

**SUMMARY OF
INNOVATIONS IN BIOMEDICAL INFORMATION SCIENCE AND
TECHNOLOGY:
PHASED INNOVATION AWARDS (R21/R33)
FOR PROGRAM ANNOUNCEMENT PAR-03-106
NEWLY FUNDED IN FY 2005**

The following text provides a summary of grants from BISTIC member institutes and centers for NIH innovations in biomedical information science and technology awards in response to program announcement PAR-03-106. The objective of this program is to support innovative biomedical computation research whose outcomes are likely to advance health or health-related research within the mission of the NIH.

Funded grants are listed below in alphabetical order by the principal investigator's (PI's) last name. Other information provided for each grant includes PI affiliation, grant title, application number, and funding organization.

1. PRINCIPAL INVESTIGATOR: BAHAR, IVET

AFFILIATION: UNIVERSITY OF PITTSBURGH AT PITTSBURGH

PROJECT TITLE: Computational Prediction of Biomolecular Dynamics

GRANT NUMBER: 1 R33 GM068400-01A2

2. PRINCIPAL INVESTIGATOR: BAJAJ, CHANDRAJIT L.

AFFILIATION: UNIVERSITY OF TEXAS AUSTIN

PROJECT TITLE: Hierarchical Methods for Large BioMolecular Complexes

GRANT NUMBER: 1 R01 GM074258-01

3. PRINCIPAL INVESTIGATOR: BRAUN, WERNER A.

AFFILIATION: UNIVERSITY OF TEXAS MEDICAL BR GALVESTON

PROJECT TITLE: Computational tools for T- and B-cell epitope prediction

GRANT NUMBER: 1 R01 AI064913-01

4. PRINCIPAL INVESTIGATOR: BRINKMAN, RYAN R.

AFFILIATION: BRITISH COLUMBIA CANCER RESEARCH CENTR

PROJECT TITLE: Bioinformatics Standards for Flow Cytometry

GRANT NUMBER: 1 R01 EB005034-01

5. PRINCIPAL INVESTIGATOR: CHRISTENSEN, GARY E.

AFFILIATION: UNIVERSITY OF IOWA

PROJECT TITLE: NIREP: Non-rigid Image Registration Evaluation Project

GRANT NUMBER: 1 R21 EB004126-01A1

6. PRINCIPAL INVESTIGATOR: EGGLETON, CHARLES D.
AFFILIATION: UNIVERSITY OF MARYLAND BALT CO CAMPUS
PROJECT TITLE: Computational model of cellular adhesion in bulk flows
GRANT NUMBER: 1 R01 AI063366-01

7. PRINCIPAL INVESTIGATOR: FILIZOLA, MARTA
AFFILIATION: WEILL MEDICAL COLLEGE OF CORNELL UNIV
PROJECT TITLE: Informatics Of Gpcr Dimers In Drug Abuse Mechanisms
GRANT NUMBER: 1 R21 DA017976-01A1

8. PRINCIPAL INVESTIGATOR: GOLDBERG, DAVID
AFFILIATION: PALO ALTO RESEARCH CENTER
PROJECT TITLE: High-throughput annotation of glycan mass spectra
GRANT NUMBER: 1 R01 GM074128-01

9. PRINCIPAL INVESTIGATOR: GRIMSON, ERIC
AFFILIATION: MASSACHUSETTS INSTITUTE OF TECHNOLOGY
PROJECT TITLE: Computational Modeling of Anatomical Shape Distributions
GRANT NUMBER: 1 R01 NS051826-01

10. PRINCIPAL INVESTIGATOR: GROSLAND, NICOLE M.
AFFILIATION: UNIVERSITY OF IOWA
PROJECT TITLE: Automating Patient-Specific Model Development
GRANT NUMBER: 1 R21 EB001501-01A2

11. PRINCIPAL INVESTIGATOR: GRYK, MICHAEL R.
AFFILIATION: UNIVERSITY OF CONNECTICUT SCH OF MED/DNT
PROJECT TITLE: Database-driven software for biological NMR analysis
GRANT NUMBER: 1 R21 EB001496-01A2

12. PRINCIPAL INVESTIGATOR: HOCH, JEFFREY C.
AFFILIATION: UNIVERSITY OF CONNECTICUT SCH OF MED/DNT
PROJECT TITLE: Signal processing software for biomolecular NMR
GRANT NUMBER: 1 R01 RR020125-01A1

13. PRINCIPAL INVESTIGATOR: KARYPIS, GEORGE.
AFFILIATION: UNIVERSITY OF MINNESOTA TWIN CITIES
PROJECT TITLE: Classification Algorithms for Chemical Compounds
GRANT NUMBER: 1 R01 LM008713-01A1

14. PRINCIPAL INVESTIGATOR: KASIF, SIMON
AFFILIATION: BOSTON UNIVERSITY CHARLES RIVER CAMPUS
PROJECT TITLE: Gene Annotation Using Evidence Integration & Propagation
GRANT NUMBER: 1 R01 HG003367-01A1

