Final Agenda

Pathogen Genomics Funders Forum

17 January 2025

Agenda

1. Brief Introduction (Greg and Caxton)
    a. Main objectives for today:
        i. input on possible in-person meeting in May
        ii. input on webinar series topics
        iii. input on other organizational issues
    b. Brief update: ionput from other organizations:
        i. WHO/IPSN
        ii. Wastewater surveillance funders forum
2. Potential in-person meeting in London (see concept note sent Monday Jan 13)
    a. Presentation of concept (Greg)
    b. Suggestions from members
    c. Preliminary poll of members (we'll send out a follow-up poll)
3. Webinar series (preliminary discussion of direction this should take)
    a. Discussion of potential topics (see draft list of topics below)
    b. Frequency
4. Input from funders:
    a. What information to include in a shared directory of members?
    b. Names of other funders not yet participating
5. Next meeting (in 4 to 6 weeks?)

Draft list of topics for the webinar series

The following is a tentative list of topics for the webinar series. These are included to provide a starting point for the discussion (Item 3 on today's agenda). They are not prioritized in the list below. We are looking for input on

- What additional topics to include
- Which topics would be priorities

While we anticipate opening the webinar series to the public, please keep in mind that the objective of the webinar series is to provide funders with information that will be useful in improving their investments in pathogen genomics in LMICs.

- Pathogen- (or pathogen group-)specific applications
    - Future of genomics in TB:
        - Speaker: one or more experts in TB and the use of genomics. The speaker should have knowledge of the control and treatment of TB in LMICs as well as of the issues around the use of genomics both for DST and for cluster detection/investigation. The speaker should be prepared to address not just where the field is now but where it is going.
        - Potential topics to cover:
            - The potential use of genomics for TB drug susceptibility (targeted amplicon sequencing, whole genome sequencing, [others?])
            - Current available platforms
            - Economics of these
            - Possible scenarios for adoption of genomics for DST, including timelines
            - Potential uses of genomic data for cluster detection/phylogeny--how useful is this likely to be? Would it require additional amplicons (in the case of targeted sequencing)
    - Future of genomics in malaria
        - Speaker: similar to above--someone with a knowledge of malaria genomics and the potential for public-health use of the data as well as the use in the research realm. Knowledge of how genomics is used to track mosquitoes and insecticide resistance would be a plus (this can be worked into the talk).
        - Potential topics:
            - Uses in research
            - Uses for public health action at national or sub-national level
                - For making recommendations on empiric treatment
                - For tracking HRP-2 deletions and informing RDT policy
    - Future of genomics in healthcare infection prevention / antimicrobial resistance
        - Speaker: This is a very broad topic, and may need to be narrowed (or split into more than one), but the overall idea would be to cover the use of genomics in tracking resistance in organisms of importance in healthcare settings. Healthcare settings in high-income countries are routinely using genomics as a tool for healthcare infection control. The speaker should be someone who can discuss the degree to which is this now the practice in LMICs as well as how it likely to evolve in the next several years.
        - Potential topics:
            - Current state in LMICs
            - How is this being used
            - Is this still strictly speaking a research tool, or does it have day-to-day application as well?
            - Wastewater surveillance for resistance markers
                - What do we know about the utility of this?
                - What markers are typically used
    - Respiratory virus genomic surveillance: influenza, RSV, coronaviruses
        - Speaker: Someone with knowledge of genomic surveillance for these three viruses and is part of the global discussions on this issue
        - Potential topics:
            - How is this data used?
            - Who benefits from its use?

        - What does the global network look like?
        - What are plans going forward for supporting or expanding the global network?
        - Are there priorities beyond influenza, RSV and coronaviruses?
- "Wet-lab" technologies
    - Genomic sequencing technologies
        - Speaker: Someone with a knowledge of this industry who can talk about the broad range of existing technologies and those in the pipeline, including technologies coming out of China (or other "Global South" countries). Ideally, the speaker would have some knowledge which technologies are in common use for which applications. The speaker also needs to be able to discuss practical issues around cost and maintenance of equipment.
        - Potential topics:
            - What do we know about which technologies are most used in LMICs?
            - What other existing technologies are potentially useful in LMICs?
            - What are cost issues involved with using these technologies?
            - What sort of maintenance does the equipment require?
            - Looking forward, are technologies in the pipeline that could have the potential to be useful in LMICs
    - Other lab technologies important for sequencing (?)--technologies to enable metagenomics workflows, library prep automation, others? This would not be one of the first webinars in the series, but might be an interesting one for later on.
- Software
    - Tools for integrating genomic and epidemiologic data
        - Speaker: It will be important to find someone who has a broad knowledge of this--both of why this is important and what solutions there are to it. If it's not possible to find an unbiased expert in this area, perhaps a few speakers could be invited to discuss the software their groups have developed and how its used. If this is the solution, it might be useful to have someone separate talk the "why" part of this -- why this useful.
        - Potential topics:
            - What tools are available for doing this?
            - What are their strengths and limitations?
            - How is development of these tools supported financially?
            - Are there practical ways funders could support the development of these?
    - Tools for managing bioinformatics workflows
        - Speaker: the issues are similar to those for a speaker in the previous topic
        - Potential topics
            - Overview of variety of platforms out there
            - Have speaker speculate on what will be needed in future
- Policy
    - Pathogen genomic data--issues around sharing and data sovereignty
        - This subject may require more than one speaker
        - What platforms are out there for sharing pathogen genomic data publicly or semi-publicly?
        - What are the characteristics of these platforms, including advantages and drawbacks?

        - What implications does the Convention on Biologic Diversity (and specifically, the Nagoya Protocol) have for sharing pathogen genomic data?
    - Broader policy issues 9this may need to be refined further)
        - Speaker: ?
        - Global pathogen surveillance networks--overview, future directions
        - North-south collaborations--examples of successful collaborations and lessons learned from them
        - IHR and implications for genomics
        - Other regulatory issues?
- Other
    - Feedback from implementers
        - Identify a panel of three fundees
        - Ask the three to reach out to their colleagues to get feedback for funders
        - Have the panel present for perhaps 15 minutes on what they're hearing and seeing in the field with respect to pathogen genomics in LMICs: what's working; what's not; what suggestions do they have for funders; where do they see unmet needs.
        - Leave much of the time open for questions.
        - We would have to carefully coach the presenters to make sure any recommendations they make are general--not specifically about funding, for example, their own particular area of research.