

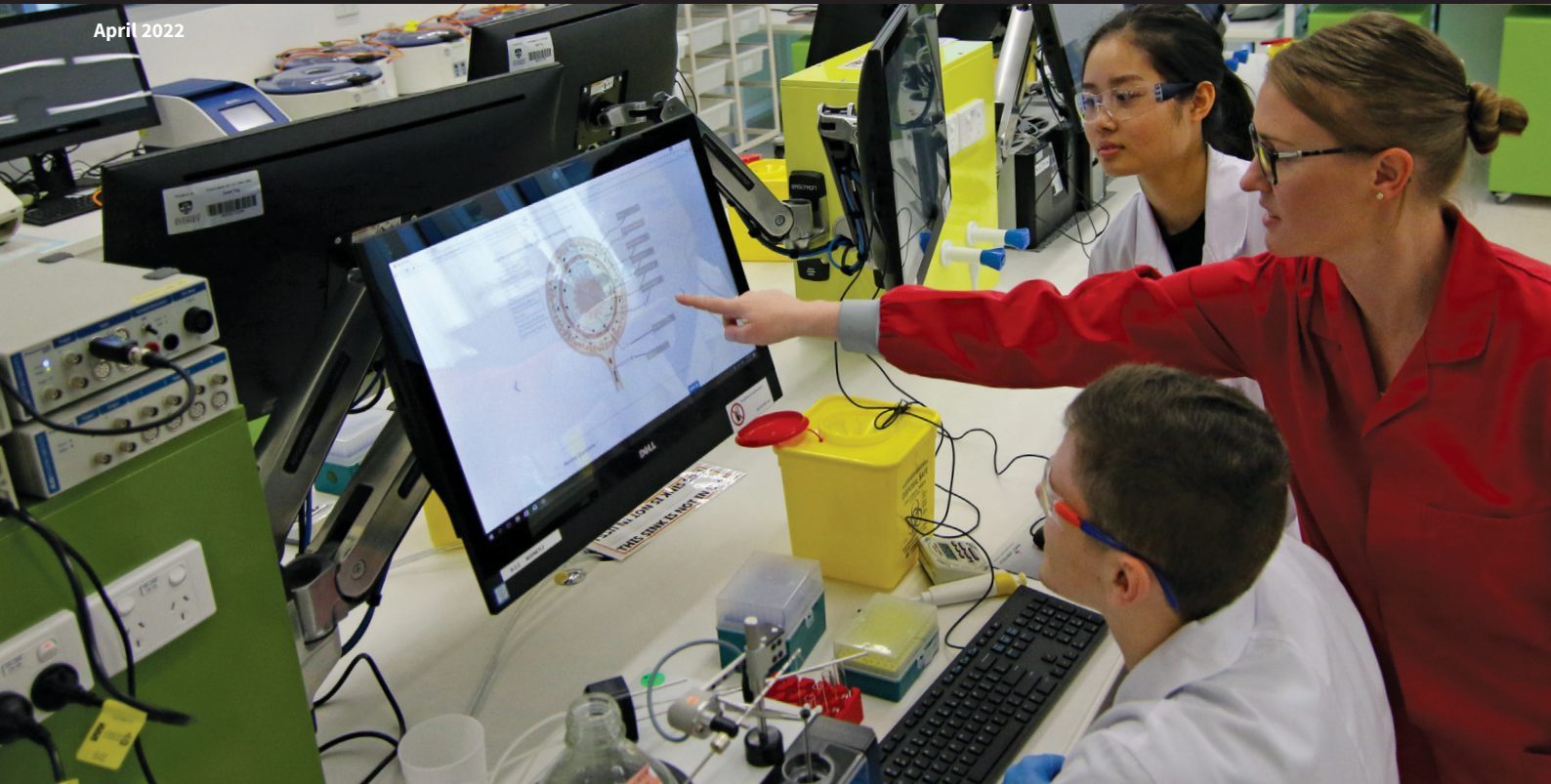


**CREATE
SHARE
INSPIRE.**

Lt Content Checklist

Lessons, experiments, and Patient Case Library resources

April 2022



Lt is a cloud-based learning platform for science and medicine courses that helps you bridge the gap between theory and practice.



