thinking outside the box

It has been more than 30 years since the emergence of HIV and AIDS and yet it still remains one of the greatest challenges to human health.

More than 35 million people are living with HIV, and one third are infected with latent tuberculosis (TB).

Australia has shown outstanding leadership in HIV prevention and Burnet has played a significant part in this. Although a cure for HIV remains elusive, our scientists have made important contributions to understanding HIV and the body’s response to infection. This work has helped in the development of effective HIV therapies and the pursuit of therapeutic cures or prevention vaccines. Since the early 1990s, Burnet has played a leading role in national and international policy development, research, and service delivery in response to the HIV epidemic.

Burnet’s unique approach to tackling HIV by ‘thinking outside the box’ transcends our laboratory research, population health collaborations and international community-based HIV prevention programs.

We are proud of our legacy in HIV research since the early days of the epidemic in Australia; the cutting edge research underway in our labs; the major role we play in the partnership approach to HIV prevention in Victoria; and the development of more effective programs to manage HIV in poor and vulnerable communities.

9 labs working on a cure, vaccine and more effective treatments

70+ scientists involved in HIV research

100+ public health professionals working in HIV prevention and treatment in Victoria and overseas

Burnet initiated PRONTO! Australia’s first shop-front rapid HIV testing clinic

Burnet-developed VISITECT® CD4 low-cost, point-of-care test undergoes field evaluation internationally

Prevention of HIV transmission from mother to child through Burnet’s Healthy Mothers, Healthy Babies research initiative
The Burnet-developed VISITECT® CD4 low cost, point-of-care test is beginning field trials internationally.

The Churchill Laboratory is determining the way in which HIV enters, replicates and persists in the brain. This research is aimed at preventing and treating central nervous system infection.

The Gorry Laboratory discovered the mechanism of HIV-1 resistance to the drug maraviroc (CCR5 antagonist). Unlike other anti-HIV drugs, resistance was due to different genetic changes that resulted in HIV adopting a common but altered function.

The Tachedjian Laboratory discovered a natural microbicide in the vagina that potently kills HIV. They are undertaking the preclinical evaluation of dendrimer microbicides for the inhibition of HIV and genital herpes.

In Myanmar, Burnet delivers HIV prevention programs in community-settings through peer education, referrals to voluntary confidential counselling and testing, and increasing condom access by at risk communities.

Burnet opened Australia’s first shop-front rapid HIV testing clinic PRONTO! in collaboration with the Victorian AIDS Council/Gay Men’s Health Centre, which provides test results within 20 minutes.
Our capacity extends from basic, discovery and translational research to working with local non-government organisations and at risk communities, and with high-level government agencies and international partners. Through collaboration and innovation we aim to make a significant impact on HIV and AIDS and those affected individuals and communities.
**Public Health Epidemiological Research and Programs**

**Epidemiology and Surveillance:**
- Ongoing management of enhanced HIV passive surveillance of HIV
- Implementation and ongoing coordination of HIV and other STI sentinel surveillance
- National study of undiagnosed HIV in the gay community
- Study of undiagnosed HIV among gay men in Melbourne
- Integrated bio-behavioural survey for HIV and other STIs among sex workers and men who have sex with men (MSM) in Vanuatu
- Epidemiology and risk and protective factors associated with HIV and hepatitis C among people who inject drugs in Dar es Salaam, Tanzania.

**Implementation Research and Community Engagement:**
- PRONTO! Implementation of Australia’s first ‘shop front’ community-based HIV rapid testing service for gay men in collaboration with the Victorian AIDS Council
- Implementation of innovative and interactive social media-based HIV prevention health promotion in collaboration with the Victorian AIDS Council – ‘Being Brendo’
- Policy development and strategic planning for districts, countries and regions including Fiji, Nepal, and the smaller countries of the Pacific
- Education of community and government leaders, masters degree students and staff of donor organisations including Australia’s aid program
- Operational research to improve the quality and reach of all sorts of HIV programs in all countries in which we work
- Development of national guidelines on HIV for key populations in Mongolia, Tanzania and other countries.

**Service Delivery Improvement:**
- HIV prevention: improving the reach and quality of harm reduction for people who inject drugs, and improving community-based prevention for men who have sex with men, with a focus on Myanmar, Papua New Guinea, Lao PDR and Vietnam
- Promoting access to testing and treatment in community settings in urban and rural areas of low-income countries
- Helping people to stay on treatment once they start it, by working with health service staff and community organisations
- Preventing mother-to-child transmission of HIV, and promoting male involvement in reproductive health, in Papua New Guinea, Kenya, Zimbabwe and South Africa

**Monitoring and Evaluation:**
- Evaluation and review of large scale HIV programs being run by other organisations
- Ongoing evaluation (2008-current) of HIV prevention social marketing in Victoria
- Evaluation of the Victorian AIDS Council tailored alcohol and other drug counselling service targeting gay, lesbian, bisexual and transgendered (GLBT) community.

**Trials:**
- 24-month trial comparing HIV testing frequency between community-based HIV rapid testing, targeting gay men with high HIV caseload, gay-friendly, primary care settings
- Randomised controlled trial of using rapid point-of-care VISITECT® CD4 tests to enhance early commencement of maternal HIV treatment for prevention of maternal-to-child HIV transmission
- HIV Pre-exposure Prophylaxis (PrEP) demonstration trial.
About Burnet

Burnet Institute is an Australian, unaligned, independent, not-for-profit organisation that links discovery-based research with innovative public health action to address complex health issues affecting disadvantaged, poor or otherwise vulnerable people in the world.

Burnet Institute is internationally renowned for its expertise in infectious and non-infectious diseases of major global significance. Cross-centre collaborations aim to achieve advances in the treatments, vaccines, diagnostic tests and prevention strategies to address diseases such as HIV, malaria, tuberculosis, hepatitis and influenza, and apply the best available evidence to inform development of community-level public health programs.

We are passionate in our commitment to working and growing together to create a healthier world. We value excellence, innovation and social justice, and share a desire to extend the boundaries of knowledge and understanding.

While based in Melbourne, Burnet has offices in Myanmar (Burma), Papua New Guinea and Lao PDR, and is involved in a range of research and public health activities in other Asian, Pacific and African countries.