

African Society for Bioinformatics and Computational Biology

The importance of international collaboration is emphasised by ASBCB President **Nicky Mulder**, who reveals that pan-African networks and projects are boosting bioinformatics research and infrastructure on the continent

Could you outline how you apply your background in computational biology to your role as President of the African Society for Bioinformatics and Computational Biology (ASBCB)?

My background has been valuable in my role as President of ASBCB as I have had exposure to research, services and education in bioinformatics, and access to the user community who want to learn more. I have also met many people in the field and have a large network of international collaborators or contacts, which is very useful for the Society.

What other roles do you fill in African bioinformatics?

I am the coordinator of a large National Institutes of Health (NIH)-funded consortium – H3ABioNet – which aims to build a pan-African bioinformatics network for Human Heredity and Health in Africa (H3Africa; www.h3africa.org). H3ABioNet has over 30 sites in 15 African countries and two in the US, and we are building infrastructure and training researchers in bioinformatics for genomics of human health. This has really had an impact on bioinformatics in Africa and has enabled us to achieve numerous things we wanted through ASBCB that we didn't have the funds for, particularly in capacity building.

I am also on the Scientific Advisory Board for ELIXIR, which exposes me to European bioinformatics infrastructures and enables me to compare the challenges and successes between African and European environments.

Can you describe some of the exciting new opportunities that are opening up in the field of bioinformatics in Africa?

Probably the most significant is the H3Africa initiative. The NIH and Wellcome Trust have put significant funding into H3Africa research projects and the NIH are funding biorepositories and H3ABioNet, the bioinformatics network. This has already impacted bioinformatics development in Africa, with notable successes after its first year.

There is still much work to do, but the funding provided through H3ABioNet is enabling bioinformatics groups to really get themselves established and build up their computing infrastructure and trained human resources. This has also become a springboard for further opportunities in the field. Many of the participants in H3ABioNet have formed smaller regional collaborations, in order to apply for new grants or to start up new collaborative projects. The group is also working on facilitating a new bioinformatics degree programme to get the topic onto the postgraduate agenda at more universities in Africa. In the future, we will be looking to approach government

agencies to contribute to the development of bioinformatics, ensuring long-term sustainability.

ASBCB is a non-profit professional association dedicated to the advancement of bioinformatics and computational biology in Africa. By what means does the Society provide an international forum and resource for developing competence and expertise in these areas?

ASBCB's website has information on the Society and promotes bioinformatics courses and events. It includes a page where members can identify others in the Society with whom they wish to work. We also have a newsletter that is widely distributed and a mailing list for members to communicate with us and with each other.

The main international connection is through our association with the International Society for Computational Biology (ISCB). Our students receive reciprocal membership of ISCB and are actively involved in their student council and regional student groups (RSGs). There was originally one RSG for Africa, but due to its popularity this has now been split into the five regions (north, east, south, west and central Africa).

ISCB and ASBCB team up every two years to run an ISCB Africa ASBCB Conference on Bioinformatics, which rotates between the different African regions. These are accompanied by workshops, which train our local students and researchers. The conferences provide an international forum for African scientists to present their work and gain exposure to high quality international keynote speakers. The workshops provide a forum for learning and exposure to international trainers.

What is the role of students within ASBCB and what is the benefit of their joint membership with ISCB?

Our students are very active and enthusiastic. Through the RSGs of the ISCB student council they work together on interesting projects. The students have taken the initiative and organised virtual conferences and published their own papers on the subject. At the conferences, students provide excellent ideas for the Society and help us with our activities.

They benefit enormously from joint membership with ISCB, which brings with it access to the Intelligent Systems for Molecular Biology (ISMB) conference (discounted registration), opportunities for applying for travel funds and internships, discounted journal subscription, and exposure to other student groups worldwide. ASBCB is a smaller organisation with very limited funds, so we can't provide as many opportunities as ISCB can to our students.

How important is the organisation of conferences to the work of ASBCB?

We run conferences every two years which have always been accompanied by workshops. In 2007, ASBCB organised the first conference on Bioinformatics of African Pathogens, Hosts and Vectors in Nairobi, Kenya. In 2009, ASBCB teamed up for the first time with ISCB to organise a meeting in Mali, which was followed in 2011 by a second in Cape Town, South Africa, and third in Casablanca, Morocco, in 2013. The student groups have also organised virtual conferences and courses. We will organise the next ISCB Africa ASBCB conference, which is planned for March 2015 in Dar es Salaam, Tanzania.

Does the Society collaborate with any individuals, groups or organisations in its mission to develop the application of bioinformatics in Africa?

We have a natural link with H3ABioNet, as I coordinate the network and all our governing council members are part of the network. In fact, everything we are trying to achieve with H3ABioNet is what ASBCB hoped to achieve. Therefore the activities of the two are very closely aligned.

ASBCB is also now a member of the Global Organisation for Bioinformatics Learning Education and Training (GOBLET), and bioinformatics training is high on our agenda. GOBLET members include many international societies or institutions with extensive experience in bioinformatics education, so we can learn from them in developing bioinformatics on the continent.

www.asbcb.org

