The following 510(k) summary is being submitted as required by 21 CFR 807.92(a):

**Submission Information:**

- **Contact:** Patrick Moore  
  Manager, Quality Assurance
- **Sponsor:** U&i Corporation, America  
  6132 South 380 West  
  Murray, UT 84107  
  Phone: 801.262.3100  
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- **Date Prepared:** December 4, 2002

**Device Identification:**

- **Trade Name:** OPTIMA™, Spinal System
- **Common Name:** Pedical Screw Spinal Fixation System
- **Classification Name:**
  - Spinal Pedical Screw (MNI) per 21 CFR § 888.3070
  - Spondylolisthesis Spinal Fixation Device System (MNH) per 21 CFR § 888.3070
  - Spinal Intervertebral Body Fixation Orthosis (KWQ) per 21 CFR § 888.3060

**Substantially Equivalent Predicate Legally Marketed Devices:**

The subject OPTIMA™, Spinal System is substantially equivalent in function, design, composition, labeling, and intended use to:

- OPTIMA™, Spinal System MNH, MNI, KWQ – (K020279).
- Micron Precision Engineering, AMT Spinal System – KWP, MNH – (K002059)
- Stryker® Spine, Xia™ Spinal System – MNH, MNI, KWQ – (K001319)

The substantial equivalence of this device is based on equivalence in intended use, materials, designs and operational principles to the above listed predicate devices.
Device Description:

The OPTIMA™ Spinal System is a top-loading multiple component, anterior / posterior spinal fixation system which consists of pedicle screws, rods, set screws, connectors, and a transverse (cross) linking mechanism.

The OPTIMA™ system will allow surgeons to build a spinal implant construct to stabilize and promote spinal fusion. The OPTIMA™ implant system components are supplied non-sterile are single use and are fabricated from titanium alloy (Ti-6Al-4V ELI) that conforms to ASTM F136. Various sizes of these implants are available. Specialized instruments made from surgical grade stainless steel are available for the application and removal of the OPTIMA™ system.

Indications for Use:

The OPTIMA™ posterior spinal fixation device is a pedicle screw system indicated for the treatment of severe Spondylolisthesis (Grade 3 and 4) of the L5-S1 vertebra in skeletally mature patients receiving fusion by autogenous bone graft having implants attached to the lumbar and sacral spine (L3 to sacrum) with removal of the implants after the attainment of a solid fusion.

In addition, the OPTIMA™ is intended to provide immobilization and stabilization of spinal segments in skeletally mature patients as an adjunct to fusion in the treatment of the following acute and chronic instabilities or deformities of the thoracic, lumbar and sacral spine: degenerative Spondylolisthesis with objective evidence of neurological impairment, fracture, dislocation, scoliosis, kyphosis, spinal tumor and failed previous fusion (pseudoarthrosis).

When used as an anterior screw fixation system, the OPTIMA™ is indicated for patients with degenerative disc disease which is defined as back pain of the discogenic origin with degeneration of the disc confirmed by history and radiographic studies, Spondylolisthesis, fracture, spinal stenosis, spinal deformities such as scoliosis, kyphosis, lordosis, tumor, pseudoarthrosis, or revision of failed fusion attempts.

Statement of Technological Comparison:

The subject spinal implant system is substantially equivalent to the above listed predicate devices in terms of materials, design, indications for use and operational principles.

Performance Data:

Bench testing as listed in Section XII which was conducted in accordance with ASTM F1717 demonstrates equivalence to the above listed predicate devices.
Mr. Patrick Moore  
Manager, Quality Assurance  
U&I Corporation, America  
6132 South 380 West  
Murray, Utah 84107  

Re: K024096  
Trade Name: OPTIMA™, Spinal System  
Regulation Number: 21 CFR 888.3070, 888.3060  
Regulation Name: Pedicle screw spinal system, Spinal intervertebral body fixation orthosis  
Regulatory Class: II  
Product Code: MNI, MNH, KWQ  
Dated: December 4, 2002  
Received: December 12, 2002  

Dear Mr. Moore:  

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.  

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.  

Please be advised that FDA’s issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act’s requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set
forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050. This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at (301) 594-4659. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address http://www.fda.gov/cdrh/dsma/dsmamain.html.

Sincerely yours,

Celia M. Witten, Ph.D., M.D.
Director
Division of General, Restorative and Neurological Devices
Office of Device Evaluation
Center for Devices and Radiological Health

Enclosure
INDICATIONS for USE STATEMENT

510(k) Number (if known):

Device Name: OPTIMA™ Spinal System.

Indications for Use: The OPTIMA™ posterior spinal fixation device is a pedicle screw system indicated for the treatment of severe Spondylolisthesis (Grade 3 and 4) of the L5-S1 vertebra in skeletally mature patients receiving fusion by autogenous bone graft having implants attached to the lumbar and sacral spine (L3 to sacrum) with removal of the implants after the attainment of a solid fusion.

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(PLEASE DO NOT WRITE BELOW THIS LINE - CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

[Signature]

(Division Sign-Off)
Division of General, Restorative and Neurological Devices

510(k) Number K024096

Prescription Use OR Over-the-Counter Use (Per 21 CFR 801.109)
(Optional Format 1-2-96)

U&I
OPTIMA™ Device Premarket Notification