

Advanced Biomedical Science and Technology Group

T. Vo-Dinh, Ph.D., *Group Leader*^a

J. B. Cooper, *Secretary*

Advanced Monitoring Development (AMD)

T. Vo-Dinh, Ph.D.
G. Griffin, Ph.D.
B. Hingerty, Ph.D.³
A. L. Wintenberg, Ph.D.⁴
B. M. Cullum, Ph.D.¹
J. Mobley, Ph.D.¹
J. Song, Ph.D.¹
D. L. Stokes, Ph.D.¹
D. N. Stratis, Ph.D.¹
P. Kasili,²
M. W. Williams, Ph.D.⁶
M. J. Sepaniak, Ph.D.⁶
P. Viallet, Ph.D.⁶

Biosystems Modeling (BS)

K. F. Eckerman, Ph.D.
C. E. Easterly, Ph.D.
R. W. Leggett, Ph.D.
N. B. Munro, Ph.D.³

Forensics (F)

A. A. Vass, Ph.D.

Ionizing Radiation Dosimetry & Metrology (IRDM)

J. S. Bogard, Ph.D.

Photophysics, DNA Physics (PDNA)

C. H. Chen, Ph.D.
S. L. Allman
L. J. Sammartano, Ph.D.⁶

Structural Biology (SB)

G. J. Bunick, Ph.D.
L. Cacheiro⁶
B. L. Hanson, Ph.D.⁶
J. M. Harp, Ph.D.⁶

a Corporate Fellow

1 Postdoctoral Associates

2 Graduate Student

3 Part-Time

4 On loan part-time from ESTD

5 On Loan from I&C (50%)

6 Visiting Scientists/Guest Assignments

INSTRUMENTATION

- Advanced laser techniques
- Biological mass spectrometry
- Calibrated radiation exposure
- Crystallography
- Microbiology techniques
- Nanosensors, biosensors, biochips
- Scattering techniques (light, X-ray, neutron)
- Tissue culture techniques

THEORETICAL MODELING

- Computational modeling:
 - biomolecules (DNA, proteins)
 - crystallographic structures
- Mathematical modeling:
 - biokinetics and dosimetry
- Tissue-light interactions modeling

APPLICATIONS

- Biomedical diagnostics
- DNA/Gene expression decoding
- Health standards
- Low-dose exposure
- Pathogen sensing
- Structural biology of complex systems