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## Empathetic social context of HIV researches and treatment: The core of long term success

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Protracted expectations from HIV research and treatment has been and continue to be giving hope to multidisciplinary teams and holistic interventions for prevention and impact mitigation of the pandemic. Whilst comprehensive resources are committed to generating appropriate knowledge through research, empathetic ethical practice epitomises holistic needs of beneficiaries and service providers. HIV shatters not only dreams of those infected but also visions for the future of possibilities for improved health and related socioeconomic services. Requisite outcome of both research and treatment is when knowledge and hope becomes pragmatic and reflects more intrinsic community perspectives and easily traslates community perspectives, meaning and conclusions. Communities according to Bacon (2009) due to their unity they share common beliefs and interests. Consequently, the threshold of production, publication, availability and usage of research and treatment is based on empathetically identifying how peoeple's needs affect their ability to achieve relevant outcomes, and how this impacts on their wellbeing, as well as consistent effectiveness of innovations. Phenominally, it is an ambivalent dimension to seperate researchers as professionals from researchers as social beings. Experientially, there is a critical missing link in the way research and treatment are considered from professional and scholarly practice. Thwaites (2007) attributed the model of therapeutic empathy within contexts of empathic attunement, empathic attitude/stance, empathic communication, and empathy knowledge. It is not a matter of research and making treatment available, but how much professionals can practically relate to the products as prospective users. Years as a service recipient enabled me to recognise how the lack of empathetic relationship of professionals led to severe backdrops to shortcomings in practice. It is easy to see possibilities in the eyes of a researcher but how easy is it to see possibilities in those of recipients. Conclusions are easier understood by professional than they are in those of communities. Therefore, research conclusions and most importantly treatment are always a major break through but are always a mere step in responses against pandemics like HIV. Empathy in that sense should remain an integral component to any kind of research.

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## Therapeutic targeting of viral RNAs: High-hanging fruit only needs a longer ladder

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Small molecules targeting the enzymes responsible for human immunodeficiency virus (HIV) polyprotein maturation (protease), DNA synthesis (reverse transcriptase) and the subsequent insertion of ribonucleotide-free double-stranded DNA into the host chromosome (integrase) have for several years been the central components of combination antiretroviral therapy. For infected individuals harboring drug-susceptible virus, this approach has afforded complete or near-complete viral suppression. However, in the absence of a curative strategy, the predictable emergence of drug-resistant variants requires continued development of improved antiviral strategies, inherent to which is the need to identify novel targets. Cis-acting regulatory elements of the HIV-1 RNA genome that regulate its transcription (the transactivation response element, TAR), translation (the ribosomal frameshift signal), nucleocytoplasmic transport (the Rev response element or RRE),dimerization (the dimer linkage sequence or DLS), packaging (the element) and reverse transcription of the (+) strand RNA genome (the primer binding site, or PBS) should now be considered as alternative targets for small molecule, peptide- and oligonucleotide-based therapeutics, as well as combinations thereof. The first part of this talk will summarize how high-resolution 3D structural information is being used to develop small molecule and peptide-based therapeutics that targetcritical cis-acting RNA motifs of the HIV-1 genome and consequently may be less prone to resistance-conferring mutations. Subsequently, advances in the development of novel high-through put small molecule microarrays (SMMs) and RNA motifs that have been successfully targeted by this approach will be presented. An extension of the (SMM) approach to target other viral RNAs, or virus-specified RNAs, will be presented. Finally, where target specificity, endosomal release, cellular penetration and toxicity have been the primary obstacle to successful "macromolecule therapeutics", methodological advances will be reviewed.

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