



PURCHASE REQUEST

PR #: GF-2021-04-00108

Date: 04-06-2021

Dept./Office: **DPBG**Category: **Laboratory Equipment**Section/End-User: **Rommel M. Garrido Jr.**

Project Title/Code: **Completion of Lecture Hall and
 Classroom Rehabilitation of Breeding Nursery of
 Seed Storage Facility and Tissue Culture**

Funding Source: **General Fund - CO**

Item #	Item Description	Unit	Qty	Unit Cost	PAR/ICS	Total Cost
1	40x-2000x LED Biological Trinocular Compound Microscope with 5MP Camera and Macbook Pro Laptop	unit	1	300,000.00	ROMMEL M. GARRIDO JR.	300,000.00

Specification:

Head: trinocular, 45 degree inclined, 360 degree swiveling
 Nosepiece: revolving quadruple
 Objective: Achromatic, DIN 4X, 10X, 40X(Spring), 100X(Spring, Oil)
 Eyepiece: WF10X and 20X
 Stage: 3D double layer, size 5.5 x 5 in (14 x 12.7 cm), X-Y stroke: 3x2 in (7.6 x 5.3 cm)
 Focusing: coaxial coarse and fine
 Condenser: Abbe, NA=1.25, with iris diaphragm
 Illumination: LED
 Power Supply: 100-240VAC, 0.35A adapter to DC6V, 2A
 Achromatic optical system with precise optical glass elements
 Adjustable ocular diopter on left ocular tube
 High resolution images over a wide field of view
 Heavy-duty metal framework
 5MP USB camera with Windows/Mac software
 GS and CE approval
 Excellent five (5) year warranty
 Camera specifications
 Sensor: Aptina MT9P001 (color)
 Sensor Type: CMOS
 Sensor Size: 5.7x4.3mm (1/2.5" class)
 Pixel Size: 2.2 micrometers
 Resolution: 5.1MP
 Frame Rate: 55fps @ 640x480, 18fps @ 1280x960, 6.8fps @ 2592x1944
 Sensitivity: .53V/Lux-sec
 Connectivity: USB 2.0
 Compatibility: Windows (32/64 bit) XP/Vista/7/8/10, Mac OSX, Linux

Mounting Sizes: 23mm, 30mm, 30.5mm, and C-mount

Packing List:

Trinocular Microscope Body

Four Achromatic DIN Objectives, 4X, 10X, 40X(S), 100X(S, Oil)

One Pair of WF10X Eyepieces

One Pair of WF20X Eyepieces

Bottle of Immersion Oil

Dust Cover

AC Adapter

User's Manual Download

One 5.0MP Color Digital Camera - MU500B

One 0.5X C-mount Relay Lens

One 6' (1.8m) USB Cable

Two Eyepiece Adapters, 30.0mm 30.5mm

Two Rubber Seal Rings

One CD with Software, Driver and User's Instructions

Macbook Pro Laptop Specifications

13-inch Retina display with True Tone

Apple M1 chip with 8-core CPU, 8-core GPU, and 16-core Neural Engine

8GB unified memory

256GB SSD storage

Magic Keyboard

Touch Bar and Touch ID

Force Touch trackpad

Two Thunderbolt / USB 4 ports

2	Basic Bench pH meters with replaceable electrode and buffer	unit	1	60,000.00	ROMMEL M. GARRIDO JR.	60,000.00
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Specification:

Accuracy temperature: $\pm 0.3^{\circ}\text{C}$

Accuracy pH: ± 0.1

Electrical requirements: AC/DC 9 V adapter (220 VAC, 60 Hz)

Resolution (mV): 0.1 mV (± 199.9 mV); 1 mV beyond ± 200 mV

Temp probe calibration: offset in 0.1°C increments; offset range $\pm 5^{\circ}\text{C}$

Range pH: 0 to 14

Accuracy mV: ± 0.2 mV (± 199.9 mV), ± 2 mV beyond ± 200 mV

Calibration points: 1 to 5 points with automatic buffer recognition (ABR)

Include 13-620-AE6 3-in-1 single junction gel pH/ATC electrode

Memory: 100 datasets

Resolution temperature: 0.1°C

Temperature compensation: automatic or manual (0 to 100°C)

