Proposed Budget Details

Institute	Budget Year	Manpower Budget (Rs.)	Contingency	Consumables	Equipment	Travel	Overhead	Total(Rs)
[redacted]	1	2547840.00	700000.00	13598657.00	3900000.00	500000.00	229683	21476180
[redacted]	2	2547840.00	700000.00	4094874.00	0	500000.00	219984	8062698
[redacted]	3	2547840.00	700000.00	3769757.00	0	500000.00	210527	7728124
Total in (Rs.):		**7643520**	**2100000**	**21463288**	**3900000**	**1500000**	**660194**	**37,267,002.00**

Budget Breakup Details (Staff/Manpower)

#	Budget Year	Institute	Designation	No. of Person(nos)	Require Month(nos)	Cost Per Person(Rs.)	Overhead(Rs.)	Total Cost(Rs.)
1	**Year: 1**	[redacted]	Project Technical Support - II	1	12	23,600	8,496.00	283,200.00
Justification : One project technical support-II position has been requested for the preparation of reagents, buffers, culture medium and RBCs, collection of samples, assisting Project Research Scientists, maintenance of animal cages, insectary, project-related purchase records etc., and day-to-day lab assistance.								
2	**Year: 1**	[redacted]	Senior Project Assistant	1	12	30,600	11,016.00	367,200.00
Justification : The support from Senior Project Assistant is requred throughout this project since there is a large number of Pf and Pb transfections, maintenance of Pf and Pb transgenic lines, in vitro and in vivo experiments, disease pathogenesis studies, in vitro and in vivo screening studies etc have been included in this proposal. Hence, one Senior Project Assistant position has been requested.								
3	**Year: 1**	[redacted]	Project Reseach Scientist - II (Non Medical)	2	12	79,060	56,923.00	1,897,440.00
Justification : This proposal involves basic (genetic, biochemical, molecular biological and transgenic studies), translational (in vitro and in vivo drug screening studies with compound libraries and maintenance of clinical isolates) and clinical (phase-I trial in human subjects assessing safety and pharmacokinetics) studies. The proposed study also involves metabolomics, lipidomics and proteomics studies using high-resolution mass spectrometry and Big Data analysis Therefore, two Project Research Scientist-II positions have been requested.								
4	**Year: 2**	[redacted]	Project Technical Support - II	1	12	23,600	8,496.00	283,200.00
Justification : One project technical support-II position has been requested for the preparation of reagents, buffers, culture medium and RBCs, collection of samples, assisting Project Research Scientists, maintenance of animal cages, insectary, project-related purchase records etc., and day-to-day lab assistance.								
5	**Year: 2**	[redacted]	Senior Project Assistant	1	12	30,600	11,016.00	367,200.00
Justification : The support from Senior Project Assistant is requred throughout this project since there is a large number of Pf and Pb transfections, maintenance of Pf and Pb transgenic lines, in vitro and in vivo experiments, disease pathogenesis studies, in vitro and in vivo screening studies etc have been included in this proposal. Hence, one Senior Project Assistant position has been requested.								
6	**Year: 2**	[redacted]	Project Reseach Scientist - II (Non Medical)	2	12	79,060	56,923.00	1,897,440.00
Justification : This proposal involves basic (genetic, biochemical, molecular biological and transgenic studies), translational (in vitro and in vivo drug screening studies with compound libraries and maintenance of clinical isolates) and clinical (phase-I trial in human subjects assessing safety and pharmacokinetics) studies. The proposed study also involves metabolomics, lipidomics and proteomics studies using high-resolution mass spectrometry and Big Data analysis Therefore, two Project Research Scientist-II positions have been requested.								

Total Cost (Rs.) **7,872,825.00**

including overhead

Budget Breakup Details (Staff/Manpower)

7	**Year: 3**	[redacted]	Project Technical Support - II	1	12	23,600	8,496.00	283,200.00

Justification : One project technical support-II position has been requested for the preparation of reagents, buffers, culture medium and RBCs, collection of samples, assisting Project Research Scientists, maintenance of animal cages, insectary, project-related purchase records etc., and day-to-day lab assistance.