15. PRINCIPAL INVESTIGATOR: KAZNESSIS, YIANNIS

AFFILIATION: UNIVERSITY OF MINNESOTA TWIN CITIES

PROJECT TITLE: Computational Modeling /Design of Antimicrobial Peptides

GRANT NUMBER: 1 R01 GM070989-01A2

16. PRINCIPAL INVESTIGATOR: KELLOGG, GLEN E.

AFFILIATION: VIRGINIA COMMONWEALTH UNIVERSITY

PROJECT TITLE: New Hydrophathy-Based computer Tools for Drug Discovery

GRANT NUMBER: 1 R01 GM071894-01A1

17. PRINCIPAL INVESTIGATOR: KIRK, BERNADETTE L.

AFFILIATION: UT-BATTELLE, LLC-OAK RIDGE NATIONAL LAB

PROJECT TITLE: Innovation Deterministic Particle Transport for RTP

GRANT NUMBER: 1 R21 CA114614-01

18. PRINCIPAL INVESTIGATOR: LAIDLAW, DAVID H.

AFFILIATION: BROWN UNIVERSITY

PROJECT TITLE: MRI+ Based Tools for Analyzing White Matter Variation

GRANT NUMBER: 1 R01 EB004155-01A1

19. PRINCIPAL INVESTIGATOR: LATHROP, RICHARD H.

AFFILIATION: UNIVERSITY OF CALIFORNIA IRVINE

PROJECT TITLE: A Functional Census of p53 Cancer and Suppressor Mutants

GRANT NUMBER: 1 R01 CA112560-01A1

20. PRINCIPAL INVESTIGATOR: LESLIE, CHRISTINA S.

AFFILIATION: COLUMBIA UNIV NEW YORK MORNINGSIDE

PROJECT TITLE: Recognizing protein folds with discriminative learning

GRANT NUMBER: 1 R01 GM074257-01

21. PRINCIPAL INVESTIGATOR: LI, LANG

AFFILIATION: INDIANA UNIV-PURDUE UNIV AT INDIANAPOLIS

PROJECT TITLE: Bayesian Tools for PBPK Models in Drug Interaction Res.

GRANT NUMBER: 1 R01 GM074217-01

22. PRINCIPAL INVESTIGATOR: MYCEK, MARY-ANN

AFFILIATION: UNIVERSITY OF MICHIGAN AT ANN ARBOR

PROJECT TITLE: Photon Migration Codes for Tissue Spectroscopy & Imaging

GRANT NUMBER: 1 R01 CA114542-01A1

23. PRINCIPAL INVESTIGATOR: PATERNOSTRO, GIOVANNI

AFFILIATION: BURNHAM INSTITUTE

PROJECT TITLE: Systems Biology of Cardiac Aging

GRANT NUMBER: 1 R21 AG026729-01

24. PRINCIPAL INVESTIGATOR: POON, C-S.

AFFILIATION: MASSACHUSETTS INSTITUTE OF TECHNOLOGY

PROJECT TITLE: Nonlinear Analysis of Heart Rate Variability

GRANT NUMBER: 1 R01 HL079503-01A1

25. PRINCIPAL INVESTIGATOR: RICHARDSON, JANE S.

AFFILIATION: DUKE UNIVERSITY

PROJECT TITLE: Inverse Kinematics, Sterics & Data - To Fit RNA Backbone

GRANT NUMBER: 1 R01 GM074127-01

26. PRINCIPAL INVESTIGATOR: ROTH, FREDERICK P.

AFFILIATION: HARVARD UNIVERSITY (MEDICAL SCHOOL)

PROJECT TITLE: Computational Methods for Directed Functional Genomics

GRANT NUMBER: 1 R01 HG003224-01A2

27. PRINCIPAL INVESTIGATOR: SANTALUCIA, JOHN

AFFILIATION: WAYNE STATE UNIVERSITY

PROJECT TITLE: Software for Structural Bioinformatics of Nucleic Acid

GRANT NUMBER: 1 R01 GM073179-01

28. PRINCIPAL INVESTIGATOR: SANTALUCIA, JOHN

AFFILIATION: WAYNE STATE UNIVERSITY

PROJECT TITLE: Software for Structural Bioinformatics of Nucleic Acid

GRANT NUMBER: 3 R01 GM073179-01S1

29. PRINCIPAL INVESTIGATOR: SHERMAN, SIMON

AFFILIATION: UNIVERSITY OF NEBRASKA MEDICAL CENTER

PROJECT TITLE: Biomedical Computing Tools for Pancreatic Cancer Res.

GRANT NUMBER: 1 R33 CA105955-01A2

30. PRINCIPAL INVESTIGATOR: STRAATSMA, TJERK P.

AFFILIATION: BATTELLE PACIFIC NORTHWEST LABORATORIES

PROJECT TITLE: Pseudomonas aeruginosa Outer Membrane Protein Modeling

GRANT NUMBER: 1 R01 AI063509-01

31. PRINCIPAL INVESTIGATOR: SUNYAEV, SHAMIL

AFFILIATION: BRIGHAM AND WOMEN'S HOSPITAL

PROJECT TITLE: Approaches to Multiorganismal Comparative Proteomics

GRANT NUMBER: 1 R01 GM070986-01A1

32. PRINCIPAL INVESTIGATOR: TROYANSKAYA, OLGA

AFFILIATION: PRINCETON UNIVERSITY

PROJECT TITLE: Integration and Visualization of Diverse Biological Data

GRANT NUMBER: 1 R01 GM071966-01A1

33. PRINCIPAL INVESTIGATOR: VAKSER, ILYA A.

AFFILIATION: UNIVERSITY OF KANSAS LAWRENCE

PROJECT TITLE: Integrated Resource for Protein Recognition Studies

GRANT NUMBER: 1 R01 GM074255-01

34. PRINCIPAL INVESTIGATOR: WEARNE, SUSAN L.

AFFILIATION: MOUNT SINAI SCHOOL OF MEDICINE OF NYU

PROJECT TITLE: Multiscale Analysis of Neuronal Morphology

GRANT NUMBER: 1 R01 MH071818-01A1

35. PRINCIPAL INVESTIGATOR: XU, XIE G.

AFFILIATION: RENSSELAER POLYTECHNIC INSTITUTE

PROJECT TITLE: Virtual Patients for Computing Radiation Doses

GRANT NUMBER: 1 R01 CA116743-01