Temperature range metric: 0.0 to 100.0 °C

Range mV: ±1999 mV

Resolution pH: 0.01

Power source: 220 - 240 50/60 Hz

Warranty: 2-year meter warranty; 6-month electrode warranty

3	Electric Compound Binocular Microscope (4)	unit	4	55,000.00	ROMMEL M. GARRIDO JR.	220,000.00
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Specification:

Objective Lenses: DIN standard Achromat 4x, 10x, 40xR, 100xR oil immersion objectives are parfocalled, parcentered, color coded and mounted in reverse facing quadruple;

Eyepieces: Wide field 10x eyepieces, FN18. Interpupillary adjustment 55-75mm. Eyepiece can be fitted with a 20mm diameter reticle

Total Magnification: 40x, 100x, 400x, 1000x

Specimen Stage: Large 125mm x 115mm stage, with built-in mechanical stage. Mechanical stage provides X-Y movement of 55mm x 75mm

Focusing: Rack and pinion coarse focus with tension adjustment, separate fine focus. Coarse focus knob control moves the stage up or down 20mm. Fine focus moves 0.2mm per

Condenser: Abbe NA 1.25 condenser with iris diaphragm and filter holder for 32mm filter

Illumination: 1W LED illumination with on/off switch with intensity control. Corded microscope is voltage sensing 100~240V

Warranty: 5-year warranty, excluding LED bulb

Includes: Dust cover and blue filter

4	Hotplate stirrer including magnetic bar and retriever kit	unit	1	70,000.00	ROMMEL M. GARRIDO JR.	70,000.00
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Specification:

Heating temperature range: 50°C - 500°C

Heating rate heating plate: 5K/min

Heat output: 1000W

Heat control: LED

Motor rating output: 1.5W

Sttiring bar length max: 80 mm

Speed range: 100 rpm - 1500 rpm

Speed control : sacel 0 - 6

Fixed safety circuit: 550 °C

Set-up plate dimensions: 180 x 180 mm

Set-up plate material: ceramic

Power output: 1020W

Power source: 220 - 240 V 50/60 Hz

Depth: 330 - 335 mm

Width: 220 - 225 mm

Height 105 - 110 mm						
5	Laboratory Refrigerator with 10.6 cubic foot/300 L capacity	unit	2	70,000.00	ROMMEL M. GARRIDO JR.	140,000.00
Specification: Temperature range: +2°C to +8°C Inner cabinet: white epoxy painted Inner shelves: epoxy plastic coated steel rod CFC Free Eco-friendly refrigerant R 134a CFC Free, environment friendly Cyclopentene foaming PUF insulation No frost, fan-assisted cooling circulation system Ultra fast pull down, auto defrost with self-evaporating drip tray Rear-to-front hot air anti-condensation Digital temperature controller Double glazed glass doors Full length illumination Fitted with castors, front two with brakes Low noise, green technology and energy saving Self closing hinge doors Lock as standard Input 220/240V, 50 Hz with power cord & plug Automatic voltage stabilizer with time delay restart gross volume: ? 300 L Inner dimension: 560(w) x 480(d) x 1415(h) Outer dimension: 645(w) x 570(d) x 2050(h)						
6	Micro bead sterilizer with 1000g glass beads	unit	2	48,000.00	ROMMEL M. GARRIDO JR.	96,000.00
Specification: Capacity: 300g/11oz. Chamber diameter: 1.6 in/ 40mm Height: 15.5 cm/6.1 in Length: 14.5 cm/5.5 in Temperature range: 100 to 300 °C Power source: 220-240V 50/60hz						
7	Portable electric balance/weighing scale with AC adapter and storage cover	unit	1	30,000.00	ROMMEL M. GARRIDO JR.	30,000.00
Specification: Capacity: 8200 g readability: 1g						

For paraffin-embedded tissue sectioning

Section thickness total range in (μ): 0.5 - 100

Trimming total range in (μ): 1 - 600

Specimen feed in (mm): 27-29

Vertical stroke in (mm) for sectioning og mega-cassettes: 71-73

User interface: 6"-8" capacitive touchscreen display

Operating modes: Rotational or Rocking (selectable)

Specimen retraction total range (μ): Selectable between 5 – 250, Default value: 40 μ

Motorized coarse feed (μ m/sec): 300 - 1800

Blade Holder Type: Two in One for high and low profile blades

Max. specimen size (mm): 50x60x40 (w x h x d)

Specimen orientation: $\pm 8^\circ$ horizontal and vertical, Rotational capability: 360°