8	**Year: 3**	[redacted]	Senior Project Assistant	1	12	30,600	11,016.00	367,200.00

Justification : The support from Senior Project Assistant is requred throughout this project since there is a large number of Pf and Pb transfections, maintenance of Pf and Pb transgenic lines, in vitro and in vivo experiments, disease pathogenesis studies, in vitro and in vivo screening studies etc have been included in this proposal. Hence, one Senior Project Assistant position has been requested.

9	**Year: 3**	[redacted]	Project Reseach Scientist - II (Non Medical)	2	12	79,060	56,923.00	1,897,440.00

Justification : This proposal involves basic (genetic, biochemical, molecular biological and transgenic studies), translational (in vitro and in vivo drug screening studies with compound libraries and maintenance of clinical isolates) and clinical (phase-I trial in human subjects assessing safety and pharmacokinetics) studies. The proposed study also involves metabolomics, lipidomics and proteomics studies using high-resolution mass spectrometry and Big Data analysis Therefore, two Project Research Scientist-II positions have been requested.

Total Cost (Rs.) **7,872,825.00**
including overhead

Contingency budget breakup details

#	Budget Year	Institute	Contingency Name	Overhead Charges (Rs.)	Total Cost(Rs.)
1	**Year: 1**	[redacted]	Contingency has been requested for purchasing laboratory records, autoclave bags, routine laboratory requirements like dissection boxes, syringes, animal feed, payment of equipment utilization charges as per the internal faculty utilization rates at ILS for flow cytometry, high-resolution mass spectrometry and flourescence microscopy facilities, routine equipment maintenance expenses, purchase of softwares for data analysis, accommodation and other expenses at sample collection sites, [redacted]pplication submission expenses etc.	21,000.00	700,000.00

Justification :A minimum of 7 Lakhs has been requested to meet all the requirements provided in the Contingency detail column.

2	**Year: 2**	[redacted]	Contingency has been requested for purchasing laboratory records, autoclave bags, routine laboratory requirements like dissection boxes, syringes, animal feed, payment of equipment utilization charges as per the internal faculty utilization rates a[redacted] for flow cytometry, high-resolution mass spectrometry and flourescence microscopy facilities, routine equipment maintenance expenses, purchase of softwares for data analysis, accommodation and other expenses at sample collection sites, [redacted] application submission expenses etc.	21,000.00	700,000.00

Justification :A minimum of 7 Lakhs has been requested to meet all the requirements provided in the Contingency detail column.

3	**Year: 3**	[redacted]	Contingency has been requested for purchasing laboratory records, autoclave bags, routine laboratory requirements like dissection boxes, syringes, animal feed, payment of equipment utilization charges as per the internal faculty utilization rates at [redacted]or flow cytometry, high-resolution mass spectrometry and flourescence microscopy facilities, routine equipment maintenance expenses, purchase of softwares for data analysis, accommodation and other expenses at sample collection sites[redacted]pplication submission expenses etc.	21,000.00	700,000.00

Justification :A minimum of 7 Lakhs has been requested to meet all the requirements provided in the Contingency detail column.

