Recently announced as the new Head of Policy and Advocacy at the Drugs for Neglected Diseases Initiative (DNDi), Michelle Childs tackles the challenges that involve Research & Development and, consequently, compromise the access to essential medicines for the most vulnerable populations of the planet.

According to a research published by Folha de São Paulo newspaper in 2014, neglected diseases threaten one in every six people and are responsible for up to a million deaths worldwide. However, in the period between 2000 and 2011, only 4% of the newly approved drugs were meant to treat those illnesses. Why does this paradox still persist?

This fatal imbalance between health needs and Research & Development (R&D) to meet them persists, despite some progress, primarily because of the current way it is financed.

In today’s system, drug development is overwhelmingly driven by interests of the pharmaceutical industry that choose whether to invest in developing a drug based on the potential commercial return. Patents and other legal monopolies are also used, which gives companies the exclusive right to make and sell products, allowing them to set high prices. The result of this market-driven logic is that the drugs, diagnostics and vaccines that meet the needs of people who can’t afford to pay high prices or who don’t constitute a sizeable or lucrative market get ignored.

Therefore, R&D is lacking not just for neglected tropical diseases, such as malaria, Chagas disease and leishmaniasis, but also for emerging infectious diseases and new treatments to address antimicrobial resistance. Even where new treatments are developed, high prices strain the health budgets and can mean that treatments are rationed or are simply out of reach.

Why do neglected diseases, mostly in the developing countries, only become R&D priority once they are considered a “global threat” (just as it recently occurred to Zika virus)?

It is important to recognize that the concerns over Zika are influenced by the worldwide reaction to the Ebola outbreak in 2014. It highlighted the general lack of preparedness to deal with emerging infectious diseases and the deadly effect of how research priorities are set. Although Ebola has been around for over 40 years, there were no effective diagnostics, treatments or vaccines available, mainly because it had been restricted to poor communities in Africa.

Good surveillance systems and research in Brazil detected cases of microcephaly and its relation to the Zika virus when the outbreak was first identified. Global agreements on sharing research data in real time have allowed researchers from many countries to build on each other’s work and speed up the process of identifying and developing promising leads for diagnostics and treatments. While the emergency has tested health systems in the region, it has also shown that where there is a political willingness, effective collaboration can be rapidly organized between countries across the region.

South America is one of the regions that has been most affected by neglected diseases due to its high levels of inequality. As new head of Policy and Advocacy at DNDi, what are the main challenges when it comes to access to medicines for neglected diseases?

There are both challenges and opportunities in the region, which appears to concentrate the biggest inequalities in the whole world.
Due to changes in social, economic, climate and disease patterns, health needs are constantly evolving. Governments are facing multiple challenges in order to address the health needs of their populations. It means not just addressing neglected tropical diseases and new challenges such as the arboviruses outbreaks such Zika and Chikagunya – but also the burden of noncommunicable diseases like diabetes and cancer and the costs of access to treatments such a Hepatitis C as well as the threat of rise in antimicrobial resistance, which means that we are heading towards a post-antibiotic era in which common infectious diseases will once again kill.

South America is uniquely placed to address some of these challenges having both the patient need and research & development and clinical trial capacities. Through DNDi’s work with partners in the region we are also seeking to help approach these matters. These initiatives foster inter regional collaboration towards a regional public health agenda.

**Which diseases deserve more attention?**

**MICHELLE** There is need for new treatments and diagnostics for neglected diseases such as leishmaniasis and Chagas diseases. For example, according to the latest WHO report, about 5.7 million people are infected by Chagas disease in South America, approximately 30% of which will develop a chronic heart condition that is estimated to cause more than 7,000 deaths annually. However, the existing treatment was developed 40 years ago, carries significant side effects and has limited efficacy.

Alongside its regional partners, DNDi has been working to identify the most appropriate context-specific access strategies and delivery models to scale up access to diagnosis and treatment in Chagas disease. We have a number of R&D projects and clinical trials in the region, as well as innovative drug booster discovery initiatives such as – LOLA platform, Lead Optimization in Latin America which to seeks the optimization of new molecules against Trypanosoma cruzi and Leishmania spp for the treatment of Chagas disease and leishmaniasis.

**Consultative Expert Working Group (CEWG) published a report on financing and coordination which suggested “the development of a fully functional Global Observatory on Health Research”. How will the new division help promote innovation and access to medicines to neglected diseases?**