Education and Coordinated Training working group, H3Africa Consortium Meeting, Kigali, Rwanda 9/17/18

## Introductions

- The meeting was opened by the ECTWG chair, Oumar Samassekou
- Each participant in the meeting introduced themselves

Career Development presentation, Paballo Chauke, University of Cape Town

- Paballo coordinates the Introduction to Bioinformatics online course and Genomic Medicine course through UCT and is passionate about education and career development.
- He is interested in understanding and expanding the options for career development for early career researchers/post docs/students (or any staff)
- Factors that he's considering when examining current training programs:
  - O What kind of students are we producing, and do we want to attract?
  - o What kind of students are leaving the programs? What happens to them after training?
  - o How do we prepare students to succeed?
- Paballo is working with CBIO/CIDRI/H3ABionet/H3Africa to find partners to offer an array of
  insights into the world of bioinformatics and genomics grants or proposal writing or job seeking.
  Series will be both formal and informal and allow space for questions and sharing of
  experiences. Would like the series to be useful for PhD students, post-docs, and other early
  career researchers who are increasingly needing to write or contribute to research proposals
  and look for jobs.
  - o Likely will include webinars and workshops
  - Planned topics introduction to fundraising, general proposal writing do's and don't's, theory of change, integrating monitoring, evaluation and learning into a proposal, turning your plans into a budget, how to create a funding tracker, which funding websites to join
    - One potential resource/website is Research Professional, which has opportunities for Africans
  - Planning a Career Fair Day for UCT/IDM students how to find a job/write a good CV, how to apply for grants/funding, write cover letters for jobs, scholarships, travel fellowships
    - This is all in attempt to capacitate and upskill our students and post docs.
       Empower them to be competitive students and job seekers in the bioinformatics arena.
  - Some more ideas:
    - Where to look to find opportunities, find job ads through LinkedIn,
       Bizcommunity
    - Scholarship opportunities
      - http://internationalscholarships.dhet.gov.za
      - https://opportunitiesforafricans.com
    - Interviewing skills (power poses) speaking skills
  - Looking for suggestions, ideas, questions, participation

- Questions and Comments from Audience
  - We need to put more emphasis on careers outside of academia. How to prepare people properly for industry. Universities should offer modules for how to get a job and work in the private sector. Would also like to link Francophone community into this effort. He's willing to help (Hans Hagen).
  - o Emphasis through the consortium the past few years has been on academia. There should be focus on improvement in other areas like soft skills.
  - o Paballo even some professors need help with mentor training and speaker training, we all need to communicate better.
  - Students need a better understanding of their pathway to develop a PhD and how to incorporate passion, purpose, and self-expression into their work, rather than just producing a thesis.
  - A website that might be useful: Cheekyscientist.com talks about transition from academia to industry
  - Transition to meaningful jobs outside academia is important, but knowing your passion and path forward isn't easy or always possible. They might not know what's going to carry their careers forward. We invest in training people to create the next generation of genomic scientists. But should teach them transferable skills we now have a cohort of people with thesis and unpublished data. One thing to consider is next steps how do you get your data published and how can we foster trainees through a mentorship platform. There is a wealth of combined knowledge from funders to more senior scientists.
  - We need to work on mentor/mentee training and facilitation. People who get to the top have people who have pulled them up. We should focus efforts more on training to become a good mentee and good mentor.

Update on HtrainDB, Rolanda Julius, UCT (H3Africa Coordinating Center)

- Rolanda explained HtrainDB and its purpose as an accessible platform for the whole consortium. She provided an overview of functionalities that have been implemented:
  - Announcing an event so fellows know about it ahead of time
  - Make a meeting create a survey
  - o Resources and weekly digest can upload resource files
  - o Webforms

Industry Perspectives for Fellows – Oumar Samassekou, USTTB (Chair, ECTWG)

- The purpose of the presentation was to start a conversation on how we can shift some focus to industry/academia partnerships and what we need to teach trainees so that they can pursue industry careers, development of their own companies, intellectual property and patents (and how to generally translate ideas to help people).
- Example at University of Manitoba cancer biomarker idea that sat for 15 years. Now the project has more than \$120 million investment.
- Sited opportunities:
  - Clinical laboratory, research laboratory

- Executive positions (Oumar has helped lead a company) can form grant partnerships between academia and industry.
- Market analysts people who can understand science and can inform investments.
- Industry advisors, consultants.
- Clinical research organizations that run clinical trials (important field for biostatistics and bioinformatics experts)
- Data analysts
- Patent officers
- Journal editor/science writers
- Thoughts on how students and early career researchers can shift toward industry:
  - Be good scientists
  - o Have a plan
  - Make an industry job your target
  - Be advised or mentored for industry, get business insight
  - Be part of IP (intellectual property)
  - o Establish a network
  - o Get industry training experience
- Advantages: rewarding, well paid, expands career development/options
- Questions and comments from audience
  - People are not thinking about this enough in Africa and industry not picking up enough
     there needs to be more of a presence in-country.
  - Mali now has a minister of innovation trying to figure out what needs to be done to make this profitable.
  - o But how do you create an innovation environment in Africa? Thinks that we need to create an open innovation ecosystem that combines talent, collaboration, and first right of refusal for companies. But it's unclear what this looks like in Africa. Universities need to become relevant for this area. Value added chain needs to be developed. Need people but also enabling resources. Need a practical plan. And we need these things to develop in unison.
  - At Mali there is nothing at the entrepreneur level, but we need to be the pioneers. Could use H3Africa as a platform.
  - o If people are trained but there is no platform for them to extend their knowledge, then this training is useless. In Swaziland, there is a network that wants to train people in bioinformatics but there is no platform for these people to work. Could be a waste for the country.
  - Encouraged by industry/academic relationships, but industry usually not usually engaged with academia. What can be done? Information that be provided to get academics more connected to industry?