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A review of bioinformatics training applied to research in molecular biosciences and biodiversity in Central America

Allan Orozco

University of Costa Rica, Costa Rica

Today, bioinformatics has become a scientific discipline with great relevance for the molecular biosciences and for the omics sciences in general. Although developed countries have progressed with large strides in bioinformatics education and research, in other regions, such as Central America, the advances have occurred in a gradual way and with little support from the Academia, either at the undergraduate or graduate level. To address this problem, the University of Costa Rica's Medical School, a regional leader in Bioinformatics in Central America, has been conducting a series of bioinformatics workshops, technologies, projects, seminars and courses, leading to the creation of the region's first Bioinformatics Master's Degree and the recent creation of the Central American Bioinformatics Network (BioCANET), associated to the deployment of a supporting computational infrastructure (HPC Cluster) devoted to provide computing support for molecular biology in the region. It is composed by 60 SGI rackable system servers and a network storage system with capacity for 100 TB distributed in four independent racks. The cluster runs on the Rocks Mamba Server 6.2 operating system (stable version of Red Hat Linux for servers). This infrastructure provides the technical support for the Central American Bioinformatics Network as well as a Galaxy-based platform for aggregated services that delivers support for applied biomolecular data analysis & biodiversity.

Biography

Allan Orozco completed his Master's and PhD degree at the Universidad Autónoma de Madrid (UAM), Bioinformatics and Nano-Biotechnology. He received trainings at Cambridge University (UK), Austria, Germany, Sweden, Finland, Portugal, USA and Italy in the field of Bioinformatics Area and Computer Biology. He is the co-founder of the Bioinformatics Latin America Society, Director of the Central America's Bioinformatics and Molecular Biocomputing Network, Director of the Bioinformatics at the University of Costa Rica's Medical School, General Director (CEO) at Indromics Bioinformatics (allied with illumina), Node Manager of the EMBNET Bioinformatics Global Network, ex-General Manager of the Bioinformatics National Institute in Madrid, Spain. He is also an active member of the International Society of Computational Biology (ISCB), USA; Co-founder of the Bioinformatics and Systems Biology Master's Degree, University of Costa Rica, Professor of the Biomedical Science Post-Graduate Study System, University of Costa Rica. He received the 2014 Biotechnology Entrepreneur National Award (ITCR), is the member of scientific committees of Bioinformatics in Europe, America and Asia member of Editorial Board Journal (IJSAMI), Greece former Researcher of the Oncological Research National Center (CNIO), Structural Biology and Biocomputing Group and Coordinator of the Molecular Oncology Master's Degree (CNIO), Spain.

allan.orozco@indromics.com, bioinformatica.em@ucr.ac.cr