

The Richard G. Lugar Center for Public Health Research



History of Development and Final Formation

Early 90s	Nun-Lugar initiative
1997	USA – Georgia Umbrella Agreement signed
2002	USA – Georgia Implementing Agreement signed (DoD / MoD)
2004	Ground breaking of the lab building
2011	Legal establishment of R. Lugar Center
2013	Integration of R. Lugar Center for Public Health Research into the National Center for Disease Control and Public Health (NCDC)
2013-2014	Elaboration and ratification of Joint Transition Agreement (JTA)
2014-2018	Implementation of JTA
From 2018	GoG takes a responsibility for full funding and operation of the Laboratory Network

May, 2013

**Integration of Lugar Center into
the National Center for Disease
Control**

**June –
August, 2013**

**Transfer the Labs of the NCDC
(including the repository of
EDPs) to the Lugar Center**

August, 2013

**Lugar Center Became Fully
Operational**



MOLHSA

Multisectoral Supervisory Board:
MoLHSA, MoA, MoES, MoIA, MoD, MoE, MoF

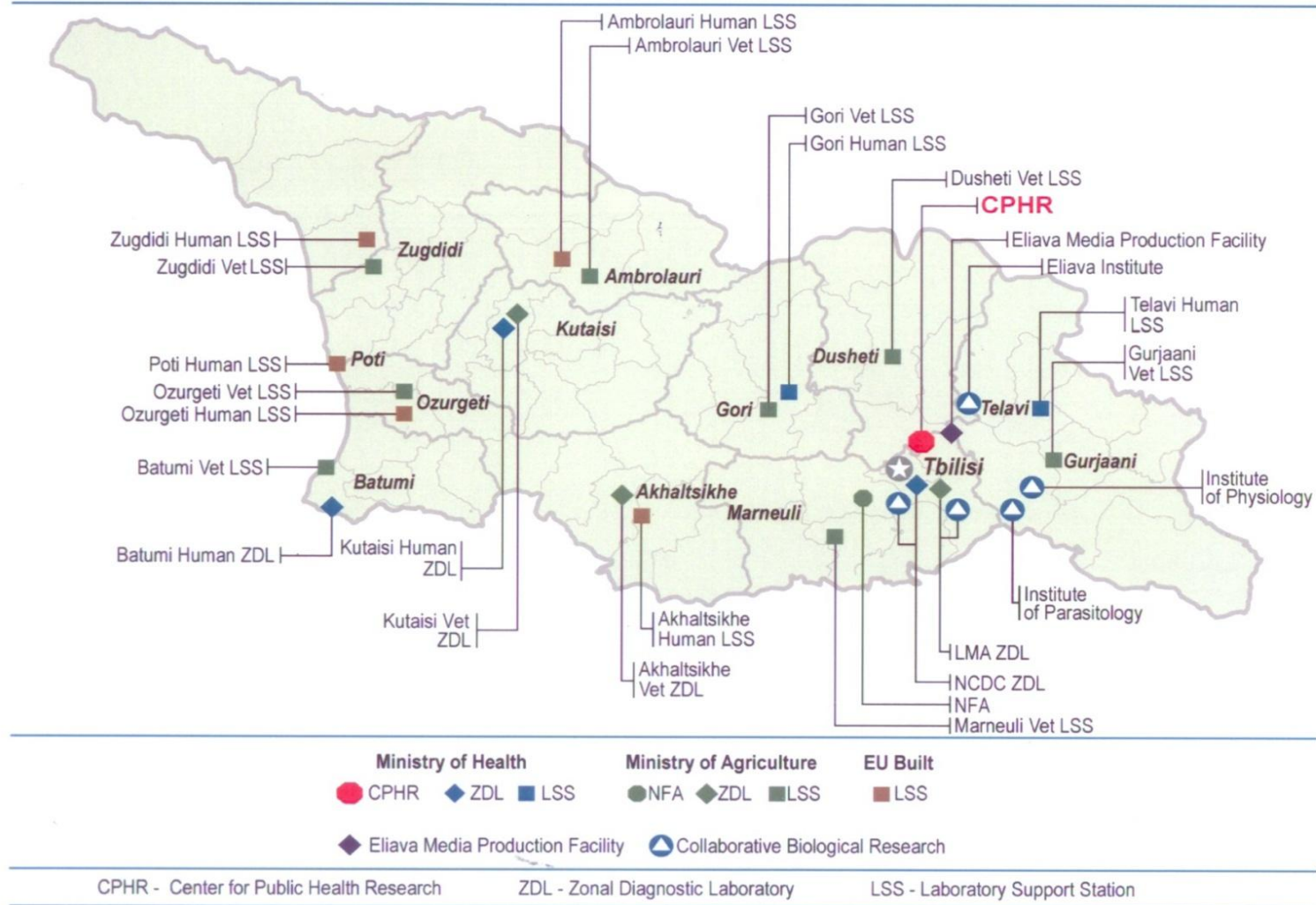
NCDC
(High-level Biomedical Research Center –
Major Goal: to become a Regional Center of Excellence)

