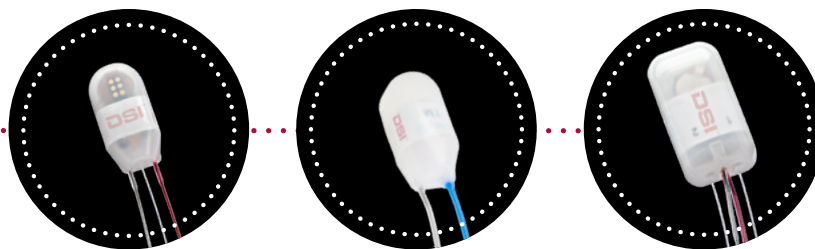


PhysioTel™ HD

Enabling New Research Possibilities



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DSI™

BetterData. BetterScience.

DSI's PhysioTel™ HD implants allow researchers to focus on what matters — Research.

Ease of use

- Auto-configuration of implants to save time
- Encoded animal ID to prevent wrong data collection
- Device on-time counter to track remaining battery life

Enhanced performance

- Improved parameter sensitivity
- Reduced pressure channel drift and improved accuracy
- Consolidate studies with more signal types combined into a single implant

Proven success

- Proven chronic *in vivo* pressure sensing
- Versatile platform supports a wide range of research applications
- Established in the global research community



Extra-Small Implant

HD-X11 & HD-X10

- Small device size enables use in transgenic mouse models, hamsters, and juvenile rats
- 7 cm catheter options to measure core body temperature with left carotid artery catheterization
- Perform a more complete cardiovascular assessment in a single study (HD-X11 only)



HD-X11



Small Implants

HD-XG - The First Continuous Glucose Telemetry Implant

- Direct arterial blood glucose sensing
- Continuous, real-time monitoring
- Conscious, freely moving animals



HD-XG

HD-S21 & HD-S11

- Collect pressure, biopotential, temperature, and activity in a single study
 - ▼ Left ventricular pressure
 - ▼ Pulmonary artery pressure
 - ▼ Intrapleural pressure
 - ▼ Intraocular pressure
 - ▼ Bladder pressure
 - ▼ Pulse wave velocity (HD-S21 only)
 - ▼ And more
- Improved sensitivity to accurately detect parameters
- Various catheter lengths accommodate diverse research needs
- Hermetic electronics enclosure ensures successful extended duration studies



HD-S21

HD-S10

- Collect pressure, temperature, and activity
- Combine hypertension and immunology studies
- Reduced weight and volume for improved animal welfare



HD-S10

PhysioTel™ HD Implant Specifications

	Model	Weight (gm)	Volume (cc)	Minimum Animal Weight	Maximum Cage Size	Battery Life Warranted (Months)
NEW	HD-X10	2.2	1.4	19 grams	33 x 33 x 14 cm	1.5
	HD-X11	2.2	1.4	17 grams*	33 x 33 x 14 cm	1
NEW	HD-S10	4.4	3.1	175 grams	42 x 42 x 18 cm	5
	HD-S11	8	5.9	175 grams	42 x 42 x 18 cm	2
	HD-S21	8	5.9	175 grams	42 x 42 x 18 cm	2

*17-gram minimum weight for subcutaneous implantation; 23-gram minimum weight for intraperitoneal implantation.

References

Peer-reviewed Papers

Rey, M., Weber, E.W., Hess, P.D. "Simultaneous Pulmonary and Systemic Blood Pressure and ECG Interval Measurement in Conscious, Freely Moving Rats." *Journal of the American Association for Laboratory Animal Science*, Volume 51, Number 2, March 2012, pp. 231-238.

Kitayama, T., Saito, T., Kajihara, M., Harada, K. "Evaluation of Effects on Cardiac Contractility in Conscious Common Marmosets Using Telemetry." *Journal Pharmacological and Toxicological Methods*, Volume 66, Number 2, 2012, pp. 195-196.

Tomozo Moritani, MD, Masaru Iwai, MD, PhD, Harumi Kanno, MA, Hiroto Nakaoka, MA, Jun Iwanami, PhD, Takashi Higaki, MD, Eiichi Ishii, MD, PhD, Masatsugu Horiuchi, MD, PhD. "ACE2 Deficiency Induced Perivascular Fibrosis and Cardiac Hypertrophy During Postnatal Development in Mice." *Journal of the American Society of Hypertension*, Volume 7, Issue 4, July-August 2013, Pages 259-266

Poster Citations

Simultaneous Measurement of Arterial and Left Ventricular Pressure in Conscious Freely Moving Rats by Telemetry
Jason Segreti
Poster 101, Safety Pharmacology Society, September 2010

Hemodynamic, ECG and Function Telemetry in Conscious Ferrets Administered Verapamil
Randy Hunter
Poster, Safety Pharmacology Society, September 2011

Functional Evaluation of a Novel Mouse Implant for Cardiovascular Assessment
Harter, M., VanMiddlesworth, J., O'Donohue, K., Galbraith, B., Gauvin, D., Dalton, J., Baird, T.
Poster, Safety Pharmacology Society, September 2011

Assessment of HD-X11 Transmitter (DSI) for Telemetric Measurement of Arterial Pressure, Electrocardiogram, Heart Rate and Autonomic Function in Conscious Mice
Sabharwal, R., Chapleau, M.W.
Poster, 2012

New Method to Assess Arterial Stiffness in Conscious Unrestrained Rats by Telemetry
Isabelle, M., Chimenti, S., Gransagne, D., Chariglione, S., Vayssettes-Chourchay, C., Villeneuve, N., Blaïne, JP
Servier Research Institute, 2012

Continuous Glucose Monitoring via Telemetry in Rat
Tamer Coskun, Libbey O'Farrell, Robert Brockway, Paul Haefner, Kimberly Holliday-White, Richard G Peterson, Charles V Jackson
Poster 38-LB, American Diabetes Association Annual Meeting, Chicago, IL, June 2013

Comparison of Continuous Glucose Monitoring Systems in Type 1 Rat Model
Paul Haefner, Kimberly Holliday-White, Dr. Mark Clements
Poster 39-LB, American Diabetes Association Annual Meeting, Chicago, IL, June 2013

Imposition of Improved Diurnal Rhythms in Heart Rate and Blood Pressure Using β -blockers in Huntington's Disease (BACHD) Mice
Analyne M. Schroeder, Maria C. Jordan, Christopher S. Colwell and Kenneth P. Roos
Poster, International Society for Heart Research XXI World Congress, July 2013

Improving Small Animal Cardiovascular Telemetry Using Next Generation Implantable Technology
Robert A. Kaiser¹, Ryan Lindquist², Douglas E. Regalia¹, Jennifer Doyle², Charles River, Preclinical Services, Reno, NV, USA, 2Data Sciences, International, St Paul, MN, USA
Poster, Safety Pharmacology Society, September 2013

Continuous Glucose Monitoring via Telemetry in Rats
R. Brockway, T. Coskun, L.S. O'Farrell, P. Haefner, K. White, C.V. Jackson, R.G. Peterson
Poster 1099, European Association for the Study of Diabetes Annual Meeting, Barcelona, Spain, September 2013

Assessment of Insulin Response in STZ Rats Using Continuous Blood Glucose Telemetry
S Tiesma; R Brockway; L O'Farrell; T Coskun; M Michael; A Cox; K White; H Bogie
Poster 3025, Keystone Symposia: Challenges and Opportunities in Diabetes Research and Treatment, Vancouver, Canada, January 2014

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