# AMI HTX

*In Vivo, Optimized*

spectral
instruments
imaging

A **BRUKER** COMPANY

# In Vivo, Optimized

## Best-in-class Performance

### 29% More Sensitive
When comparing minimum detectable radiance for bioluminescence to the leading competitor in its class

### Patented LED Excitation
100x more light on target gives you a stronger fluorescence signal with minimal background for superior quantitation

### BLI · FLI · X-ray
Advanced preclinical optical imaging: Bioluminescence, Fluorescence & X-ray

### 5 Mouse Capacity
High efficiency *In vivo* imaging now available on your benchtop

### License Free Software
Aura Imaging Software is a robust analysis tool available for PC & Mac users Import legacy Living Image® files

FREE

AMI HTX

# RAISING THE BAR

**-90°C Absolute Air-Cooled Camera**

No Liquids • No Chillers • No Leaks
Reliable & ready to use in 5 minutes.

**Access Port**

Light tight access port for external systems
connections *Field Upgradable, non-xray units.

**Vertical Door**

Saves bench space & reduces
waste anesthesia gas exposure.

**Patented LED Fluorescence Excitation**

High intensity light source generates 100x more light
on target. Individual LED colors/wavelengths are
used to improve specificity & reduce background.

**Anesthesia**

Compatible with third party systems.

**Animal Friendly Heated Platform**

Unique materials & convection method produce even
heating & uniform temperature for improved animal
comfort & reliable enzyme kinetics.

**Automated, X-ray Source**

Enables rapid acquisition of X-ray images.
Maintains Specimen numbers between
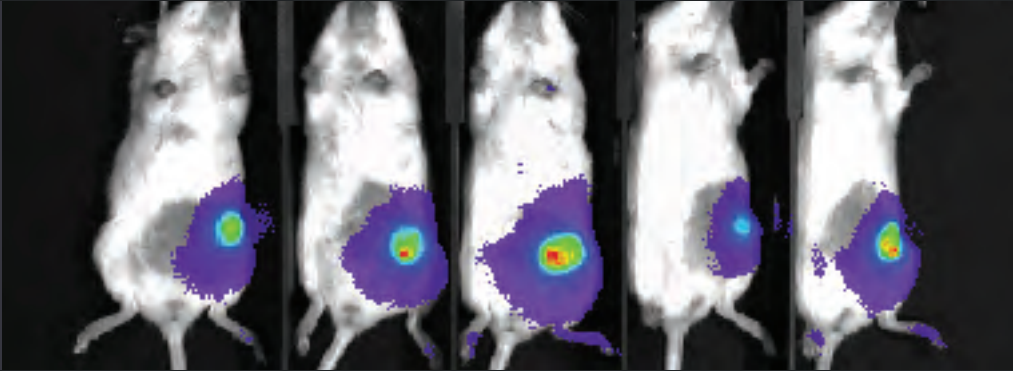optical & X-ray. *Field Upgradable

**Patented Steel Construction**

Innovative light tight cabinet - Designed without parts
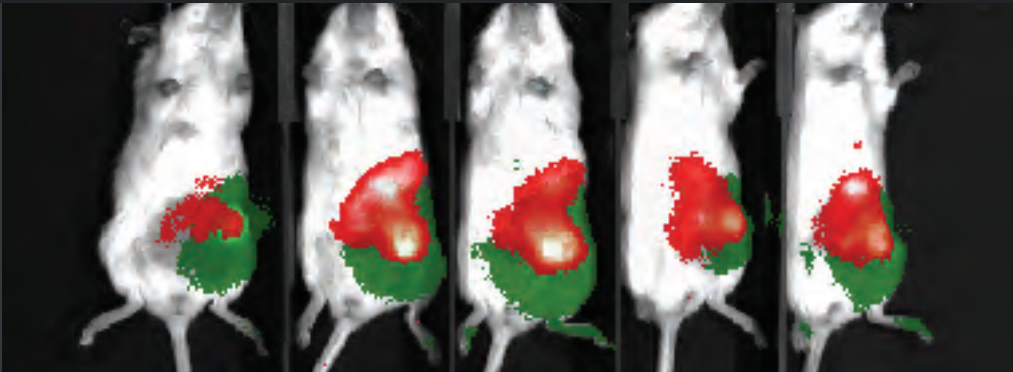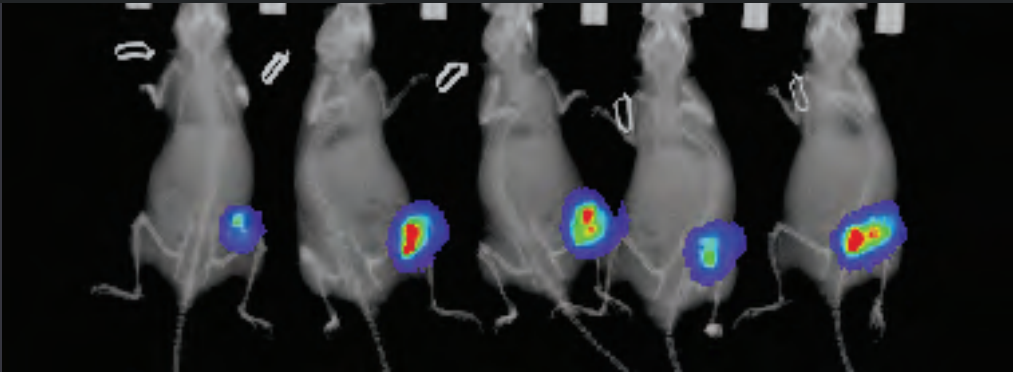that can wear over time & compromise data quality.