Lab Part
Richard G. Lugar Center
“One World – One Health”

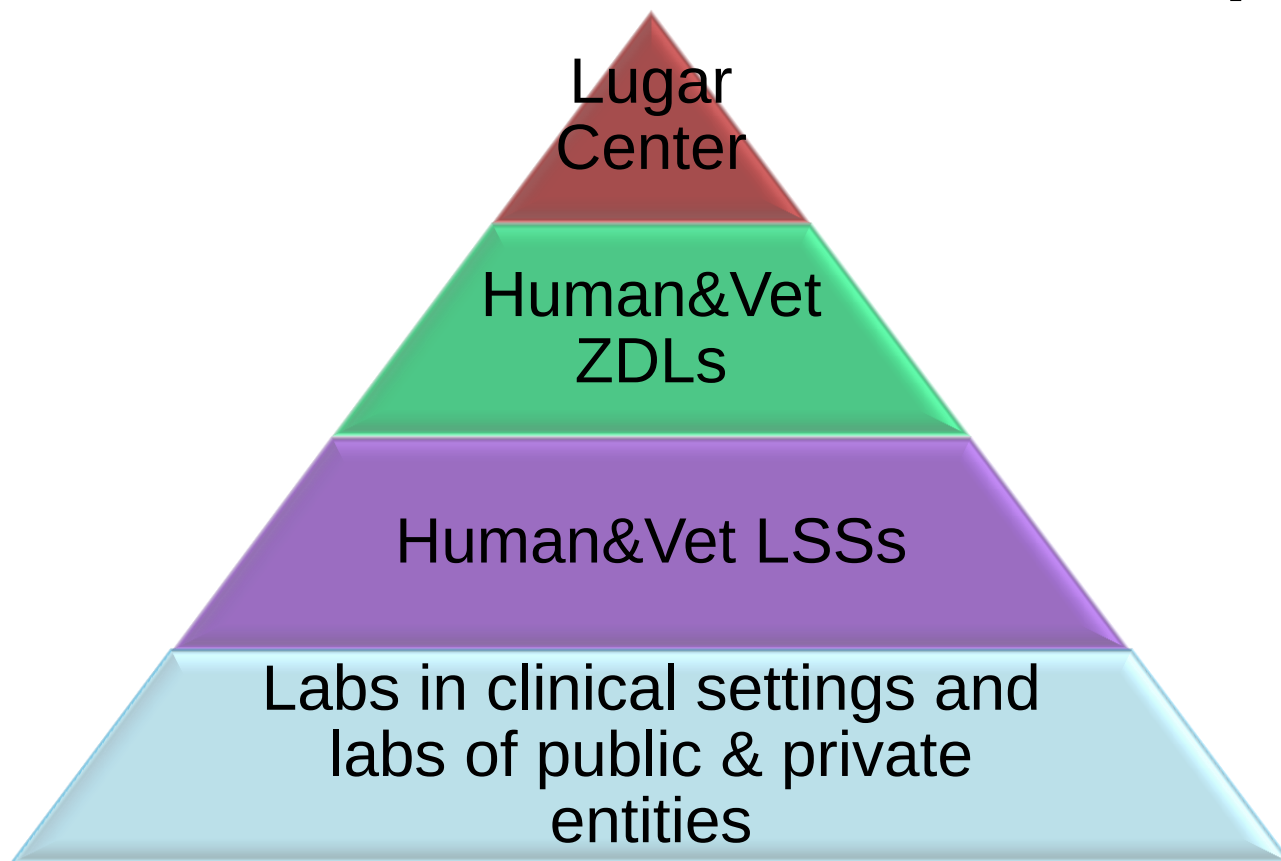
Non-Lab/Office
Part of NCDC&PH

Immunization Cold Chain Infrastructure

Georgia CBEP Sites



Tiered National Lab Network Based on One Health Concept



- **Location** – Tbilisi
- **Size** – 8,000m²
- **Lab space** – 2,551m²
- **Capabilities** – BSL-2; BSL-3; vivarium for small animals



