The ISAC Instruments for Science (I4S) Task Force mission is to promote global access to cytometry technology through scientific collaboration, instrument placement and donation to laboratories in resource limited settings, providing both initial and long-term support for these efforts. Many ISAC investigators already work on such collaborations but may not be aware of similar projects in the society. Instruments for Science aims to build a community of these investigators, facilitating their individual projects while encouraging the creation of new ones.

I4S members manage many new and refurbished instrument donations, grant-driven technology transfer projects and cytometry training programs, providing instrumentation, training and collaborations to labs globally. But donating and placing equipment is only the first step. Sustained technical support, training, education, scientific interactions and mentorship are all essential if this equipment is to be truly useful in the long term. I4S aims to promote and support these efforts by ISAC members.

Over 40 instrument donation and training programs in over 30 countries on all six inhabited continents are being organized and driven by the efforts of ISAC and I4S members...

### Phase 1 Identifying instruments for donation and potential recipients...

### Phase 2 Prepare / restore instrumentation and transfer to the recipient...

**Country: South Africa**

**Institution:** Wild Spirit Fund (in collaboration with the University of Cape Town and Yale University)

**Contacts:** Fabiola Quesada, DVM, MD (ZA), Elisa Nemes (ZA), Alfonso Blanco (IRELAND)

**Instrument:** BD Accuri C6 Plus

**Summary:** The project aims to develop new flow cytometry-based tools to understand the immunopathogenesis of helminth-tuberculosis co-infection and to diagnose tuberculosis in wild African buffalo in Kruger National Park.

**Country: Bangladesh**

**Institution:** School of Veterinary, Animal and Biomedical Sciences, Sylhet Agricultural University (SAU), Sylhet

**Contact:** Ferdhaus Mohd Hossain, DVM, PhD (BANGLADESH), Bill Telford (USA)

**Instrument:** BD FACSCalibur

**Summary:** IICS is receiving a BD FACSCalibur flow cytometer to support research on immune effects of viral and parasitic diseases endemic to Paraguay. This will be the only research-dedicated flow cytometer at this institution.

**Country: Morocco**

**Institution:** Laboratory of Cytomics, Mohammed VI Centre for Research and Innovation, Rabat

**Contacts:** Fouad Seghrouchni, PhD (MOROCCO), Diana Ordoñez-Rueda, PhD (EMBL, GERMANY)

**Instrument:** BD LSR Fortessa

**Summary:** Setting up a centre of excellence in flow cytometry practice, partnership and training in Morocco, to promote national and African scientific and transfer programs in medical, cell biology, drug developments and food/environment hygiene and security.

**Country: Paraguay**

**Institution:** Instituto de Investigaciones en Ciencias de la Salud (IICS) (Health Sciences Research Institute), Universidad Nacional de Asuncion (UNA)

**Contacts:** Vivian Giménez Bareiro MD (PARAGUAY), Mariela Bollati (URUGUAY), Bill Telford (USA).

**Instrument:** BD FACSCalibur

**Summary:** IICS is receiving a BD FACSCalibur flow cytometer to support research on immune effects of viral and parasitic diseases endemic to Paraguay. This will be the only research-dedicated flow cytometer at this institution.
Phase 3  Install the instrumentation and provide initial training…

Country:  Sudan

Institution:  Flow Cytometry Laboratory for Leukemia and Lymphoma Diagnosis, Khartoum

Contacts:  Eman Abbass, MD (SUDAN), Alfonso Blanco, PhD (IRELAND)

Instrument:  Beckman-Coulter FC500 (2)

Summary:  These instruments are part of an inter-institutional clinical cytometry training program in leukemia and lymphoma diagnosis.

Country:  Armenia

Institution:  Institute of Molecular Biology, Armenian Academy of Sciences, Yerevan

Contacts:  Gayane Manukyan, MD, PhD (Armenia), Bill Telford (USA)

Instrument:  BD FACSCalibur, BD LSR II

Summary:  This group uses high-dimensional flow cytometry to study infectious and autoimmune diseases common in Armenia. A strong and self-sustaining collaboration with NIH and ISAC investigators.

Country:  Ukraine

Institution:  Department of Infectious Diseases, Ternopil National Medical University (TNMU)

Contacts:  Mariia Shkilna, MD, PhD (UKRAINE), Bill Telford (USA)

Instrument:  BD Accuri C6

Summary:  This group studies immune effects of tick-borne spirochete infections in Ukraine. Instrument is received and training is progressing (on-line only due to pandemic and the current conflict).

Country:  Sudan, Kenya, Ethiopia, Uganda

Institution:  U Khartoum, U Gondar, U York, Makerere University, Kenya Medical Research Institute

Contacts:  Paul Kaye, PhD (UK), Karen Hogg (UK)

Instruments:  Beckman Coulter CytoFLEX LX (5)

Summary:  A multi-country Leishmaniasis project using multicolor flow cytometry on patients recruited from the countries of the Leishmaniasis East Africa Platform. Project is part of the EDCTP2 Programme supported by the European Union (RIA2016V-1640)