BVGH Partnership Hub
ANNUAL REPORT
2017
Dear WIPO Re:Search Members and Friends,

As we reflect on 2017, BVGH celebrates with you, the WIPO Re:Search community, the many exciting achievements this year brought. Membership has grown to include more than 130 organizations representing 40 countries. In 2017 alone, we welcomed 27 new Members to the Consortium and established 14 collaborations, with several others under discussion. Thirty-five collaborations are currently ongoing, seven of which have met key development milestones.

BVGH established and incorporated into our partnering processes criteria defining targeted WIPO Re:Search collaborations. In establishing these criteria, BVGH will streamline its partnering approach and consolidate efforts toward addressing the greatest unmet medical needs.

With guidance from the WIPO Re:Search Advisory Committee, WIPO and BVGH published the *WIPO Re:Search Strategic Plan, 2017-2021*. The Strategic Plan was launched during the 70th World Health Assembly and defines the Consortium's objectives over the next five years.

As we recognize our accomplishments in 2017, we look forward to 2018 and continuing to address some of the most pressing global health needs. Thank you for your ongoing support of WIPO Re:Search.

Jennifer Dent
President, BVGH
BVGH's 2017 collaboration objective was to establish eight new targeted agreements and to provide alliance management support to ongoing collaborations. BVGH exceeded its objective, establishing 14 new agreements, 12 of which met the criteria below. These agreements span nine diseases, and involve over 20 Members from ten countries.

### Diseases targeted by 2017 collaborations

- Buruli ulcer
- Chagas disease
- HAT*
- Leishmaniasis
- Lymphatic filariasis
- Malaria
- Schistosomiasis
- Soil-transmitted helminthiases
- Tuberculosis
- Human African trypanosomiasis

### Criteria for Targeted Agreements

1. Project in advanced stage of product development
2. Product addresses an unmet medical need
3. Novelty in approach/new validated target
4. Expected product aligns with target product profile (TPP)/target candidate profile (TCP)
## Partnerships Established

<table>
<thead>
<tr>
<th>Partners</th>
<th>Disease</th>
<th>Asset Shared</th>
<th>Phase</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alnylam, Fiocruz</td>
<td>Schistosomiasis</td>
<td>Reagent</td>
<td>Basic research</td>
<td>Data</td>
</tr>
<tr>
<td>Eisai, NEU, UCSD</td>
<td>Chagas disease, leishmaniasis</td>
<td>Compounds</td>
<td>Screening</td>
<td>Drug</td>
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<tr>
<td>Eisai, UCSD</td>
<td>Schistosomiasis</td>
<td>Compounds</td>
<td>Screening</td>
<td>Drug</td>
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<tr>
<td>FIND, IP Korea</td>
<td>Tuberculosis</td>
<td>Samples</td>
<td>Preclinical</td>
<td>Drug</td>
</tr>
<tr>
<td>GSK, UCB</td>
<td>Tuberculosis</td>
<td>Compounds</td>
<td>Hit identification</td>
<td>Drug</td>
</tr>
<tr>
<td>J&amp;J, IDRI</td>
<td>Leishmaniasis, tuberculosis</td>
<td>Compounds</td>
<td>Screening</td>
<td>Drug</td>
</tr>
<tr>
<td>J&amp;J, NIH</td>
<td>Tuberculosis</td>
<td>Compounds</td>
<td>Screening</td>
<td>Drug</td>
</tr>
<tr>
<td>J&amp;J, U of T</td>
<td>Soil-transmitted helminthiases</td>
<td>Compounds</td>
<td>Screening</td>
<td>Drug</td>
</tr>
<tr>
<td>J&amp;J, WUSTL</td>
<td>Tuberculosis</td>
<td>Compounds</td>
<td>Screening</td>
<td>Drug</td>
</tr>
<tr>
<td>Merck KGaA, UCSD</td>
<td>Multiple</td>
<td>Compounds</td>
<td>Screening</td>
<td>Drug</td>
</tr>
<tr>
<td>NIPD, CPC</td>
<td>Malaria</td>
<td>Samples</td>
<td>Basic research</td>
<td>Data</td>
</tr>
<tr>
<td>Takeda, NIH/NIAID</td>
<td>Malaria</td>
<td>Technology</td>
<td>Preclinical</td>
<td>Vaccine</td>
</tr>
<tr>
<td>Takeda, UCSF</td>
<td>Lymphatic filariasis</td>
<td>Compounds</td>
<td>Screening</td>
<td>Drug</td>
</tr>
<tr>
<td>USF, U of Yaoundé</td>
<td>Multiple</td>
<td>Expertise</td>
<td>Hit identification</td>
<td>Drug</td>
</tr>
</tbody>
</table>