Laboratory Part of NCDC / Lugar Center

- Genomic Center
- Repository of EDP
- Bacteriology
- Serology
- Molecular Biology
- Virology
- Parasitological
- Cell Cultures
- Entomology
- Vivarium
- CDC/GDD Lab
- WRAIR Lab
- BSL3 designated area for LMA & MES



**2 Zonal Diagnostic
Laboratories - ZDLs
7 Local Surveillance
Stations - LSSs**

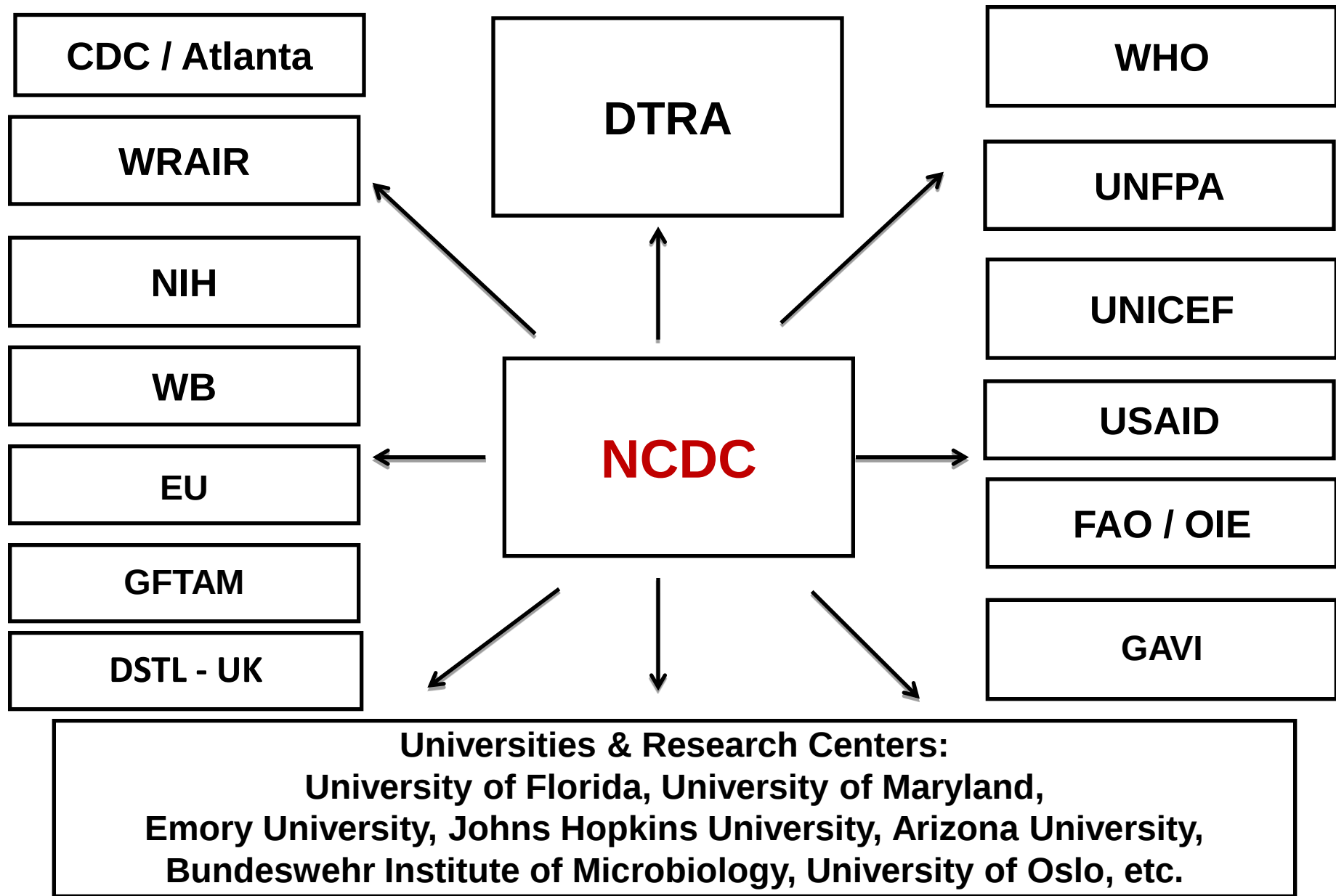
3 Labs Accredited by WHO

- Polio**
- Influenza**
- Measles/Rubella**

4 Labs Connected to WHO Lab Network

- Rota**
- Invasive Meningitis**
- Malaria**
- Salmonellosis**

**NCDC / Lugar Center is in a process of
applying for the status of WHO
Collaborating Center for Emerging
Infections**



Ongoing Scientific Projects

On the basis of Lugar Center

1. Epidemiology of *Clostridium difficile*-associated disease in Georgia”;
- 2 “Distribution and diversity of Bartonella pathogens among people and animals in Georgia and evaluation of factors associated with the emergence of bartonellosis”;
3. “Molecular Epidemiology of Multidrug Resistant and Extensively Drug Resistant Tuberculosis in country of Georgia”;
- 4 “Molecular Epidemiology of Toxigenic Escherichia coli in country of Georgia”;
5. “Emerging zoonotic pathogens in Georgian bats”;
6. “Microbiological Monitoring of Uranium-Contaminated Environments”;
7. “Epidemiology and Ecology of Tularemia in Georgia”;
8. “Human Disease Epidemiology and Surveillance of Especially Dangerous Pathogens in Georgia”;
9. “Creation of Sustainable Immunodiagnostics”;
10. “Anthrax Environmental Decontamination Network”;
11. “A Multi-Task investigation on the human immune response to anthrax aimed at developing more efficient vaccines”;
12. “Whole Genome Sequencing of quarantine plant bacterial pathogen Ralstonia Solanacearum Isolated in Republic of Georgia”;
13. ”Environmental Surveillance in Georgia in 2014 “;



Ongoing Scientific Projects (cont.)

On the basis of Lugar Center

14. “Establishment of a Southwest-Asian network for biosecurity and diagnosis of dangerous infectious diseases”;
15. “NCDC Lugar Center Regional Integration: Kafkas University Partnering for Molecular Epidemiology of B. anthracis and Brucella species in Turkey”;
