

# FLUORESCENCE APPLICATIONS

in Biotechnology and Life Sciences

## Challenges & Priorities

### COMMUNICATION

Facilitate the transfer of multidisciplinary fluorescence knowledge & techniques throughout the Network and maximise collaborations where success can be acknowledged (e.g., “*facilitated and supported by the ARC Network for Fluorescence etc.....*”) and performance indicators quantified.

Market the FABLS Network – stronger outreach, methods registry, services registry of members, international meetings (e.g., US Biophysical Society), top labs & groups, chat room

Maintain balance between applied (commercial) and pure (basic) science

Increase usage of high tech fluorescence equipment both nationally & internationally

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### SCIENTIFIC

Ensure cutting-edge research Institutes are involved with technology developers

Support endeavours that isolate, characterise, improve & capitalize on new fluorescent probes

Support endeavours that lead to the development of new and/& multiplexed analytical (SPR-FRET), microscopic, cellular and tomographic imaging technologies (↑ sensitivity, ↑ resolution, new spectral characteristics, whole body imaging, ↑ penetration, single molecule, femtosec transfection, ↑ quantum yield, ↓ toxicity, ↑ photostability, live cell/tissue imaging)

Support endeavours that analyse, discover and measure dynamic cellular events



## *Challenges & Priorities*

### **EDUCATION**

Provide funding for demonstration projects (videos, PP lectures, scientific)

Attraction & education and scientific exchange of future workforce (e.g., workshops, conferences, travel, top lab exchanges, industrial seminars, seniors refresher courses, intensive courses)

### **LONG TERM GOALS**

Solicit suggestions, identify and initiate (seed funding?) for a high impact and/or high risk multidisciplinary project(s) as a FABLS “Challenge Project” -> “big” ARC Discovery or Linkage Program

Create long term funding through ARC Centre of Excellence, NCRIS Scheme or international source (e.g., NSF, NIH)