



### CLINICAL RESEARCH AND BIOSCIENCES



### Overview

CRBio is an independent Contractual Research Organization based in Hyderabad (INDIA).

The state-of-the-art facility spreads across 30,000 square-foot, providing services for Clinical research, Regulated bioanalysis, Bio-statistics, Quality control and Data management.

We offer end-to-end services in a broad range of clinical research activities such as BA/BE studies, Patient based PK end point studies & Phase studies.

# Regulatory Approvals ERBI



















# Regulatory Experience



Experience in conducting wide range of more than 400 studies across a spectrum of major regulatory markets.

- ☐ US Studies Conducted > 50
- EU Studies Conducted >100
- ☐ UK MHRA Studies Conducted > 20
- ☐ AUS Studies Conducted > 20
- ☐ Canada Studies Conducted > 15
- ☐ WHO Studies Conducted > 10



# Clinical Infrastructure

- >8000 Volunteer database (~5% females)
- □ 5 Flexible and Independent clinics comprising a total of 114 beds
- ☐ Capacity to conduct 15 studies / month
- Two fully functional ICUs (3+3) beds
- ☐ Access and environment controlled pharmacy
- □ 21 CFR Part 11 compliant Eurotherm for temperature monitoring (-30°C) deep freezers
- ☐ Provision for cardiac ambulance in addition to the standby ambulance for all studies



# Clinical Capabilities and Strengths



Exi	oertise	in	executing	different	tv	pes	of	studies:
			<del>-</del>		-,		~ -	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

Crossover
Parallel
Partial Replicate/Full Replicate
Steady State
Endpoint
Safety and Tolerability
Patient-based studies
Hormonal Studies (Post menopausal)
Phase trials

- The total number of Studies executed at CRBio are >400
- Experience in handling first-to-file molecules
- First CRO to prepare an unconventional study design for Highly Variable Drugs accepted by regulatory authorities
- Strategy to minimize the extrinsic/intrinsic factors that may impact study outcome (Eg; Extra housing, diet standardization etc.)

2 November 2015

# Experience with various dosage forms ERBI



Immediate Release
Modified Release
Biphasic Release
Effervescent Tablet
Dispersible Tablets
Mouth Dissolving Films
Suspension
Nutraceutical (Measurement of glycemic and insulinemic index as clinical endpoints)

# Clinical Study Management



- ☐ Stringent Inclusion and Exclusion Criteria applied during volunteer selection based on category of the drug.

  E.g., BMI range, RBC count & haemoglobin etc.
- ☐ Audit-trail enabled biometric software to control cross-participation of volunteers
- ☐ IVIVC software to reduce the chances of failure
- ☐ Specialist doctors and medical experts are contracted during critical studies for management of adverse events (E.g., High dose combination drug studies).

## Therapeutic Areas Handled



Antidepressant	Anticancer	Anti Platelet	Antidiabetic
Antimalarial	Antiepileptic	Anti- hyperlipidemic	Antidiuretic
Antispasmodic	NSAID	Antihypertensive	CNS Agent
Antifungal	GI drugs	Antibiotic	Skeletal Muscle Relaxant
Antiulcer	Antihistaminic	Antipsychotic	Asthama
Antiretroviral	Erectile dysfunction	Premature Ejaculation	Irritable bowel syndrome
Overactive bladder	Benign Prostate Hyperplasia	Hypnotic	Allergic rhinitis & Urticaria

### Bioanalytical Capabilities and Strengths ERE



- >140 Validated methods
- Single analyte and simultaneous methods
- Method for combination drugs
- Chiral analysis and analysis involving derivatization
- Selective and sensitive methods with LLOQ upto 5 pg/ml
- Tricky molecules (5 metabolites)
- Total drug estimation (conjugated and unconjugated)
- As a commitment to quality, we proactively revalidate old methods as per current regulatory guidelines



# Bioanalytical Capabilities and Strengths ERBI



#### **Infrastructure**

- 7 LC-MS/MS (5 Thermo Ultra and Discovery Max + 2 Triple Quad API-4000)
- 7 Deep Freezers (-86°C) connected to Eurotherm for online temperature monitoring.



### Medical Writing, Biostatistics and IT

-	C	R	Bi		
			Catalyzin	g Innovatior	١

#### **Medical Writing**

- ☐ Protocol, ICF & CRF
- ☐ Integrated CSR (ICH E3), CTD and eCTD preparation

#### **Biostatistics**

Pharmacokinetic analysis is performed using Phoenix WinNonLin 6.3, Statistical analysis by SAS 9.4 and IVIVC software

- ☐ In Vitro- In Vivo Correlation for drug development
- ☐ Sample size calculation
- Randomization

#### **Information Technology**

- ☐ 3 server for domain control and LCMS data backup, synchronizing every 30 minutes
- ☐ Data backup is stored onsite and offsite

# Quality Management



Independent QA team reporting to the Managing director
QA will implement and maintain procedures in compliance with
GCP/GLP & other local regulatory requirements
QA is responsible to conduct Audits
☐ Study based audits (In-process & Retrospective)
☐ System & Facility audit
☐ Vendor audits
Oversee the In-house and external training of the employees
Co-ordinate sponsor/ regulatory audits
Archival management
Each department has an internal QC for implementation of procedures

# Project Management



- ☐ Dedicated team to give individual customer focus
- ☐ Project manager is assigned to every project to direct, control the flow of activity and adjust schedules to provide customized solutions to suit individual client requirements
- ☐ Streamlined procedure for client management, focused approach to ensure timelines are delivered as per commitment
- ☐ All project related updates are communicated with sponsor on timely basis

### **Marquee Customers**





















#### **Marquee Customers**























### **Marquee Customers**

























### THANK YOU

www.crbio.co.in

Kashif@crbio.co.in-Head Business

Development

info@crbio.co.in