Key: ● Dissection Lab ● Histology Lab ● Model Lab ● Pre-lab ● Lab

Anatomy

- Cardiovascular System
- Central Nervous System
- Endocrine System
- Digestive System
- Integumentary System
- Lymphatic and Immune
- Muscular System
- Reproductive System
- Respiratory System
- Skeletal System
- Special Senses
- Tissues
- Urinary System

Animal Physiology

- Animal Metabolism
- Cockroach Sensory Nerve
- Cockroach Ventral Nerve Cord
- Earthworm Action Potentials
- Earthworm Smooth Muscle
- Frog Heart
- Frog Nerve
- Frog Neuromuscular Junction
- Frog Skeletal Muscle
- Gin Trap Closure Reflex
- Intracellular Action Potentials



Key: ○ Tutorial(s) ● Pre-Lab ● Lab ● Preparation ● Practice ● Quiz

Biology

- Acid Rain
- Animal Behavior
- Aquatic Photosynthesis
- Bacterial Transformation
- Biological Membranes
- Cellular Respiration
- CRISPR
- Diffusion through Membranes
- DNA Structure and Replication
- Ecology and Biodiversity
- ELISA: Giant Panda Problem
- Enzyme Action: Testing Catalase Activity
- Exploring the Greenhouse Effect
- Forensic DNA Fingerprinting
- From DNA to Protein
- Genetics of Drosophila
- Interdependence of Plants and Animals
- Introduction to Cells
- Introduction to Microscopy
- Introduction to Molecular Evolution
- Limitations on Cell Size
- Macromolecules: Proteins
- Measuring Primary Productivity
- Metabolization of Sugars by Yeast
- Mitosis and Meiosis
- Modeling Population Dynamics
- Osmosis
- Photosynthesis
- Polymerase Chain Reaction (PCR)
- Population Dynamics
- Population Genetics and Evolution
- The Visible Spectra of Plant Pigments
- Transpiration
- Turnip Peroxidase

Chemistry

- Acid-Base Titration
- Beer's Law
- Boyle's Law and Charles' Law
- Conductimetric Titration and Gravimetric Determination of a Precipitate
- Determining a Chemical Formula
- Determining an Equilibrium Constant
- Determining the K_{sp} of Calcium Hydroxide
- Dissociation Constants
- Electrochemistry: Voltaic Cells
- Evaporation and Intermolecular Attractions
- Identifying an Unknown Diprotic Acid
- Liquid Chromatography
- Measuring and Predicting Heats of Reaction
- Molar Volume of a Gas
- Properties of Solutions: Electrolytes and Nonelectrolytes
- Rate Law Determination
- Standardizing a Solution
- Synthesis and Analysis of Aspirin
- Temperature and State Changes

Clinical Skills

- Assessment Tools
- Clinical Measurements I
- Clinical Measurements II
- CPR
- Fluid and Nutrition
- Health History and General Survey
- Health Literacy
- Health Promotion and Community Nursing
- Hygiene and Personal Care
- Indwelling Catheter
- Intravenous (IV) Fluid Infusion
- Medical Administration I
- Medical Administration II
- Nasogastric Intubation
- Oxygen Therapy
- Peripheral Assessment
- Promoting Comfort
- Safety
- Sterile Fields
- Supporting Elimination
- Therapeutic Communication
- Vital Signs

Human Physiology

- Airflow
- Autonomic Nervous System
- Blood Clotting
- Blood Counting
- Blood Pressure
- Body Temperature
- Brain Structure and Reflexes
- Breathing
- Cardiorespiratory Effects of Exercise
 - Cardiovascular Effects of Exercise
- Diving Response
 - Electroencephalography (EEG)
 - Electro-oculography (EOG)
 - Endocrine Physiology
 - Energy Expenditure and Exercise
- Glucose Absorption
- Heart and ECG
- Heart and Peripheral Circulation
- Heart Sounds
- Kidney and Urine
- Lung Volumes
- Mechanics of Ventilation
- Muscle and EMG
- Peripheral Nerve Function
- Reflexes and Reaction Times
 - Sensory Illusions
 - Sensory Physiology
- Skeletal Muscle Function
 - Stroop Test
- Water Balance



Key: ○ Tutorial(s) ● Pre-Lab ● Lab ● Case Study ● Scenario ● Patient Education ● Evaluation