**Institution Acronyms**

- CPC: Centre Pasteur du Cameroun
- FIND: Foundation for Innovative New Diagnostics
- GSK: GlaxoSmithKline
- IDRI: Infectious Disease Research Institute
- IP Korea: Institut Pasteur Korea
- J&J: Janssen Research & Development
- NEU: Northeastern University
- NIH: National Institutes of Health
- NIAID: National Institute of Allergy and Infectious Diseases
- NIPD: National Institute of Parasitic Diseases
- UCSF: University of California, San Francisco
- U of T: University of Toronto
- U of Yaoundé: University of Yaoundé I
- USF: University of South Florida
- WUSTL: Washington University in St. Louis

## Collaboration Highlights

### New Drug Candidates for Soil-Transmitted Helminthiases

Janssen Research & Development (J&J) provided Professor Andrew Fraser, University of Toronto, with its Jump-stARter library. J&J’s library is a set of 80,000 high-quality compounds that have been carefully selected to represent chemical diversity. Professor Fraser’s lab has been screening the library against *C. elegans* to identify inhibitors of a unique metabolic pathway found in parasitic worms.

### Microneedle Patch Application for a Malaria DNA Vaccine

Takeda Pharmaceutical Company Limited and the National Institute of Allergy and Infectious Diseases (NIAID) have entered into a joint venture to examine the feasibility of using Takeda’s microneedle patch technology to administer a protein antigen-based, transmission-blocking malaria vaccine. The vaccine was developed by NIAID’s Laboratory of Malaria Immunology and Vaccinology (LMIV). Under this agreement, Takeda and LMIV will first confirm the compatibility of the vaccine antigen and microneedle patch polymer. The NIAID scientists will subsequently evaluate the immunogenicity of the patch-administered vaccine in vivo.
The Brazilian Biosciences National Laboratory (LNBio) is dedicated to cutting-edge biotechnology, healthcare, and life sciences research and development. LNBio scientists focus on understanding the molecular mechanisms of pathogenic bacteria’s virulence, and drug development for parasitic diseases including Chagas disease and leishmaniasis.

“Targeted” Members

Institutes from select countries and regions — Australia, East Africa, and the Indo-Pacific — and organizations with the capacity to fill critical pipeline gaps.

BVGH recruited 27 new User and Provider Members in 2017. Nine of these new Members met “targeted” recruitment criteria. Sixteen new Members are based in a low-to middle-income country (LMIC).
New Members
Brazilian Biosciences National Laboratory
Centre for Plant Medicine Research
George Washington University
Instituto de Biología Molecular y Celular de Rosario
Institut de Recherche en Sciences de la Santé
Makerere University
Seattle Children’s Research Institute
Social Medicine Institute, Rio de Janeiro
State University
Structural Genomics Consortium
Texas Children’s Hospital Center for Vaccine Development
University of Campinas
University of Dschang
University of Paris-Sud
University of São Paulo
University of South Carolina
University of Texas Southwestern Medical Center
University of Toronto
University of Zambia

New Members - Targeted
Eijkman Institute for Molecular Biology
Institut Pasteur de Madagascar
Institut Teknologi Bandung
International Centre for Diarrhoeal Disease Research, Bangladesh
James Cook University
Monash University
National Institute for Medical Research
Papua New Guinea Institute of Medical Research
University of Melbourne

New Member Spotlights

University of Toronto
The University of Toronto is Canada’s leading institution of higher learning and one of the top research-intensive universities in the world. The University has been awarded $1.2 billion in research funding. Research at the University includes using C. elegans as a model to study parasitic nematodes; investigating the role of Leishmania RNA virus-1 in the pathogenesis of cutaneous leishmaniasis; and developing synthetic surfactants that sensitize drug-resistant Plasmodium.

