To: Mr. Warren C. Kocmond

President, Chief Operating Officer

Cepheid

904 E Caribbean Drive Sunnyvale, CA 94089

United States

Cc: Thomas P. Joyce, Jr., President and Chief Executive Officer, Danaher

William K. Daniel, II, Executive Vice President, Danaher

Peter Farrell, Executive Vice President, Global Commercial Operations, Cepheid

David H. Persing, Executive Vice President, Chief Medical and Technology Officer, Cepheid

Philippe Jacon, Senior Vice President, Global Access, Cepheid

Martin Colla, Director, Global Access, Cepheid Cristina H. Kepner, Board Member, Cepheid Robert J. Easton, Board Member, Cepheid Thomas L. Gutshall, Board Member, Cepheid Hollings C. Renton, Board Member, Cepheid

Glenn D. Steele Jr., Board Member, Cepheid

OPEN LETTER: Time to Lower the Price of Xpert Cartridges to US\$5

6 January 2020

Dear Mr. Kocmond,

We acknowledge your response, which regrettably did not meet the expectations of the 156 undersigned organizations and individuals. We reiterate our request for you to respond with a detailed plan for how Cepheid will lower the price of Xpert MTB/RIF and Xpert MTB/RIF Ultra tuberculosis (TB) tests to US\$5, and include in this price the cost of service and maintenance. We additionally request that you articulate how Cepheid will lower the price of all GeneXpert tests, including those for HIV, hepatitis B and C, human papillomavirus (HPV), and other sexually transmitted infections (STIs), and include in this lower price the cost of service and maintenance.

In 2018, Xpert TB cartridge sales volumes reached nearly 12 million cartridges sold to High Burden Developing Countries (HBDCs) alone. Given the current high volumes of sales and resulting manufacturing efficiencies and cost savings, we know Cepheid can do better than \$9.98 per cartridge for TB tests. This price is comparable to the earlier FIND-negotiated price of \$10.72 for volumes of just 3.7 million annually, one third of what they are today, and one eighth of what they would be if Xpert MTB/RIF and Xpert MTB/RIF Ultra were being used according to World Health Organization recommendations, as the initial TB test for all. 4,5

According to an independent cost of goods (COGS) analysis commissioned by Médecins Sans Frontières (MSF), the estimated cost to produce Xpert MTB/RIF and Xpert MTB/RIF Ultra cartridges at volumes of 1 million cartridges per year was estimated to be \$8.63 and \$8.82, respectively.⁶ When modeled at annual volumes of 10 million, the estimated cost dropped to \$4.64 per cartridge, including royalties on two patents. Presuming that these patents have expired, at annual volumes of 10 million the cost of producing each Xpert cartridge is estimated to be as low as \$3 (see: https://msfaccess.org/time-for-5).⁷

In your response, you mentioned Cepheid's investments related to HIV, hepatitis B and C, HPV, and other STIs. Under the HBDC concessional pricing program, viral tests are currently priced at \$14.90 per cartridge, while STI test cartridges are priced at \$16.20 for chlamydia and gonorrhea, and \$19.00 for Trichomonas vaginalis. Yet the COGS analysis found that there is no significant cost distinction to warrant a higher price: it found that the basic materials to construct the bacterial and viral cartridges are the same. Similar to Xpert tests for TB, the sales volumes for Cepheid's other assays are expected to continue to rise, particularly the HIV viral load tests, as well as the tests for HPV and other STIs. Since all of these assays are manufactured on the same production line, and all contribute to manufacturing efficiencies, a comparable price reduction across all GeneXpert assays that includes the cost of service and maintenance is a reasonable request.

In 2011, Cepheid stated that "[t]he single most influential factor impacting the price of the test going forward is test volume. Higher annual test volume will directly translate into lower overall production costs and result in a lower ExWorks price to the HBDC Market." Higher annual test volumes have arrived; it's time that the global public share the benefits of Cepheid's lower production costs.

