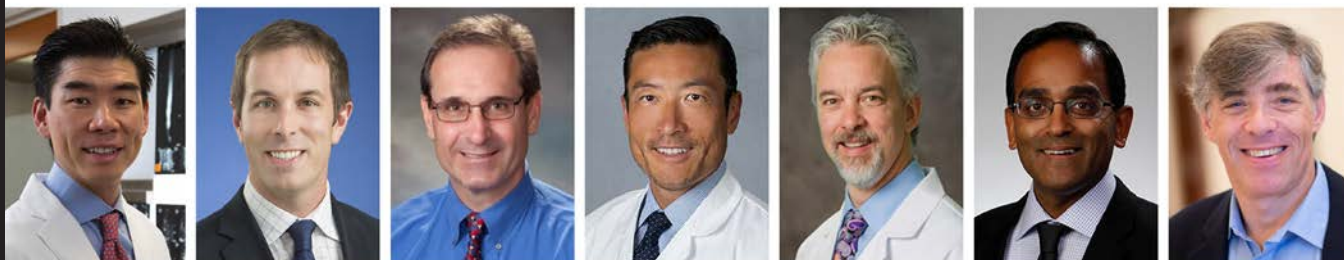
1. Be creative and innovative.
2. Bring long term significance to treating spine pathologies. Does this technology have staying power?
3. Solve a current clinical problem.
4. Improve standard of care
5. Is cost effective?
6. Members of the judges panel would consider personally using it.

We received a record number of submissions for 2023.

Here are the judges for this year's awards.  
*(Continued on page 38.)*

ARTICLE BY  
**ROBIN YOUNG**

# THE JUDGES



[ L TO R: *HYUN W. BAE, M.D.*; *MATTHEW W. COLMAN, M.D.*; *DOMAGOJ CORIC, M.D.*; *HAN JO KIM, M.D.*; *PIERCE NUNLEY, M.D.*; *ALPESH A. PATEL, M.D., M.B.A.*; AND *MIKE SHERMAN, M.S. BIOMEDICAL ENGINEERING* ]

**Hyun W. Bae, M.D.** — Dr. Bae is a professor of surgery and director of spine education at Cedars-Sinai Spine Center in Los Angeles. He is the author of hundreds of published scientific papers and is a frequent podium presenter at spine surgeon meetings around the world.

Dr. Bae received his bachelor's degree in biomechanics from the Columbia University School of Engineering and Applied Sciences. After graduating cum laude from Yale University School of Medicine, he completed his surgical internship at North Shore University Hospital, his orthopedic surgical residency at the Hospital for Special Surgery in New York, and his spine fellowship at Case Western Hospital in Cleveland. [LEARN MORE.](#)

**Matthew W. Colman, M.D.** — Dr. Matthew Colman is a board certified surgeon specializing spine surgery and musculoskeletal oncology. He graduated cum laude with honors from Dartmouth College, earned his medical degree with honors from the University of Chicago Pritzker School of Medicine, Chicago and went on to complete his residency in orthopedic surgery at the University of Pittsburgh Medical Center, Pittsburgh.

He has been fellowship trained in pediatric and adult musculoskeletal oncology at Harvard University and orthopedic and neurosurgical spine

surgery at the University of Utah. [LEARN MORE.](#)

**Domagoj Coric, M.D.** — Dr. Dom Coric spent 25 years as a neurosurgical spine surgeon at Carolina Neurosurgery and Spine Associates (CNSA) in Charlotte, North Carolina, serving 13 years as Chief, Department of Neurosurgery at Carolinas Medical Center. He's served as Executive Medical Director of SpineFirst and Director of the Carolina Center for Specialty Surgery. Finally, Dr. Coric is the Jerry and Audrey Petty Endowed Professor of Spine Surgery at Atrium Health/Wake Forest University and is currently the Atrium/Advocate Health Director of the Southeast Spine Center of Excellence.

Dr. Coric is past-President or past-Chair of the following societies: the International Society for the Advancement of Spine Surgery (ISASS), the AANS/CNS Joint Section on Spine and Peripheral Nerves/Spine Summit, the Southern Neurosurgical Society, and the North Carolina Spine Society. He currently serves on the Board of Directors of the American Association of Neurological Surgeons (AANS). [LEARN MORE.](#)

**Han Jo Kim, M.D.** — Dr. Han Jo Kim is an Attending Spine Surgeon, Professor of Orthopedic Surgery at Weill Cornell Medical College, David B Levine MD Endowed Chair

and Director of the Spine Fellowship and Chair of the Fellowship Committee at the Hospital for Special Surgery in New York.