Exercise Physiology

- Aerobic Fitness Testing
- Anaerobic Fitness Testing
- Cardiorespiratory Effects of Exercise
- Cardiovascular Effects of Exercise
- Energy Expenditure and Exercise
- Energy Metabolism
- Introduction to Fitness Testing

Neuroscience

- Autonomic Nervous System
 - Biofeedback
- Brain Structure and Reflexes
 - Cockroach Sensory Nerve
 - Cockroach Ventral Nerve Cord
- Diving Response
 - Earthworm Action Potentials
 - EDR and Classical Conditioning
 - Electrodermal Response (EDR)
 - Electroencephalography (EEG)
 - Electrooculography (EOG)
 - Frog Nerve
 - Frog Neuromuscular Junction
 - Intracellular Action Potentials
- Muscle and EMG
- Peripheral Nerve Function
- Reflexes and Reaction Times
 - Sensory Illusions
 - Sensory Physiology
 - Size-Weight Illusion
- Skeletal Muscle Function
 - Stroop Test
 - Visual Evoked Potential (VEP)

Nursing

- Blood Pressure
- ● Childbirth
- COPD
- Diabetes Complications
- Febrile Illness
- Heart Failure
- Muscular Dystrophy
- Myasthenia Gravis
- Myocardial Infarction
- Peripheral Vascular Disease
- ● Pregnancy
- Renal Failure
- Stroke
- Type 1 Diabetes

Pharmacology

- Airways Resistance
- Chick Biventer Cervicis
- Mammalian Atria
- Mammalian Diaphragm
- Mammalian Heart
- Mammalian Jejunum
- Mammalian Uterus
- Stimulated Ileum
- Stimulated Rat Vas Deferens
- Toad Rectus Abdominis
- Unstimulated Ileum
- Unstimulated Ras Vas Deferens
- Vascular Resistance
- Vascular Smooth Muscle

Preclinical Medicine

- Autonomic Nervous System
- Blood Pressure
- Body Temperature
- Brain Structure and Reflexes
- Glucose Absorption
- Heart and ECG
- Heart and Peripheral Circulation
- Heart Sounds
- Kidney and Urine
- Lung Volumes
- Muscle and EMG
- Peripheral Nerve Function
- Skeletal Muscle Function

Psychophysiology

- Biofeedback
- Diving Response
 - EDR and Classical Conditioning
 - Electrodermal Response (EDR)
 - Electroencephalography (EEG)
 - Electrooculography (EOG)
 - Introduction to Psychophysiology
- Muscle and EMG
- Reflexes and Reaction Times
 - Sensory Illusions
 - Sensory Physiology
 - Size-Weight Illusion
 - Visual Evoked Potential (VEP)