Total Cost (Rs.) **2,163,000.00**
including overhead

Consumables Budget Breakup Details

#	Budget Year	Institute	Consumables Name	Overhead	Total Cost(Rs.)
1	**Year: 1**	[redacted]	[redacted] Il Lipid-Rich BSA, Hypoxanthine, Sodium bicarbonate, Gentamycin Solution, MICRO TIPS 200-1000 UL, MICRO TIPS 2-200 UL, MICRO TIPS 0.2-10 UL, 10ml serological pipettes, TISS.CUL.F.STER.25 CM, Tissue Culture Flask, Non-treated, Close cap, 12.5 cm, Tissue Culture Flask, Non-treated, Sterile Vented Filter Cap, 12.5 cm, Vaccutainer, 1ml sterile racked filter tips, 200ul racked sterile filter tips, 12 well cell culture plates, 24 well cell culture plates, 96 well cell culture plate TCT, 1.5ml Micro CentrifugeTtubes, Glass Slides, Ground Edges,Plain 76 mm x26 mm, Stearic acid1-C14, [redacted] Membrane filter holder, Prolong Gold Antifade Mountant with DNA Stain DAPI, [redacted], for flow cytometer, [redacted] Nucleic Acid Gel Stain - 10,000X concentrate in DMSO, Antibiotic solution 100x liquid, N-Acetyl-D-glucosamine, Tissue Culture Flask, Non-treated, Vented cap, 25 cm, Hypoxanthine 8-3H monohydrochloride, [redacted] Insect Cages, Aneket injection 5mL, Xylaxin I.P Solution 30mL, Synthetic Sea Salt 500g, [redacted] membrane feeding systems- 4 feeders with 3ml reservoirs[redacted] Stainless steel Watchmaker's forceps, [redacted] Dissecting Needle, BD Ultra fine Needle Insulin Syringes 31G, [redacted] Needles with Syringe 1mL, Custom Oligos, [redacted], [redacted] SYBR Green, 8-Strip PCR Tubes,8-Tube Strip with Non-Attached Optical Flat Caps, 0.2mL, Low Retention Filtered Pipette Tip, Sterile DNase/RNase-free Low Retention Filtered Pipette Tip 1000ul ,96 Tips/Rack[redacted], Evans Blue, Paraformaldehyde Powder 95%, Gluteraldehyde solution, Grade I, 25% , CD71 Antibody, Raised in Mouse, Goat Anti-Mouse IgG HL [redacted] Goat Anti-Rabbit IgG HL [redacted] [redacted]n X-100, [redacted] Rabbit raised Anti-NF-kB Antibody p65, Rabbit raised Anti-NF-kB Antibody p65 [redacted], Rabbit raised Anti-NLRP3 Antibody, Rabbit raised Anti-Phospho NLRP3 [redacted], Rabbit raised Anti-ProCaspase 1 , Rabbit raised Anti-IL-1b antibody, Rabbit raised Anti-Pro-IL-1b antibody, Rabbit raised Anti-beta Actin antibody, Donkey raised Anti-Rabbit IgG HL [redacted]), Silica Gel 60 Matrix, 20CM x 20CM, P3 Primary Cell 4D Nucleofector X Kit, P5 Primary Cell 4D [redacted]t, Silver Nitrate, [redacted], 99% , Isoplate -96/ 50W, Glass Fibre Filter, VivoGlo Luciferin, in vivo Grade, [redacted] [redacted] Column, Acclaim PepMap 100 C18 HPLC Column[redacted] C30 UHPLC Column, Hypersil [redacted], Accucore 150 C4 HPLC Column and Phase-I clinical trial conducting expenses.	132,248.00	13,598,657.00

Justification : Of the total amount of Rs.1,35,98,657/- requested under 1st year consumables, Rs.91,90,383/- will be utilized for conducting the Phase-I clinical trial in collaboration with Ipca Laboratories. The quotation with 18% GST has been included in the pdf file submitted under additional information. The clinical trial expenses have been included under consumables, since there is no separate column for submitting the details. We will be able to start this in the first year itself and the money for this will be requested only after getting the [redacted] approval. The rest of Rs.44,08,274/- will be utilized for the purchase of consumables mentioned in the consumables detail section and this is required for performing the transfections in Pf and Pb, maintaining the transgenic parasites, analysis of hemozoin, heme and GPI, cerebral pathogenesis studies (blood-brain integrity, T cell infiltration, brain and plasma cytokine/chemokine levels, neuroinflammation, parasite sequestration and ECM mortality etc), radiolabelling studies for lipid analysis with stearic and oleic acid, lipid staining studies using fluorescent dyes, recombinant enzyme assays etc. Overheads has been requested only for the budget proposed for consumables.

