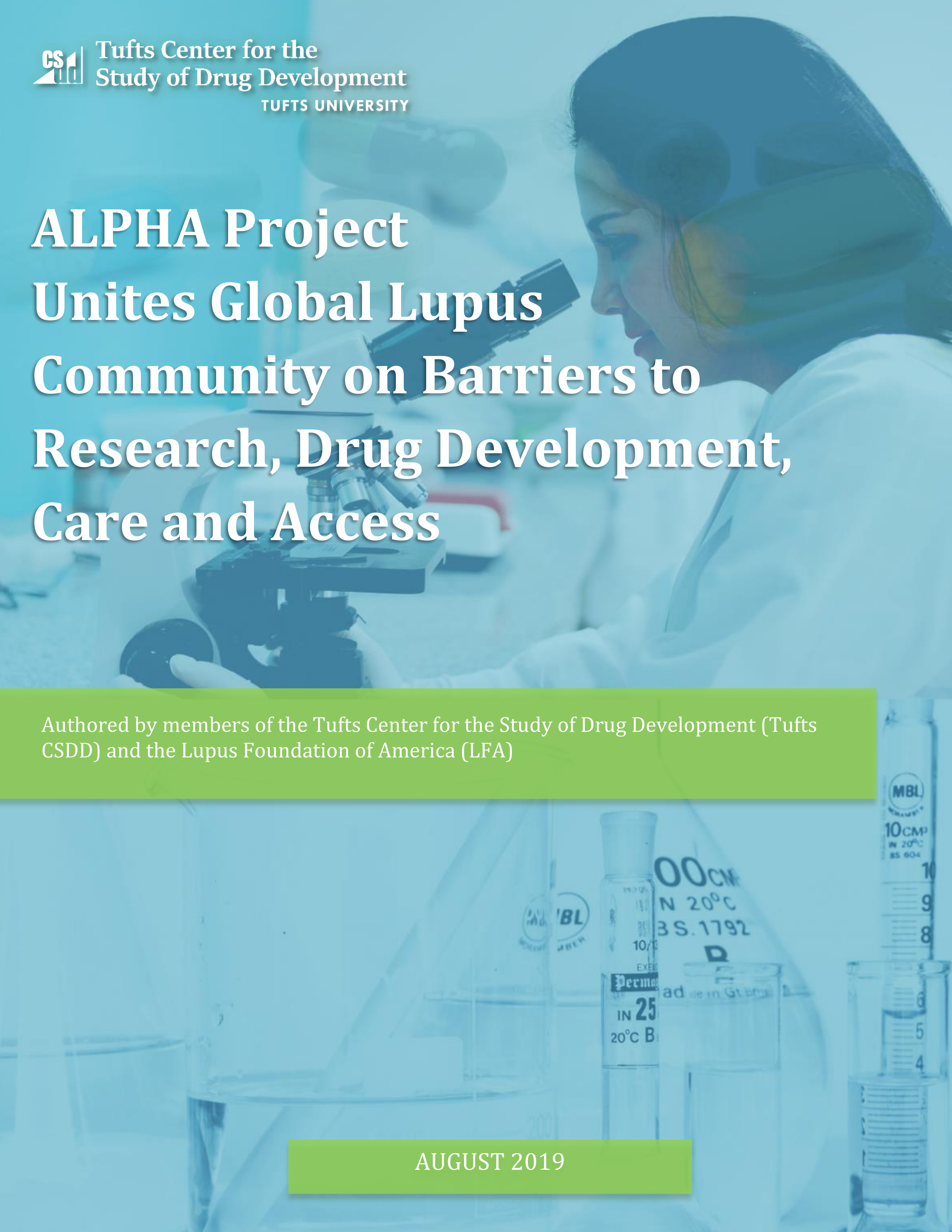

Tufts Center for the
Study of Drug Development
TUFTS UNIVERSITY

ALPHA Project Unites Global Lupus Community on Barriers to Research, Drug Development, Care and Access

Authored by members of the Tufts Center for the Study of Drug Development (Tufts CSDD) and the Lupus Foundation of America (LFA)

AUGUST 2019

Introduction

Lupus is a chronic autoimmune disease that manifests differently between patients. Several factors contribute to the development and severity of lupus, including genetics, epigenetics and exposure to a variety of environmental stimuli.[1] While people of African, Hispanic, Native American or Asian origin have increased risk for lupus, the prevalence of the disease is 2 to 4 times more frequent and more severe among women aged 15-24 of nonwhite populations globally.[2] Differences among ethnic groups indicative of the nongenetic component of ethnicity such as socioeconomic status, education levels, and insurance status also contribute to a high incidence of lupus mortality.[2] Among the many inequalities that exist for lupus patients is also a lack of access to medical care. It has been extremely difficult to develop new treatments due to poor consensus among health care and research professionals on the most pivotal impediments in lupus.[3]