By January 21st, the 156 undersigned organizations and individuals look forward to your response, which should directly address the evidence presented in this correspondence, and articulate how Cepheid will lower the price of TB test cartridges to \$5, as well as how Cepheid will lower the price of all GeneXpert assays, inclusive of service and maintenance. Please direct your response to David Branigan, David.Branigan@treatmentactiongroup.org.

Sincerely,

David Branigan TB Project Officer Treatment Action Group

On behalf of the 156 undersigned organizations and individuals

Organizational Endorsements:

AASRA for Community Transformation (ACTINDIA), India Access to Rights and Knowledge (ARK) Foundation, India ACT! AP, Asia Pacific ACTION, Global

Active Help Organization (AHO), Pakistan Afrihealth Optonet Association, Nigeria

Aids Counselling Trust (ACT), Zimbabwe

Alliance for Public Health, Ukraine / Global

Alliance Lanka, Nugegoda, Sri Lanka

Americas TB Coalition (ATBC), Latin America and the Caribbean

APCASO, Asia Pacific

Asha Parivar, India

Association Burkinabé d'Action Communautaire, ABAC, Burkina Faso

Association for Protection of Human Rights and Community Development (APHRICOD), Nigeria

Burundian Alliance for the Fight Against Tuberculosis and Leprosy (ABTL), Burundi

Canadian HIV/AIDS Legal Network, Global

Carmelo Hospital of Chokwe, Mozambique

Citizen News Service (CNS), India

Civil Society Movement Against Tuberculosis (CISMAT), Sierra Leone

Coalition PLUS, Global

Community and Family Aid Foundation, Ghana

Compañeros en Salud (CES), Chiapas, Mexico

Delhi Network of Positive People (DNP+), India

Dr Uzo Adirieje Foundation (DUZAFOUND), Nigeria

Drug Resistant TB Scale Up Treatment Action Team (DR-TB STAT), Global

Empower India, India

End Hep C SF, USA

Epicentre / Médecins Sans Frontières (MSF), Global

European AIDS Treatment Group (EATG), Europe

FACT, Zimbabwe

Georgia Harm Reduction Network, Georgia

Ghana National TB Voice Network, Ghana

Global Coalition of TB Activists (GCTA), Global

Global Media Foundation, Ghana

Global TB Community Advisory Board (TB CAB), Global

Grassroots Development and Empowerment Foundation, Nigeria

Health GAP (Global Access Project), Global

Hepatitis Education Project, Seattle, USA

Human Touch Foundation, Goa, India

INP+ (Indian Network For People Living With HIV/AIDS), India

INTILISH, Uzbekistan

ITPC Eastern Europe and Central Asia (ITPCru), Eastern Europe and Central Asia

ITPC South Asia, Delhi, India

Jointed Hands Welfare Organisation, Zimbabwe

KHANA, Cambodia

Lawyers Collective, India

League PLWHA, Moldova

LHL International Tuberculosis Foundation, Global

Maa Community Health Workers CBO, Kenya

Manicaland Network of Most at Risk Populations, Zimbabwe

Médecins Du Monde, Georgia

Médecins Sans Frontières (MSF), Global

Médecins Sans Frontières (MSF), Mozambique

Medical IMPACT, Global

Mongolian Tuberculosis Coalition, Mongolia

National Coalition of People Living with HIV in India (NCPIPLUS), India

National Empowerment Network of People Living with HIV/AIDS in Kenya (NEPHAK), Kenya

National TB Reference Lab, Philippines

Network of TB Champions, Kenya

Pamoja TB Group, Kenya

Pan-African Treatment Access Movement, Africa

Partners In Health (PIH), Global

PIVOT, Madagascar

plan:g Partnership for Global Health, Austria

Private Health Sector Project, Ethiopia

REACH, Ethiopia

RESULTS UK, United Kingdom

San Francisco Hepatitis C Task Force, USA

Sentinel Project on Pediatric Drug-Resistant TB, Global

Sikkim Drug Users' Forum, India

Society for Conservation and Sustainability of Energy and Environment in Nigeria (SOCSEEN), Nigeria South African National AIDS Council (SANAC) Civil Society Forum, Access Chapter 2 (AC2), South Africa