AMI HTX

BLI

FLI

X-RAY

## Image 5 Mice

25cm x 17cm FoV

Optimized sensor size
Ideal for imaging 5 mice

*We have used our Ami HTX intensively for the past four years and have been extremely pleased with the sensitivity and reliability of this instrument, both for NIR fluorescence & bioluminescence capture. Operation is very simple and the system needs almost no maintenance at all. On top of this, technical support is easy to reach and quick to reply with solutions for general use and technical questions.*

Ami HTX

# BETTER FLUORESCENCE EXPERIENCE

### Patented LED Technology

High intensity fluorescent excitation source results in stronger signals - with less background for Superior Signal-to-Noise & earlier detection.
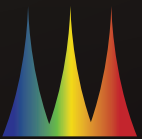
### 100x more light on target

*than traditional white light sources

LEDs have a direct path to targets.
No use of fiber optic cables that can contaminate & attenuate excitation light.

### Stable & Linear Excitation Light

Long life LED's - Rated for 100,000 hrs of imaging.
Lasts 1000x longer than tungsten bulbs, never fading or compromising your data.
Fine tune adjustable power of every LED.
No warm up time.

### Flexibility Across the Spectra

10 excitation LED's | 10 emission filters of your choice with custom options available. Additional filters can be changed by operator if needed.

*We have found the NIR fluorescence to be of high sensitivity with the ability to differentiate signals at 680nm, 715nm, 750nm, and 800nm.*

Multiplex FLI: GFP & ProSense 750

AMI HTX

# 100% License Free Analysis Software

Aura Software is comprehensive & provides a seamless, end to end workflow – from acquisition to analysis.

SII supports open collaboration by providing analysis copies of Aura 100% license free for both Mac & PC.

Aura Software supports legacy files by opening & analyzing IVIS® Living Image® optical data.
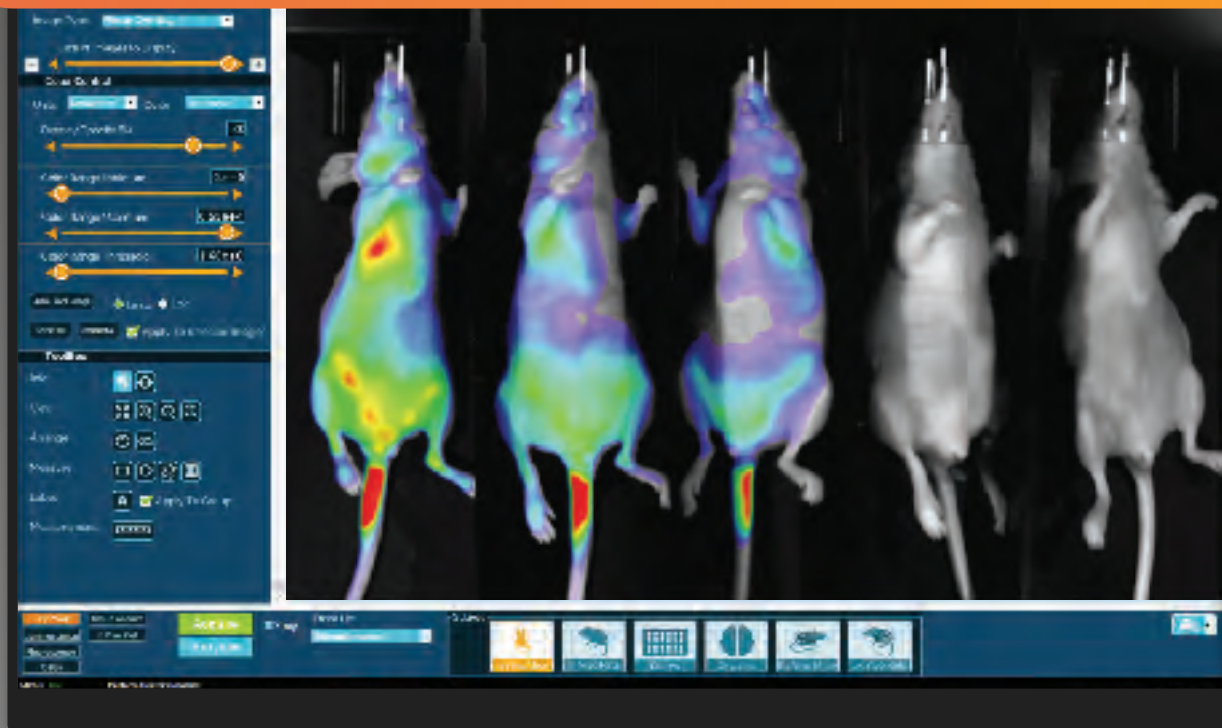
## 3 Clicks to Acquisition