2	**Year: 2**	[redacted]	[redacted] Lipid-Rich BSA, Hypoxanthine, Sodium bicarbonate, Gentamycin, [redacted], MICRO TIPS 2-200 UL, MICRO TIPS 0.2-10 UL, 10ml serological pipettes, TISS.CUL.F.STER.25 CM, Tissue Culture Flask, Non-treated, Close cap, 12.5 cm, Tissue Culture Flask, Non-treated, Vaccutainer, 1ml sterile racked filter tips, 200ul racked sterile filter tips, 12 well cell culture plates, 24 well cell culture plates, 96 well cell culture plate TCT, 1.5ml Micro CentrifugeTtubes, Stearic acid1-C14, Oleic acid 1-C14, FD-approved compound libraries, [redacted] Green I Nucleic Acid Gel Stain, Antibiotic solution 100x liquid, Hypoxanthine 8-3H monohydrochloride, Bugdorm Insect Cages, Aneket, Xylaxin, Synthetic Sea Salt 500g, [redacted] Dissecting Needle, BD Ultra fine Needle Insulin Syringes 31G, [redacted] Needles with Syringe 1mL, Custom Oligos, [redacted]aking Yeast, QuantiTect [redacted] Green, 8-Strip PCR Tubes,8-Tube Strip with Non-Attached Optical Flat Caps, 0.2mL,125 Strips/Box (Make: [redacted], Low Retention Filtered Pipette Tip, Sterile DNase/RNase-free Low Retention Filtered Pipette Tip 1000ul ,96 Tips/Rack([redacted], mass spectrometry grade reagents - Water for Chromatography (LC-MS), Acetonitrile Hypergrade for LC-MS, DL-Dithiothreitol, Iodoacetamide, Chloroform for Liquid Chromatography, Methanol for Liquid Chromatography, Urea, BioUltra, Sucrose for Biochem, Ammonium hydrogen carbonate for LC-MS, Formic acid, 98-100, Emprove Essential, Ammonium formate for LC-MS, LysoTracker Deep Red, GFP-Catch-Mag, mCherry-Catch-Mag, Sep-Pak C18 1 cc Vac Cartridge, Shield 1, Blasticidin S HCl, BODIPY 493/503, Nile Red, stable heavy isotope internal standards for metabolomics and lipidomics, mass-spectrometry grade trypsin etc.	122,549.00	4,094,874.00

Justification : An amount of Rs. 40,94,874/- has been requested for the purchase of consumables mentioned in the consumables detail section and this is required for performing the characterization of Pf and Pb knockout/knockdown parasites, immunoprecipitation studies for v-type proton ATPase, proteomics studies to assess its assembly, complete lipid and metabolite profiling studies by high-resolution metabolomics and proteomics studies, assessment of lipid signalling pathways, high-throughput screening studies with FDA-approved compound libraries etc.

Total Cost (Rs.) **21,831,177.00**

including overhead

Consumables Budget Breakup Details

3	**Year: 3**	[redacted]	[redacted]ich BSA, Hypoxanthine, Sodium bicarbonate, Gentamycin, 12 well cell culture plates, 24 well cell culture plates, 96 well cell culture plate TCT, 1.5ml Micro CentrifugeTtubes, flow cytometry tubes, [redacted] 200-1000 UL, MICRO TIPS 2-200 UL, MICRO TIPS 0.2-10 UL 1000/PK, 10ml serological pipettes, TISS.CUL.F.STER.25 CM, Tissue Culture Flask, Non-treated, Close cap, 12.5 cm , Tissue Culture Flask, Non-treated, Sterile Vented Filter Cap, 12.5 cm, Vaccutainer, 1ml sterile racked filter tips, 200ul racked sterile filter tips, Glass Slides, human serum, antimalarials such as quinolines, artemisinin, dihydroartemisinin, primaquine, [redacted] SYBR Green, Hepa 1-6 Cell line, [redacted] Powder, Stearic acid1-C14, Oleic acid 1-C14, 32P-orthophosphoric acid, kits and reagents required for assessment of hemozoin, GPI and free heme levels in clinical isolates, RDT Kits, Real-time PCR detection kits for species identification in clinical samples[redacted] Luciferin, in vivo Grade, [redacted], Fura Red, AM, Cell Permanent, Alexa Fluor 647 anti-Mouse CD31 antibody, Hepa 1-6 Cell line, UIS4 antibody, Hoechst, DMEM/F-12 Powder, Reagents for SEM and TEM analysis of hemozoin formation, Osmium Tetroxide, Cacodylic Acid, Sodium Salt, trihydrate, Propylene Oxide, EM Grade, Lead Citrate, Trihydrate, [redacted]ro High Precision, very fine curved tips, [redacted] Curved, Formvar/Carbon 200 mesh, Copper, Uranyless (Uranyl Acetate), H3K9ac Monoclonal Antibody (J.924.2) for liver stage detection, UltraPure Glycogen, FBS, etc.	113,092.00	3,769,757.00