Dr. Kim has authored more than 300 peer-reviewed scientific articles and more than 55 book chapters and over 50 visiting lectureships. He was selected for the prestigious Edgar G. Dawson Fellowship in 2013 and subsequently was selected for the Scoliosis Research Society Traveling Fellowship in 2017 and served as the IMAST Chair in 2020. He is an active member of the Cervical Spine Research Society. [LEARN MORE.](#)

**Pierce Nunley, M.D.** — Dr. Pierce Nunley is a board-certified surgeon, clinical researcher and thought leader behind many key innovations in spine surgery. Dr. Nunley has been Principal Investigator (PI), in more than 30 studies, author of dozens of peer reviewed clinical studies.

Dr. Nunley is the chairman of the American Board of Spine Surgery, and member Cervical Spine Research Society (CSRS), Scoliosis Research Society (SRS), Society for Minimally Invasive Spine Surgery (SMISS), North American Spine Society (NASS), American Academy of Orthopaedic Surgeons (AAOS), and International Society for the Advancement of Spine Surgery (ISASS).

He is also associate editor for *The Spine Journal*, and reviewer for *Global Spine Journal* and *British Medical Jour-*

*nal.* Dr. Nunley is Founder and Medical Director of the Spine Institute of Louisiana and is a Clinical Instructor of Orthopedic Surgery at Louisiana State University Health Sciences Center.

Dr. Nunley is also an accomplished musician performing and composing music for voice, guitar, violin and piano. [LEARN MORE.](#)

**Alpesh A. Patel, M.D., M.B.A.** — Dr. Patel is the Co-Director of the Northwestern Center for Spine Health and is fellowship trained in both orthopedic spine surgery and neurosurgery. Dr. Patel specializes in cervical spine surgery and minimally invasive spine

surgery. He is known for his clinical research on patient outcomes, quality and value in healthcare, and predictive analytics. Also, dedicated to creating value through strategy and innovation in healthcare. [LEARN MORE.](#)

**Mike Sherman, M.S. Biomedical Engineering** — Mike Sherman is the dean of spinal implant and instrument engineering. Sherman's career is, in effect, the history of Modern Spine Surgery and he, above anyone else, has been part of the foundational spinal implant and instrument developments and continues to work with surgeons and companies, large and small, to advance and transform patient's lives.

His background includes 9 years with MB Venture Partners and 16 years at Medtronic Spine (formerly Sofamor Danek). Prior to Sofamor Danek, Mike held positions at Synthes and Richards Medical. Over the course of his career, Mike has amassed over 100 issued U.S. patents on various inventions. Mike received his Bachelor of Science in Biomedical Engineering from Rensselaer Polytechnic Institute and a Master of Science in Biomedical Engineering from the University of Texas, Southwestern Graduate School. He has served on dozens of boards of directors. Mike currently owns and operates MB Innovations, Inc. [LEARN MORE.](#)

# THE 10 BEST SPINE TECHNOLOGIES

[ IN ALPHABETICAL ORDER BY COMPANY NAME ]

# HAPPE Spine, LLC

**Technology Name:** Integrate®-C Interbody Fusion System

**Manufacturer:** HAPPE Spine, LLC

**Inventors and Engineers:** Douglas Snell, Dr. Gabriel L. Converse, Dr. Stephen M. Smith, Mark Messman, Isaac Running, Robert Ball, Ryan K. Roeder



(L to R): Steven M. Foster, Andrew Iott, Dr. Stephen M. Smith, Douglas Snell, Robin Young, Dr. Ryan K. Roeder, Luke Maher, Brian McCollum. Key members unavailable Jenna Hollern, Dr. Gabriel L. Converse, Mark Messman, Isaac Running, Robert Ball

## INTEGRATE®-C INTERBODY FUSION SYSTEM

One key feature is that it's monolithic with porous regions which extend endplate-to-endplate because they are derived directly from the implant body—NOT sintered or coated onto the implant.

It comes in multiple footprints, lordosis and heights. It is also radiolucent and radiovisible.

Clearly, the HAPPE® INTEGRATE®-C Fusion Device, with all of these features, creatively meets a well-defined, practical and understood cervical spine fusion clinical need. Single-level ACDF fusion rates are typically >90%, but pseudoarthrosis rates increase in multilevel ACDFs to 24% for two levels and 56% for four levels (Epstein, SNI, 2019).

HAPPE Spine has its sights set beyond ACDFs, however, as the HAPPE material is viewed as a platform for a variety of future implants for the lumbar spine and even more broadly across orthopaedics.

Imagine a spinal implant where Hydroxyapatite is fully integrated throughout a porous PEEK (Polyetheretherketone) implant. And imagine that the same implant mimics anatomic cancellous bone with interconnected spherical pores—oh, and that the hydroxyapatite is exposed on pore surfaces.

That is HAPPE (pronounced "Happy") Spine's award-winning invention. Brand named the HAPPE® INTEGRATE®-C Fusion Device, it is indicated for anterior cervical discectomy and fusion (ACDF).