Eijkman Institute for Molecular Biology
The Eijkman Institute for Molecular Biology is focused on advancing basic and applied research into biomedicine, biodiversity, biotechnology, and biosecurity. The Institute’s infectious disease investigators focus their research on mechanisms of antimalarial resistance, natural products drug discovery, malaria vaccine development, and dengue vaccine clinical trials.

Makerere University
Makerere University is one of Africa’s oldest universities. Researchers at the University are focused on the molecular biology and clinical pharmacology of malaria. The Infectious Disease Institute at the College of Health Sciences performs an array of projects including the clinical assessment of tuberculosis diagnostics.
In 2016 the Government of Australia contributed funding to WIPO (Funds in Trust 2 [FIT2]) to support the training of East African and Indo-Pacific researchers at Australian research Institutes. In 2017 BVGH matched trainees with host organizations and developed plans for their research projects and training. Nine LMIC scientists were selected to participate, and three sabbaticals were initiated in 2017.
Completed
FIT2 Sabbatical

Despite the success of Papua New Guinea's (PNG's) National Malaria Control Program, malaria remains a public health concern throughout the country. New approaches, including genomic tools, have the potential to bolster and revolutionize malaria control efforts.

To strengthen molecular surveillance and develop genomic tools for malaria control, Associate Professor Alyssa Barry of the Walter and Eliza Hall Institute of Medical Research hosted Ms. Dulcie Lautu, an experienced researcher from the Papua New Guinea Institute of Medical Research. During the sabbatical, Alyssa and Dulcie used novel genomic approaches to investigate drug resistant genes in parasites that were collected from PNG. Dulcie plans to build on this research, and is applying for a Ph.D. studentship focused on tracking antimalarial resistance in PNG.

Trainee Institutes

EIMB: Eijkman Institute for Molecular Biology  
icddr,b: International Centre for Diarrhoeal Disease Research, Bangladesh  
IPM: Institut Pasteur de Madagascar  
ITB: Institut Teknologi Bandung  
KEMRI: Kenya Medical Research Institute  
NIMR: National Institute for Medical Research  
PNGIMR: Papua New Guinea Institute of Medical Research

Host Institutes

GRIDD: Griffith Institute for Drug Discovery  
MU: Monash University  
UM: University of Melbourne  
WEHI: Walter and Eliza Hall Institute of Medical Research
Communications

2017

GOAL

- Continue activities to increase awareness of WIPO Re:Search
- Present and represent WIPO Re:Search at five conferences
- Develop WIPO Re:Search strategic plan

DELIVERED

- Published monthly *WIPO Re:Search Snapshot* and 2017 *WIPO Re:Search Mid-Year Report*
- Increased WIPO Re:Search social media presence
- Presented and represented WIPO Re:Search at six conferences
- Published the *WIPO Re:Search Strategic Plan, 2017-2021*

WIPO Re:Search Strategic Plan

In partnership with WIPO and with guidance from the WIPO Re:Search Advisory Committee, BVGH published the *WIPO Re:Search Strategic Plan, 2017-2021*. The Strategic Plan defines activities across four strategic goals:

1. Leverage intellectual property (IP) assets to advance R&D for neglected tropical diseases (NTDs), malaria, and tuberculosis
2. Advance promising R&D collaborations
3. Build global capacity for IP management and biomedical R&D
4. Communicate the beneficial role of IP in innovation for NTDs, malaria, and tuberculosis
**IP Australia FIT2**

Manage FIT2 sabbaticals
Develop and publish FIT2 summary report

**Collaborations**

Establish eight targeted collaborations
Manage ongoing collaborations
Advance prioritized collaborations

**Communications**

Develop a WIPO Re:Search communications strategy
Bolster WIPO Re:Search communications
Increase awareness of WIPO Re:Search:
- Events and meetings
- Newsletter readership
- Publications
- Social media

**BVGH 2018 Goals**
Developed in cooperation with our Sponsors: