## St. Jude Children's Research Hospital Opens New Proton Therapy Center

The first center 100% dedicated to pediatric cancer

Memphis, December 14, 2015 ---Hitachi, Ltd. (TSE:6501, "Hitachi") today announced that St. Jude Children's Research Hospital opened the St. Jude Red Frog Events Proton Therapy Center in Memphis, Tennessee, the world's first proton therapy center solely dedicated to children. The new center has 190-degree half gantries that provide efficient and spacious treatment-room environments suited specifically for pediatric care. All rooms are equipped with spot-scanning irradiation, a technology for which Hitachi received the first FDA Premarket Notification Special 510(k) clearance in 2007. St. Jude will be Hitachi's third proton therapy site in the United States.

"The opening of the St. Jude Red Frog Events Proton Therapy Center marks an important step in our efforts to provide therapies that maximize cures while minimizing long-term treatment complications," said James R. Downing, M.D., St. Jude president and chief executive officer. "The center is an engineering marvel made possible through the talents of many who are committed to offering children with cancer the best hope for the future."

Radiation therapy, used alone or in combination with surgery and chemotherapy, is an integral component for successfully managing and treating pediatric tumors. Proton therapy allows doctors to administer targeted, high-dose radiation while sparing surrounding healthy tissue from exposure.

"The center is a one-of-a-kind patient resource that will help advance care for pediatric brain and solid tumors," said Masaya Watanabe, Vice President and Executive Officer, President and CEO of the Healthcare Group and Healthcare Company at Hitachi, Ltd. "It is extremely rewarding to see this project realized and to celebrate this moment that holds great promise for the future of childhood cancer treatment."

Proton beam therapy is an advanced form of external beam radiotherapy in which the protons from a hydrogen atom are extracted and accelerated up to 70 percent the speed of light. The energy beam is concentrated directly on the tumor, minimizing

radiation doses to the surrounding healthy tissues. The procedure has fewer side effects compared to traditional radiotherapy.

Spot-scanning irradiation technology does not scatter proton beams like conventional proton beam therapy does. Rather, it repeatedly turns a narrow proton beam on and off at high speed as it progressively changes location to irradiate entire tumor volumes. Protons can be aimed with high precision at targeted tumors, even those with complex shapes, while minimizing the impact on nearby healthy tissue.

Hitachi will continue to enhance its particle therapy systems through innovations and deliver advanced technologies throughout the world.

## About Hitachi, Ltd.

Hitachi, Ltd. (TSE: 6501), headquartered in Tokyo, Japan, delivers innovations that answer society's challenges with our talented team and proven experience in global markets. The company's consolidated revenues for fiscal 2014 (ended March 31, 2015) totaled 9,761 billion yen (\$81.3 billion). Hitachi is focusing more than ever on the Social Innovation Business, which includes power & infrastructure systems, information & telecommunication systems, construction machinery, high functional materials & components, automotive systems, healthcare and others. For more information on Hitachi, please visit the company's website at http://www.hitachi.com.

## About St. Jude Children's Research Hospital

St. Jude Children's Research Hospital is leading the way the world understands, treats and cures childhood cancer and other life-threatening diseases. It is the only National Cancer Institute-designated Comprehensive Cancer Center devoted solely to children. Treatments developed at St. Jude have helped push the overall childhood cancer survival rate from 20 percent to 80 percent since the hospital opened more than 50 years ago. St. Jude freely shares the breakthroughs it makes, and every child saved at St. Jude means doctors and scientists worldwide can use that knowledge to save thousands more children. Families never receive a bill from St. Jude for treatment, travel, housing and food — because all a family should worry about is helping their child live. To learn more, visit at <a href="https://www.stjude.org">https://www.stjude.org</a> or follow St. Jude at <a href="https://www.stjude.org">@stjuderesearch</a>.

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