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Statement of Intent

My motivation for joining the Executive Committee for the International Society for Biocuration (ISB) is both personal and professional. As a self-professed biocurator, I am passionate about promoting the biocurator profession and providing networking and training opportunities to foster the development of the biocurator workforce. The tenets of data accuracy, quality control, scientific reproducibility, provenance, open licensing and data dissemination are integral to my daily work as a biocurator of human diseases, their associated symptoms and methods of transmission and/or inheritance, as a genomic metadata resource developer fostering standardized metadata submissions to the INSDC's BioSample repository and as a researcher utilizing standardized metadata collection to explore the spread of antimicrobial resistance genes among metagenomic communities in the Washington D.C. metro system and across the island of Crete.

As a member of the ISB executive committee, I would champion the achievements of the biocuration community, address funding, outreach and training challenges, provide guidance for the growth and development of the ISB community and promote the best interests of the society and its membership among funding agencies, community stakeholders, ontology and data standards developers and biomedical and genomics data providers and databases.

As a member of the ISB executive community I would utilize my leadership, collaborative and biocuration experiences and expertise to promote the ongoing development of the biocurator community and to contribute to the ISB's operations and governance.

Biographical Sketch

I am an Associate Professor at the University of Maryland, School of Medicine in Baltimore, Maryland. I joined the Department of Epidemiology and Public Health, Division of Genomic Epidemiology and Clinical Outcomes, and at the Institute of Genome Science (IGS) in 2007. My research group is focused on the development, implementation and utilization of biomedical ontologies, genomic metadata standards and bioinformatic tools to gain a broader understanding of role of microbial genomics, human genetic variation and human disease. As Principal Investigator of the Human Disease Ontology (DO) project, I am focused on the classification and annotation of cancers and rare human diseases towards elucidating shared etiologies, fostering interoperability between cancer data

repositories and facilitating identification of connections between common and rare diseases towards drug repurposing and determination of personalized treatment types. The DO project is actively engaged in representing and standardizing human diseases associated with animal models within and among the Model Organism databases.

As Principal Investigator of the Alfred P. Sloan Foundation funded Built Environment MIXS-BE Metadata project, I lead a team of engineers, architects and microbial ecologists. We have developed a novel metadata standard, MIXS-BE to enable researchers to collect and deposit standard metadata in order to examine the role of the built environment on microbial communities within hospitals, homes, subways and schools.

I joined the Genomic Standards Consortium (GSC) as a metadata standards developer in 2005. I became a GSC board member in 2009, served as GSC Treasurer from 2010 to 2015 and currently serve in my second term as GSC President and GSC Board Chairman, where I guide growth and development of the consortium, foster community outreach and coordinate the organization of our yearly conference with local hosts.

Following my postdoctoral research at the National Cancer Institute - Frederick Cancer Research and Development Center conducting HIV-related CCR5 delta 32 population studies and characterizing mouse ABC-transporters, I transitioned to the field of bioinformatics joining NCBI for six years, where as a Staff Scientist I developed resources and bioinformatics tools for the model organism genome projects prior to joining the Institute for Genome Research (TIGR) in 2005 to develop the microbial surveillance Gemina project for the Department of Homeland Security.

Complete a '**Conflict of Interests**' statement describing any activities, memberships of other associations, editorial positions on journals, etc.

Related to my activities, memberships and other associations, as outlined below, I do not believe that I have any conflicts of interest with regards to ISB Executive Committee membership.

Activities

(1) Ontology development, collaborative projects:

Human Disease Ontology, Symptom Ontology, Transmission Process Ontology

These activities involve collaborative development and development over the past 10 years including DO's integration in the Wikidata project with Andrew Su and Ben Good, harmonization of human diseases with MGD and RGD, providing standardized disease terms to database resources (e.g. Google, FlyBase, WormBase, ZFIN, Reactome, Immune Epitope Database, the Jackson Laboratory for Genomic Medicine (cancer variant annotation), the Clinical Interpretations of Variants in Cancer (CIViC) project at the McDonnell Genome Institute at Washington University at St. Louis, OMIM), ontology developers (e.g. Human Phenotype Ontology, Protein Ontology, Experimental Factor Ontology, United

National Environmental Programme (UNEP) Strategic Development Goals (SDG Ontology), researchers (e.g. Raja Mazumder, George Washington University, pan-cancer analysis) and bioinformatics developers. (178 papers citing/utilizing DO: <http://www.ncbi.nlm.nih.gov/sites/myncbi/lynn.schriml.1/collections/49204559/public/>)

(2) Metadata standards development, implementation and utilization.