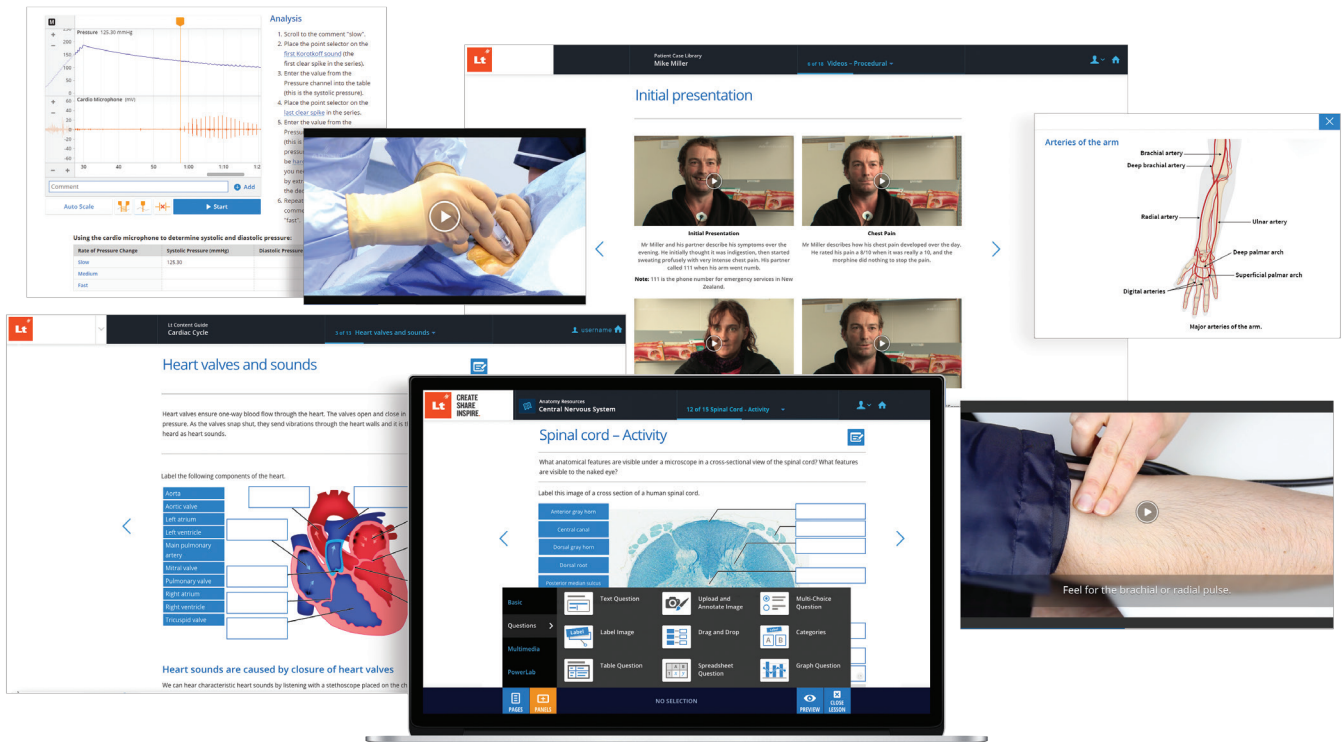
Important Notes

- Lessons from the “Getting Started with Lt” module can be included in each course to prepare students to use the platform.
- Some modules may also include multiple Tutorials.



Patient Case Library

Overview



What's in a Patient Pack?

Each patient's medical story is different, so each case has different content to use in your teaching.

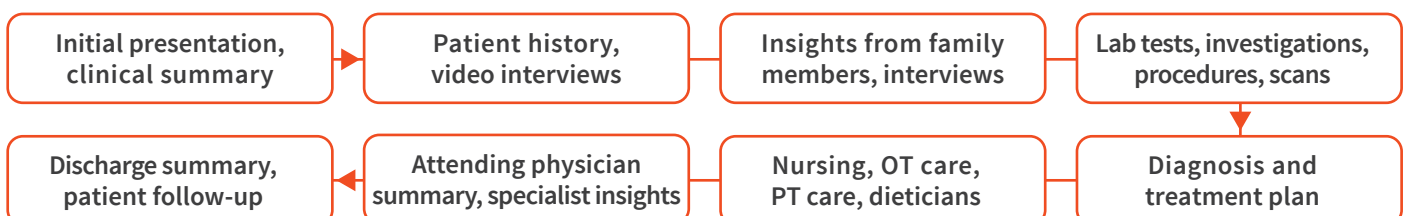
A typical patient pack can include:

- A short clinical summary (similar to a medical letter) and a chronological clinical summary
- Video interviews with patients and relatives as well as health care professionals (attending physician, nurse, OT, PT, specialized technicians and dieticians). Each video includes subtitles and a captioned summary
- Video of clinical examinations and medical procedures, including subtitles and captions
- Lab test results: SI and non-SI units
- Specialized investigations such as chest X-rays, ECGs, MRI, and CT scans
- A discharge summary
- Suggested teaching topics

Combine different patient resources and incorporate your own content to:

- Teach pathophysiology
- Alternate teaching cases across years
- Illustrate a scientific concept, such as how to read an MRI
- Compare different presenting symptoms for the same condition
- Follow a patient's story through your curriculum, building the case's complexity, or examining different aspects of a patient's condition
- Provide supplementary cases for students to expand and consolidate their learning

Typical patient journey



Patient Case Library

List of patients currently available in Lt

Alfred Ashmore

Renal function

Kidney failure, polycystic kidney disease, transplant, renal function tests, dialysis, peritoneal dialysis, hemodialysis.

Angela Williams

Reproductive physiology/obstetrics and gynaecology

Menorrhagia, IUD (intrauterine device), forms of contraception, treatment of heavy bleeding, hysterectomy, anaemia, blood film, pipelle endometrial biopsy – indications, vaginal swab – indications.

Barry West

Neurological conditions

Stroke, cerebral circulation stroke recovery, rehabilitation, hemianopia hypertension procedures, neurological examination, CN exam, eye exam, CT, MRI.

