

Tentative Outline

Special Issue for Current HIV Research

Title: Anti-HIV strategies: From diagnosis to Therapy and Cure

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Aims & Scope:

HIV prevalence is increasing worldwide because people on antiretroviral therapy are living longer, although new infections decreased from 3.3 million in 2002, to 2.3 million in 2012. Global AIDS-related deaths peaked at 2.3 million in 2005, and decreased to 1.6 million by 2012. An estimated 9.7 million people in low-income and middle-income countries had started antiretroviral therapy by 2012. New insights into the mechanisms of latent infection and the importance of reservoirs of infection might eventually lead to a cure. The role of immune activation in the pathogenesis of non-AIDS clinical events (major causes of morbidity and mortality in people on antiretroviral therapy) is receiving increased recognition. Breakthroughs in the prevention of HIV important to public health include male medical circumcision, antiretroviral to prevent mother-to-child transmission, antiretroviral therapy in people with HIV to prevent transmission, and antiretroviral for pre-exposure prophylaxis. Research into other prevention interventions, notably vaccines and vaginal microbicides, is in progress.

Many advances have been made in the prevention of HIV transmission and management of HIV/AIDS since the virus was discovered in the early 1980s. One of the most important discoveries has been antiretroviral treatment, which can halt the replication of HIV and ease symptoms, turning AIDS into a chronic condition instead of a rapidly terminal illness. Despite advances, HIV remains a major public health challenge. This article reviews the genus, life cycle, and transmission of HIV, as well as workplace issues surrounding the virus and the challenges of developing an HIV vaccine.

Big challenges face the development of an effective HIV vaccine, including the genetic diversity of HIV, uncertainty about what constitutes protective immunity, and difficulty in the development of antigens that are highly immunogenic. Findings of clinical trials of HIV vaccines have eliminated several candidate vaccines that have not shown efficacy.

Keywords: HIV, AIDS, antiretroviral therapy, vaccines, Drug design and development, Drug resistance

Subtopics:

The subtopics to be covered within this issue are listed below:

- Evolution of HIV and epidemiology
- HIV structure and properties
- Structure and function of HIV proteins
- Prognosis and diagnosis of HIV
- HIV transmission and prevention
- Anti-HIV targets to combat HIV infection
- Drug resistance and Therapeutic strategies
- Anti-HIV drugs design and development of small novel molecules
- Drug induced Toxicity
- Plant based principles as anti-HIV agents
- Vaccines against HIV

Submission deadline:

✧ Manuscript submission deadline: August 30, 2020

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