These activities include:

(1) Alfred P. Sloan Foundation Microbiology of Built Environment (MoBE), MIxS-BE metadata standard, MoBE 2017 symposium chair (National Academy of Sciences, Oct 12-14, 2017);

(2) Washington DC MetaSUB (Metagenomics & Metadesign of Subways & Urban Biomes) site, sampling the subway's metagenomes;

(3) Island Sampling Day: a soil metagenomic study on the island of Crete; and

(4) the NIAID clinical metadata working group and

(5) Genomic Standards Consortium board member, metadata standards developer and conference organizer (GSC9-GSC19).

The Genomic Standards Consortium (GSC) was established in 2005 with a mission to facilitate the harmonization of metadata collection and analysis efforts across the genomics community. The GSC has developed a suite of widely utilized minimal information (MIxS) standards for reporting data about the sampling and sequencing of over 250,000 genomes that have been incorporated into the nucleotide databases at the European Bioinformatics Institute (EMBL-EBI), the National Center for Biotechnology Information (NCBI), GOLD, QIIME and QIITA databases.

The success of the GSC's community-driven standards is attributable to coordinated community development within the auspices of international working groups. As a community, the GSC represents a highly collaborative, international group of over 500 researchers exploring microbial diversity across the globe, examining soil, water, air, built environments and human body sites. The GSC is an international open-membership working body of researchers promoting community-driven efforts since 2005 for the reuse and analysis of contextual metadata describing the collected sample, the environment and/or the host, the sample and sequencing methodologies and technologies. The GSC consortium includes 534 members from 19 countries involved in microbial research in environmental samples and the human microbiome.

(3) Advisory Board Member:

Advisory Board Member, NSF-funded, cROP: Common Reference Ontologies and Applications for Plant Biology project

Scientific Advisory Board, IRIDA Genome Canada, BC Public Health, Integrated Rapid Infectious Disease Analysis project

(4) University of Maryland School of Medicine activities

(1) University of Maryland School of Medicine, Program in Health Disparities and Population Health working group; and

(2) Department of Epidemiology and Public Health Medical School Council Representative

Grant Reviewer

NHGRI GNOM-G U41

Genome Canada Bioinformatics & Computational Biology Competition

UK Medical Research Council

Swiss National Science Foundation (SNSF), Indo Swiss Joint Research Program

Luxembourg National Research Fund, postdoctoral research grant

Alfred P. Sloan Foundation Microbiology of the Built Environment program

NHGRI study section, Genomic Medicine Pilot, Demonstration Projects

NIH Director's Early Independence Award

NHLBI Special Emphasis Panel, Biologic Specimen and Data Repository Information Coordinating Center

NIH Biodata Management and Analysis study section participant

Journal Reviewer

Database Journal, Nucleic Acids Research – Database Issue, BMC Bioinformatics, PLoS

Neglected Tropical diseases, PLoS One, BMC's Standards in Genomic Sciences Journal,

Annals of Psychiatry and Mental Health Journal, Journal BioMed Research

International, Infection, Genetics and Evolution, Gender Medicine, AMIA Annual

Symposium

Conference submission reviewer

ACM Conference on Bioinformatics, Computational Biology and Biomedical

Informatics, Data and Knowledge Bases, Text Mining, and Ontologies Track

ISMB Phenotype Day Program Committee member and reviewer

Conference Organizer

Genomic Standards Consortium (2009-present)

Microbiology of the Built Environment

Conference Organizer, Program committee: ISMB M3 and BioSharing SIG

Memberships

The International Society for Biocuration

The Genomic Standards Consortium

The Open Biological and Biomedical Ontologies Foundry, foundry member,

ontology editor, operations committee, editorial working group

MetaSUB consortium (metagenomics of urban subways)

BioCreative Metagenomics Advisory Group
Committee member and cell line metadata standard team leader, Progenitor Cell
Biology Consortium Bioinformatics Committee
The New York Academy of Sciences
Senior Ontology Expert Committee, United Nations Environment Programme (UNEP),
Multi-purpose Indicators for Strategic Development Goals
International Metagenomics and Microbiome Standards Alliance (IMMSA) member
at the National Institute of Standards and Technology (NIST).

Editorial Positions

Senior Editor, BioMed Central Standards in Genomic Sciences (SIGS) Journal (2008-
present)
Editorial Board Member, Editor, Oxford Journals' DATABASE Journal (2016-present)
Section Editor, Metagenomics Issue, *Standards in Genomics Journal*