Power requirements: 100-240 VAC / 50-60Hz

Dimensions in (mm): 460-470 (width) x 540-545 (depth with tray) x 295-300 (height)

10	Table Type vacuum packaging machine	unit	1	33,900.00	ROMMEL M. GARRIDO JR.	33,900.00
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Specification:

voltage: 220V/50-60Hz

power: 0.75W

heat-sealing power: .6 Kw

lowest absolute pressure of vacuum case: 1.33 kpa

volume of vacuum case: 380 x 380 x 80 mm

heat sealing strip length and width: 260 x 8 mm

number of heat sealing strips: 1 or 2 pcs

exhaustment of vacuum pump: 10m3/h

material of vacuum case and null: stainless steel

dimension: 470 x 330 x 300 mm (l x w x h)

weight: 45 kgs

11	Tri-power Stereo Microscope	unit	4	25,000.00	ROMMEL M. GARRIDO JR.	100,000.00
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Specification:

45° advance viewing head which can rotate 360°

locked on 15x wide-field eye piece with diopter adjustment on one ocular tube

magnification of paired objectives: 30x parfocal, 45x parcentered, and 60x achromatic

led lighting

rack and pinion focusing with slip clutch and tension adjustment

adjustable pole mounted cycle

includes a 95mm black and white reversible stage plate

rugged all metal construction

corded

power source: 220-240 V 50/60Hz

with warranty

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**Upright Flourite Objectives
Flourescence Microscope
including a microscope camera, a
c-mount camera**

unit

1

600,000.00

ROMMEL M. GARRIDO JR.

600,000.00

Specification:

Head: Trinocular

Objectives: Plan Achromat or UPlanFL 4x, 10x, 40x, 100x oil

Eyepieces: 10x Eyepieces

Nosepiece: 6 position

Stage: Graduated mechanical XY stage

Fluorescence: 4 Position Fluorescence Attachment, 100 Watt Mercury Lampouse & Power Supply

Fluorescence Dichroic Filter Cubes: FITC – U-MNB. Blue light shines on slide, green light in eyepieces, TRITC – Orange. Green light shines on slide, orange light in eyepieces, Four-Place rotary filter cube turret, Includes blank light blockers on the empty spaces to protect against harmful UV entering the viewing head.

Transmitted Halogen Lighting: High power 100W halogen illumination , Built-In Transmitted Light Filters: neutral density ND6, neutral density ND25, LBD (Daylight compensation), Condenser U-AC2: 1.1 numerical aperture

Frame has Autovolt Voltage Input: 220 – 240 VAC auto volt, 50 – 60 HZ.

Travel focus lock stop

Photography: Top camera port. 3-Position prism slider. 100 percent to eyepieces, 100 percent to camera, or split to eyepieces and camera

One year warranty

Microscope Camera specification

Image Sensor: 1 in. color CMOS

Resolution (max.): 4104 (W) x 2174 (H) pixels

Pixel Size: 3.45 x 3.45 µm

Binning: 2 × 2

A/D Converter: 10 bits

Exposure Times: 27 µs–15 s

Data Transfer: USB 3.1 Gen1

PC Control: Windows 10 Pro?64 bit?

Compatible with the desktop computer

Camera Adapter Specification

must be compatible with the fluorescence microscope

must be compatible with the microscope camera

Desk top computer specification

must be compatible with the microscope camera

with license Windows 10 Pro (64 bit)

brand new

Processor: Intel Core i5 9400F or higher

Motherboard: Intel H310 Chipset, Anti-Sulfur Resistors Design, Gaming LAN with Bandwidth Management

Memory: 16GB (2x8) DDR4 or higher

SSD: 500GB M.2,

Optical Drive: DVD-RW

Casing: W/ 700W PSU,

Monitor: 23" IPS FHD,

Keyboard and mouse combo

500W IC controlled AVR

Stereo speakers

TOTAL

2,179,900.00

Purpose: For laboratory

Checked by:


JACOB GLENN F. JANSALIN

TWG - Laboratory Equipment

Funds Available:


MYRNA S. PANCITO

HEAD, BUDGET OFFICE

Signature:

Printed Name:

Designation:

Requested by:


ROMMEL M. GARRIDO JR.

END USER

Noted by:


ROMMEL M. GARRIDO JR.

UNIT HEAD, PROJECT LEADER

Approved by:


EDGARDO E. TULIN

PRESIDENT, VSU