16. “Seroprevalence of zoonotic pathogens among veterinarians, farmers and animals – comparative analysis in Georgia and Jordan”;
17. „Atypical Y. pestis Strains Isolated from Natural Foci in Georgia from Proteome to Virulence and Gene Expression“;
18. “Epidemiology of febrile illnesses caused by Dengue viruses and other Arboviruses in Georgia”;
19. “Influenza Study of Backyard Animals in Georgia”;
21. “Sero-survey for Orthopoxvirus in the Akhmeta Region”;
22. “Surveillance of Avian Influenza Virus and Characterization of Viral Quasi-Species in Georgia”;
23. “Raising Awareness about Barcoding of Sand Flies in Georgia and Caucasus”;
24. “Characterization of mechanisms of adaptive phage-host co-evolution using next generation sequencing and phenotypic profiling”;
25. “Collaboration to Enhance MDR-TB Surveillance using the Xpert™ MTB/RIF Assay and Color Test in Diverse Settings”.



Upcoming Scientific Projects for 2015

- 1."Genotype-phenotype characterization and toxin study of archival and newly isolated Georgian *Clostridium botulinum* strains";
2. "Developing Laboratory Diagnostic and Research Capabilities to Address Antimicrobial Resistance in Georgia and the South Caucasus";
- 3."Carbapenem-resistant Enterobacteriaceae (CRE) in Armenia and Georgia";
- 4."Characterization of NCDC Strain Repository by Next Generation Sequencing";
- 5."Molecular Virology Studies in Georgia";
- 6."Enhancing capacity for case detection and diagnosis of febrile zoonotic-related cutaneous lesions in Georgia";
- 7."Analysis of Previously Identified Rickettsia positive Georgian Ticks by Multi-Sequence Typing;
- 8."Integrating bacteriophage and membrane separation knowledge bases to ensure microbiological safety of water supply";
- 9."Phage mediated antibiotic resistance gene transfer in marine, freshwater and extreme environments";
- 10."Validation of FPA as a TADR Confirmatory Diagnostic for Human Brucellosis in Georgia";
- 11."Regional Study of the Ecology of Anthrax Foci in Georgia and Azerbaijan";
- 12"Environmental Surveillance in Georgia in 2014";
- 13." Proof-of-principle antimicrobial resistance routine diagnostics surveillance study Georgia (PoP-study)".