Southern African Miners Association (SAMA), Southern Africa

STOPAIDS, United Kingdom

Swaziland Migrant Mineworkers Association (SWAMMIWA), Eswatini

TB Proof, Global

The Hepatitis C Mentor and Support Group (HCMSG), USA

TINPSWALO Association - Vincentian Association to Fight AIDS and TB, Chokwe, Mozambique

Touched By TB, India

Treatment Action Group (TAG), Global

U.S. People Living with H.I.V. Caucus, USA

Volunteer Health Services, Ethiopia

Volunteers for Development Nepal (VFDN), Nepal

Women for Health, Georgia

Wote Youth Development Projects, Kenya

Yayasan Menara Agung, Indonesia

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Amrita Limbu, TB Champion/Activist, STREAM Chennai CAB Member, India

Ana Teodoro, Philippines

Arumugam Sankar, Health Activist, Empower India, India

Bobby Ramakant, Citizen News Service (CNS) and Asha Parivar, India and Thailand

Candice Sehoma, Médecins Sans Frontières (MSF), South Africa

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Daniel Datiko, Addis Ababa, Ethiopia

Dr. Arne von Delft, University of Cape Town and TB Proof, South Africa

Dr. Basanta Kumar Parajuli, Nepal

Dr. Santosh Kumar Giri, West Bengal, India

Dr. Uzodinma Adirieje, Executive Secretary, Nigeria Universal Health Coverage Actions Network (NUHCAN), Nigeria

Eddie Sistoso Jr., Research Institute for Tropical Medicine, National Tuberculosis Reference Laboratory, Manila, Philippines

Edward Low, Positive Malaysian Treatment Access & Advocacy Group (MTAAG+), Malaysia

Emi Okamoto, MD, Cambodia

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Ganesh Acharya, TB Activist, Mumbai, India

Grace Kahenya, International Union Against Tuberculosis and Lung Disease (The Union) TB and HIV

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Martha Tholanah, PLHIV, Zimbabwe

Meera Hada, National Tuberculosis Center, Nepal

Mildred Pancho, FHI 360, Philippines

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Mohammed Dawd Negash, Ethiopia

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Pardeep Kumar, India

Patrick Amah, Nigeria

Peter Owiti, Wote Youth Development Projects, Makueni, Kenya

Pilar Mabasa, FHI 360, Philippines

Prashant Sharma, India

Priyanka Aiyer, Global Coalition of TB Activists, India

Prof. Brian Citro, Northwestern Pritzker School of Law, USA

Prof. Brook K. Baker, Northeastern University School of Law, Boston, USA

Reeta Sahoo, REACH, Odisha, India

Renbonthung Tongoe, Indian Drug Users' Forum, India

Robert Heimer, Professor of Epidemiology, Yale School of Public Health, New Haven, CT, USA

Robyn Waite, RESULTS Canada, Ottawa, Canada

Ronald Rungoyi, Stop TB Partnership, Zimbabwe

Roxanne Belen, TB Innovations and Health Systems Strengthening Project, Philippines

Ruth O. Chi, FHI 360, Manila, Philippines

Sein Sein Thi, Thailand

Sergio Maulen, Buenos Aires, Argentina

Shobha Shukla, Citizen News Service (CNS), India and United Kingdom

Tonderai Chiduku, Zimbabwe

Umesh Sharma, New Delhi, India

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Violeta Ross, Bolivian Network of People Living With HIV/AIDS (REDBOL), La Paz, Bolivia

Wondimu Adane, TB Program Officer, Addis Ababa, Ethiopia

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- ¹⁰ World Health Organization. Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection: recommendations for a public health approach; Second edition. Geneva: World Health Organization; 2016. Available from: https://apps.who.int/iris/bitstream/handle/10665/208825/9789241549684 eng.pdf?sequence=1.
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¹ Technical Officer (Stop TB Partnership Global Drug Facility, Geneva, Switzerland). Personal communication with: David Branigan (Treatment Action Group, New York, NY). 2019 October 8.

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