Ben Wolfe

Complications of diabetes

Type 2 diabetes, autonomic and peripheral neuropathy, cellulitis, charcot joints.

Betty Flannery

Left ventricular failure

Left ventricular failure, heart failure, weight gain, acute onset of shortness of breath, hyponatremia.

Carol Campbell

Endocrine and metabolic disorders

Type 1 diabetes, hyperglycaemia, hypoglycaemia, insulin, glucose, HbA1c, thyrotoxicosis, Graves disease, reactive arthritis, salmonella, insulin pump.

Charlie Park

Coronary artery disease

Myocardial infarction, angina pectoris, stable angina, bypass surgery, dizziness, cardiovascular disease, coronary artery disease, left main stenosis, triple vessel disease, high cholesterol.

Chris Rawlins

Type 1 diabetes, renal impairment, kidney transplant, colostomy, post transplant, proliferative lymphoma.

David Marks

Silent myocardial infarction

Myocardial infarction, silent MI, CABG, PVD (peripheral vascular disease), hypertension.

Emma Smith

Glomerulonephritis, Wegener's granulomatosis, septic arthritis, ESR, remission, kidney disease, microscopic polyangiitis, small vessel vasculitis, septic arthritis, pre-eclampsia, preeclampsia, toxemia, PIH.

Frank Foster

Becker muscular dystrophy, X-linked disorders, creatine kinase, OSA, obstructive sleep apnea, degenerative muscle weakness, supportive care.

Gwen Simms

Osteoarthritis, hip, replacement, chronic, pain.

Harry Barker

Glucose-6-phosphate dehydrogenase deficiency, G6PD, Wegeners, laryngitis, laryngeal webs, stridor, hoarseness, iron overload, hepatitis B, hemolysis.

James Hinton

Aortic stenosis, aortic valve replacement, angiogram, ECG.

James Lester

Hypertension, renal artery stenosis, angina pectoris, sympathectomy technique.

Jenny Lincoln

Pregnancy, childbirth, preterm labor, pre-eclampsia, stages of labor.

Joe Hunter

Chronic liver cirrhosis, hepatitis C, decompensation, interferon and ribavirin treatment.

John Wise

Atrial fibrillation, heart failure, irregular heartbeat.

Liam McFadden

Fever, paediatric care, taking a temperature, body temperature, thermoregulation.

Mary Montgomery

COPD, chronic bronchitis, emphysema, pulmonary fatigue, lung volume, breathlessness.

Max Chaves

Restrictive lung disease

Pulmonary fibrosis, restrictive lung disease, dyspnea, lung transplantation, steroid therapy, spirometry.

