Title
Integrated OMICs analysis in IMG and IMG/M

Permalink
https://escholarship.org/uc/item/0fz7q27j

Authors
Pati, Amrita
Varghese, Neha
Chen, I-Min Amy
et al.

Publication Date
2014-03-19
Integrated OMICS analysis in IMG and IMG/M

Amrita Pati¹, Neha Varghese¹*, I-Min Amy Chen², Marcel Huntemann¹, Kostas Billis¹, Kostas Mavrommatis¹, Krishna Palaniappan², Ernest Szeto², Anna Ratner², Manoj Pillay², Ken Chu², Victor Markowitz², Natalia Ivanova¹, Nikos Kyrpides¹

¹ LBNL - Department of Energy Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA USA
² Biological Data Management and Technology Center (CRD), Berkeley, CA USA

*To whom correspondence should be addressed: Email: apati@lbl.gov

March 21, 2014

ACKNOWLEDGMENTS:

The work conducted by the U.S. Department of Energy Joint Genome Institute is supported by the Office of Science of the U.S. Department of Energy under Contract No. DE-AC02-05CH11231.

DISCLAIMER:

LBNL: This document was prepared as an account of work sponsored by the United States Government. While this document is believed to contain correct information, neither the United States Government nor any agency thereof, nor The Regents of the University of California, nor any of their employees, makes any warranty, express or implied, or assumes any legal responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by its trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof, or The Regents of the University of California. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof or The Regents of the University of California.
Integrated OMICs analysis in IMG and IMG/M

Neha Varghese¹, I-Min Amy Chen², Marcel Huntemann¹, Kostas Billis, Kostas Mavrommatis, Krishna Palaniappan², Ernest Szeto², Anna Ratner², Manoj Pillay², Ken Chu², Victor Markowitz², Natalia Ivanova¹, Nikos Kyrpides¹, Amrita Pati¹,*

¹DOE Joint Genome Institute, 2800 Mitchell Dr. Walnut Creek CA 94598. ²Biological Data Management and Technology Center, CRD, Berkeley CA. *apati@lbl.gov

Natural Products and Biosynthetic Clusters

669 Natural Products in IMG

Phylogenetic distribution of corresponding biosynthetic clusters

- Polypeptides: 26%
- Polyketides: 19%
- Actinobacter: 19%
- Fatty-acids derived: 19%
- Polysaccharides: 12%
- Aminoglycosides: 10%
- Alkaloids: 9%
- Lipopolysaccharides: 7%
- Terpenoids: 5%
- Glycosides: 3%
- Nonribosomal polypeptides: 3%
- Tetraterpenoids: 3%
- Other: 3%
- Siderophores: 3%
- Methylamines: 3%
- Tetramic acids: 3%
- Phenylpropanoids: 3%
- Nonribosomal peptide-polypeptide: 3%
- Proteins: 3%
- Methylamines, Fatty-acid derived: 3%
- Pyrroles: 3%
- Lactams: 2%
- Polyethers: 2%
- Carbohydrates: 2%
- Chitin: 2%
- Sulfonates: 2%
- Polyamines: 2%
- Selenoamino acids: 2%
- Glycopeptides: 2%
- Glycopeptidolipids: 2%
- Glycopeptides: 2%
- Phosphatides: 1%
- Redox cofactors: 1%
- Sphingolipids: 1%
- Glycolipids: 1%
- Glycosylated glycopeptides: 1%
- Glycosylated peptides: 1%
- Lipids: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%
- Polyamines: 1%