

# 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)