Justification : An amount of Rs. 37,69,757/- has been requested for the purchase of consumables mentioned in the consumables detail section. This is required for in vitro and in vivo screening studies proposed for Pf and Pb using compound libraries, and assessment of antimalarial activities in the oleic acid synthesis Pb and Pf KO parasites. In addition, the consumable support has been requested for the liver stage inhibition studies using oleic acid synthesis inhibitors using RT-PCR, fluorescence and in vivo biolumiscence studies. Further, support is required for the assessment of PAMPs and DAMPs in uncomplicated and severe malaria clinical isolates. A minimum of 20 clinical isolates for uncomplicated and severe malaria, respectively, will be analyzed in the first phase and the numbers will be increased if required depending on the statistical power analysis.

Total Cost (Rs.) **21,831,177.00**
including overhead

Equipment Budget Breakup Details

#	Budget Year	Institute	Equipment Name	Equipment Model	Equipment Manufacturer	Equipment Type	Total Cost(Rs.)
1	**Year: 1**	[redacted]	[redacted]			Domestic	600,000.00

Justification : This proposal involves the generation of Pf and Pb transgenic parasites and collection of clinical isolates from uncomplicated and severe malaria patients. These parasite stocks have to be stored under liquid nitrogen for preservation and future propagation. Hence, cryocan has been requested.

Mode of Proposed disposal : The equipment will be purchased following GFR and GeM regulations, Govt. of India. After its life-time, the equipment will be sent to the institutional warehouse and disposed through the scrap auction carried out by the Institution.

2	**Year: 1**	[redacted]	Gradient PCR Machine	[redacted]	[redacted]	Imported	500,000.00

Justification :PCR machine is required for various cloning studies to generate the transgenic parasites.

Mode of Proposed disposal : The equipment will be purchased following GFR and GeM regulations, Govt. of India. After its life-time, the equipment will be sent to the institutional warehouse and disposed through the scrap auction carried out by the Institution

3	**Year: 1**	[redacted]	Dissection Stereo Microscope	[redacted]	[redacted]	Imported	400,000.00

Justification : Dissection microscope is required for dissecting the salivary glands of mosquitoes to collect the sporozoites. These sporozoites will be utilized for performing the in vivo and in vitro liver stage screening studies for oleic acid synthesis inhibitors. The dissection microscopes available in the PI's insectary facility have worn out.

Mode of Proposed disposal : The equipment will be purchased following GFR and GeM regulations, Govt. of India. After its life-time, the equipment will be sent to the institutional warehouse and disposed through the scrap auction carried out by the Institution.

4	**Year: 1**	[redacted]	Nucleofector	[redacted]	[redacted]	Imported	2,400,000.00

Total (Rs.): 3,900,000.00

Equipment Budget Breakup Details

Justification [redacted] is required for performing the transfections in cuvettes and plate formats for both falciparum and berghei. The proposed study involves more than a dozen transfections and hence, nucleofector is required. The nucleofector device (basic version) procured in the PI's laboratory is of 7 years old and has stopped functioning after multiple repairs. Therefore, support for purchasing a [redacted]s requested.

Mode of Proposed disposal : The equipment will be purchased following GFR and GeM regulations, Govt. of India. After its life-time, the equipment will be sent to the institutional warehouse and disposed through the scrap auction carried out by the Institution.

Total (Rs.): [redacted]

Travel Justification

#	Year	Amount(Rs.)
1	**Year: 1**	500000.00

Justification :A travel support of Five Lakhs has been requested to perform Phase-I trial related visits to Ipca laboratories and clinical trial sites, visiting other institutions to deliver talks, attending workshops on metabolomics and Big data analysis etc.

2	**Year: 2**	500000.00

Justification :A travel support of Five Lakhs has been requested to perform visits to clinical trial sites, Ipca laboratories, hospital partners for the collection of clinical isolates, field visits, visiting other institutions to deliver talks, attending conferences etc.

3	**Year: 3**	500000.00

Justification :A travel support of Five Lakhs has been requested to visit [redacted] and [redacted] for getting the Phase-II trial approval based on the Phase-I data generated in this study, hospital partners for the collection of clinical isolates, field visits, other academic and [redacted]nstitutions to deliver talks, attending conferences etc.

Total:	**1,500,000.00**

[redacted]