Mike Miller

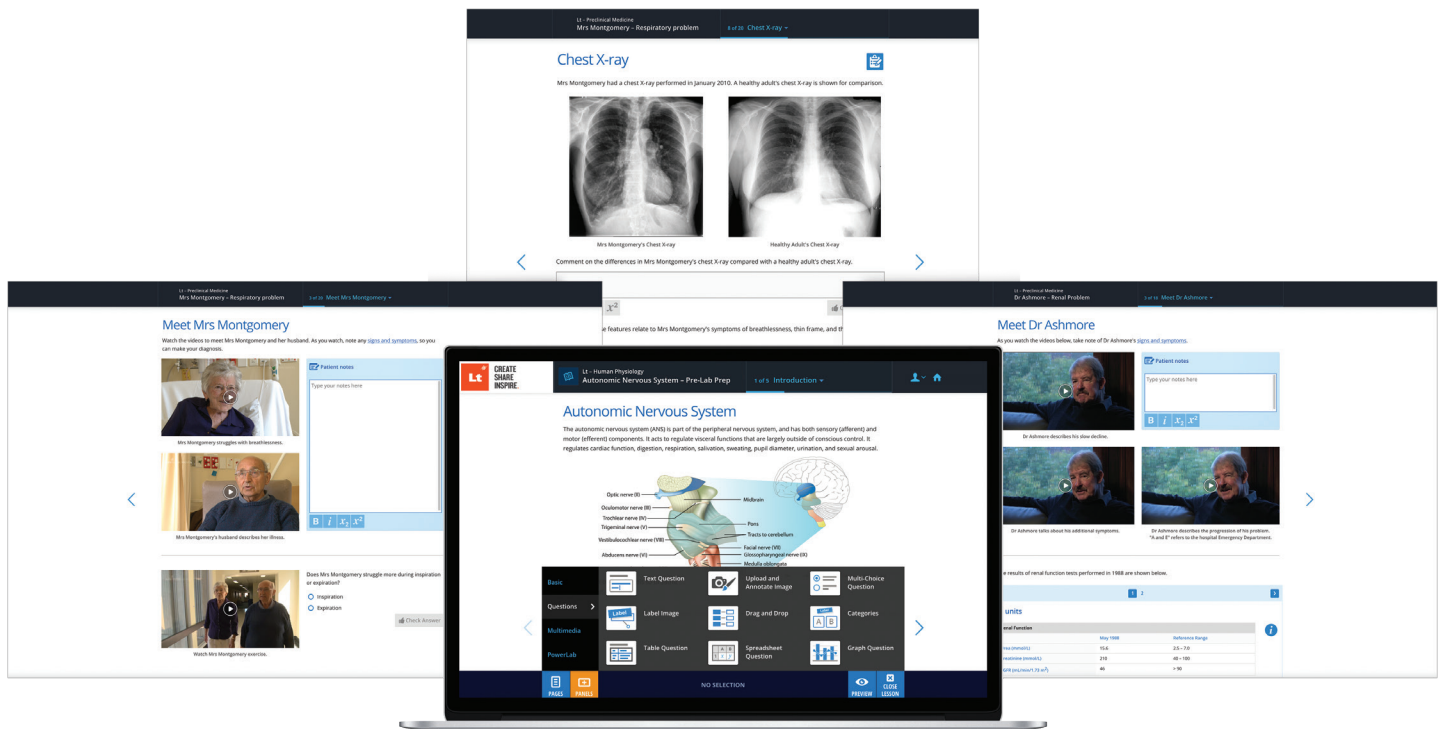
Myocardial infarction, STEMI, coronary artery disease, atherosclerosis, fibrinolysis, smoking, cardiac arrest, defibrillation, catheterisation laboratory, coronary angiogram, angioplasty, acute S-T elevation.

Nick Blair

Guillain-Barré syndrome, neurological examination, neurophysiology reports, lumbar puncture, rehabilitation, physiotherapy, occupational therapy, immunoglobulin therapy.

Penny Parker

Von Willebrand disease, tranexamic acid, heavy menstruation, ablation therapy, menorrhagia.



List of patients currently available for Lt continued:

Pete Winslow

Peripheral neuropathy.

Rachael Pearson

Myasthenia gravis, diplopia, blurry vision, cranial nerves, eye movements, facial nerve palsy - differential diagnoses, fistula - indications, immunoglobulin therapy, plasmapheresis, immunosuppressive therapy.

Sam Dixon

Claudication, endarterectomy, atherosclerosis, peripheral vascular disease, vascular studies, abdominal aortic aneurysm, peripheral artery disease, triple A, atherosclerosis, plaque.

Sarah King

Incontinence, bladder irritation, urinary tests, pelvic floor exercises, depression.

Thomas Alexander

Aortic incompetence, valve replacement, bicuspid aortic valve disease (BAVD), bradycardia, heart murmur.

Tim Scott

Myocardial infarction, STEMI, acute coronary syndrome, coronary artery disease, hyperlipidaemia.

Zac Thayer

Respiratory hyper-responsiveness, asthma, childhood, eczema.

Privacy and consent

All of our patients have provided written, informed consent for their medical story to be used to support health professional learning. Because these are real people, we have given each patient and their family members pseudonyms to protect their identities.

Our patients have all viewed and approved the content to be used to develop learning resources. This gives you the freedom to use these detailed real-life resources to create and customize comprehensive medical cases suited to your teaching process.

“Lt’s real patient case studies make theory highly clinically relevant and engaging for our students.”

- **Jack Simpson**, Lecturer, Nursing
University of the West of Scotland



**90-DAY
FREE TRIAL**

Sign up now adi.to/lit

Visit our website or contact your local ADInstruments representative for more information

ADInstruments Worldwide

Australia | Brazil | Europe | India | Japan | China | Middle East | New Zealand | North America | Pakistan | South America | South East Asia | United Kingdom

adstruments.com



ADINSTRUMENTS