**Easy Mode** makes capturing data faster than ever before.
Simply select your probe & subject & acquire your data!
**Smart AutoExp** with proprietary **SmoothBlend** technology enables rapid data acquisition at maximum sensitivity without compromising image quality.
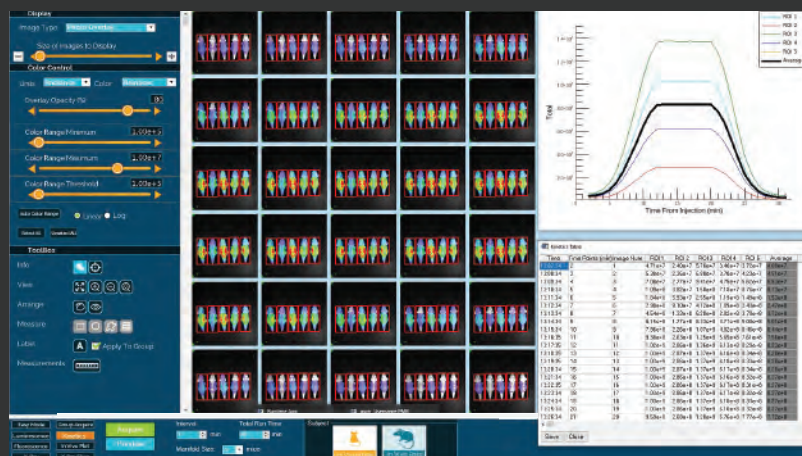
Ami HTX

# Automatic BLI Kinetic Curves

Quantifying data captured at peak signal is critical to ensuring data accuracy & reproducibility. **Kinetics** enables automatic, real-time acquisition of bioluminescent kinetic curves. Quickly & accurately acquire & present BL kinetic curve data of up to 10 mice from a single image.



# Robust & Reliable Workhorse

### Spectral Instruments' novel Solid State Air-Cooled Cameras
Provide ultra cold -90°C absolute cooling without the use of liquids or gas for support which guarantees *No Leaks!*

### Less pieces & parts to break
Built without limit switches or other dated parts prone to failure. Innovative light tight cabinet with interlocking greek keyed steel avoids gaskets that crack & degrade over time. Vertical door to save space & minimize isoflurane exposure.

### Factory Calibrated
All instruments are factory calibrated prior to shipment, allowing easy and quick installation. Factory calibrations last over the life of the instrument, maintaining high data quality.

### Absolute Calibration
Ensures data accuracy regardless of changes in animal position or camera settings. Traceable to NIST standard.

AMI HTX

# SELECTION GUIDE



| | LAGO X | LAGO | AMI HTX | AMI HT | KINO |
|---|---|---|---|---|---|
| **Ideal For:** | High Capacity Imaging Cores, BioPharma | | Animal Care Specialists, CROs | | Small Startups |
| **Bioluminescent Imaging (BLI)** | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Fluorescent Imaging (FLI)** | ✓ | ✓ | ✓ | ✓ | ✓ |
| **X-ray** | ✓ | Field Upgradable | ✓ | Field Upgradable | N/A |
| **Mouse Capacity** | 10 Mice | 10 Mice | 5 Mice | 5 Mice | 3 Mice |
| **Maximum Optical Field of View (cm)** | 25 x 25 | 25 x 25 | 25 x 17 | 25 x 17 | 13 x 13 |
| **Patented LED Excitation** | ✓ | ✓ | ✓ | ✓ | ✓ |
| **# of LED (Fluorescent) Excitation Wavelengths** | 14 | 14 | 10 | 10 | 10 |
| **Included LED Excitation Wavelengths** | 360, 405, 430, 465, 500, 535, 570, 605, 640, 675, 710, 745, 770, & 805nm | | 430, 465, 500, 535, 570, 605, 640, 675, 710, & 745nm | | 430, 465, 500, 535, 570, 605, 640, 675, 710, & 745nm |
| **Fluorescent Emission Filters** | 20 | 20 | 10 | 10 | 5 |
| **Standard Emission Filter Choices:** | 490, 510, 530, 550, 570, 590, 610, 630, 650, 670, 690, 710, 730, 750, 770, 790, 810, 830, 850, & 870nm | | | | |
| **CCD -90°C Absolute Solid State Cooling** | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Minimum Detectable Radiance** | 45 photons/sec/cm2/sr | 45 photons/sec/cm2/sr | 50 photons/sec/cm2/sr | 50 photons/sec/cm2/sr | 59 photons/sec/cm2/sr |
| **Camera Sensor** | 1" back-illuminated Grade 1 plus CCD | 1" back-illuminated Grade 1 plus CCD | 1" back-illuminated Grade 1 plus CCD | 1" back-illuminated Grade 1 plus CCD | .5" back-illuminated Grade 1 plus CCD |
| **Pixel Dimensions** | 2048 x 2048 | 2048 x 2048 | 1152 x 770 | 1152 x 770 | 1024 x 1024 |
| **High Performance CCD Size** | 27.6 x 27.6mm | 27.6 x 27.6mm | 25.9 x 17.3mm | 25.9 x 17.3mm | 13mm x 13mm |
| **Quantum Efficiency: >85% efficiency 500-700nm; >35% efficiency 700-900nm** | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Dark Current** | <49 e-/sec/cm² | <49 e-/sec/cm² | <49 e-/sec/cm² | <49 e-/sec/cm² | <100 e-/sec/cm² |
| **Binning** | 1x1,2x2,4x4,8x8,16x16 | 1x1,2x2,4x4,8x8,16x16 | 1x1,2x2,4x4,8x8 | 1x1,2x2,4x4,8x8 | 1x1,2x2,4x4,8x8 |
| **Lens** | 50mm, Aperture: f/1.2 - f/16 | 50mm, Aperture: f/1.2 - f/16 | 50mm, Aperture: f/1.2 - f/16 | 50mm, Aperture: f/1.2 - f/16 | 50mm, Aperture: f/1.2 - f/16 |
| **Absolute Calibration, NIST Traceable** | ✓ | ✓ | ✓ | ✓ | ✓ |
| **X-ray Source** | 10-50keV | Field Upgradable | 10-40 keV | Field Upgradable | N/A |
| **X-ray Camera** | Line scanning imager | Field Upgradable | Line scanning imager | Field Upgradable | N/A |
| **X-ray Field of View** | 25x22cm | Field Upgradable | 25 x 15cm | Field Upgradable | N/A |
| **Heated Imaging Platform, 20-40c** | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Inlet & Outlet Ports for Gas Anesthesia** | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Light Tight Access Port (Field Upgradeable)** | N/A | Optional | N/A | Optional | Optional |
| **Space Requirements** | 56cm(w) x 66cm (d) x 211cm (h) | 56cm(w) x 66cm (d) x 211cm (h) | 56cm (w), 66cm (d), 122cm (h) | 56cm (w), 66cm (d), 122cm (h) | 56cm (w), 66cm (d), 122cm (h) |
| **System Internal Dimension** | Imaging platform: 50x34cm | Imaging platform: 50x34cm | Imaging platform: 50x34cm | Imaging platform: 50x34cm | Imaging platform: 50x34cm |
| **PC, Monitor & Software Included** | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Aura Analysis Software: License Free (MAC & PC)** | ✓ | ✓ | ✓ | ✓ | ✓ |