In order to unite and unify the lupus community, a global, multi-year initiative — The Addressing Lupus Pillars for Health Advancement (ALPHA) Project — was launched in 2018. ALPHA builds on historical frameworks and initiatives to identify and prioritize fundamental knowledge gaps in global lupus research, care, and access.[4] The primary goal of ALPHA is to establish consensus on fundamental barriers and challenges faced by global professional and patient communities. ALPHA is the first step towards implementing strategies towards more accurate and timelier diagnosis, greater access to care, and improved treatment options for patients with lupus.

The ALPHA Project: Methodology

The ALPHA Project is led by Lupus Foundation of America (LFA) and several partners, including the Tufts Center for the Study of Drug Development (Tufts CSDD), EMD Serono and GlaxoSmithKline. Execution of the ALPHA Project is guided by a Global Advisory Committee (GAC) made up of lupus thought leaders from clinical care provider, academic, regulatory, patient/disease advocacy and industry groups.

The ALPHA Project used a mixed methods approach consisting of expert interviews and a global survey to identify, characterize, and prioritize fundamental barriers/knowledge gaps, and to validate findings among a broader, global audience.

Results

There was strong consensus around the most persistent and fundamental challenges throughout the study.

The seventeen global experts interviewed and the 127 survey respondents widely agreed that the heterogeneity of the disease and the lack of a clear disease definition universally limited advancement in clinical care, improvement in patient access to care, and in the development of new treatments.

The experts interviewed strongly agree that the complexity of the disease hinders the development of personalized lupus treatments because subtypes are not clearly defined given the large spectrum of related-diseases. They also agreed that gaining a more robust understanding of the disease could lead to the development of more targeted interventions and allow researchers to design clinical trials with the appropriate populations for better outcomes, including improvement in diagnosing and accurately measuring disease activity.

Survey respondents identified and prioritized barriers to drug development, clinical care, and access. Table 1 presents the highest ranked barriers organized by challenge category. No significant differences were observed among survey respondents by geography, years of experience, or time spent in direct care.

Table 1 | Top barriers by category listed with their respective weighted ranked scores

Drug Development	Weighted Prioritization Score
Lack of biomarkers to predict response to drug in clinical trials	6.614
Lack of user-friendly, sensitive and accurate outcome measures	6.394
Flawed clinical trial design	6.370
Challenges with collecting patient-reported and clinician-reported outcomes	5.559
Lack of alignment between patients, providers and regulatory	5.370
Challenges with attracting underrepresented study populations	5.173
Limited awareness of lupus among non-expert medical professionals	3.370
Lack of attention to R&D pediatric issues	3.173
Lack of classification criteria	2.976
Clinical Care	**Weighted Prioritization Score**
Lack of diagnostic, predictive and prognostic biomarkers for lupus	7.294
Lack of treatment adherence	6.717
Limited awareness and understanding of lupus among non-expert medical professionals	5.800
Lack of clear risk factors that trigger lupus and lupus-like diseases (onset and flares)	5.690
Inadequate understanding of benefit-risk tradeoffs between physicians and patients	5.103
Lack of attention to pediatric issues	3.968
Lack of diagnostic criteria	3.873
Access & Value	**Weighted Prioritization Score**
Barriers to effective management of lupus due to social determinants of care in predominantly lower socioeconomic status areas	6.937
Lack of access to clinicians familiar with lupus	6.873
Lack of access to medications either due to lack of coverage or added cost to patients	6.492

Lack of understanding by government payers/insurers about lupus and the medications needed to treat the disease	5.976
Lack of tools for collecting real world evidence (RWE)	4.089

Most Critical Barriers for Future Focus

Based on the results of the expert interviews and the global survey, the following barriers were identified and ranked as the most critical:

- Lack of diagnostic, predictive and prognostic biomarkers for lupus and lack of biomarkers to predict response to drug in clinical trials
- Flawed clinical trial design
- Lack of user-friendly, sensitive and accurate outcome measures
- Lack of access to clinicians familiar with lupus/lack of awareness
- Barriers to effective management of lupus due to social determinants of care in predominantly lower socioeconomic status areas
- Lack of treatment adherence

Conclusions and Next Steps

The ALPHA Project has identified fundamental knowledge gaps preventing advancements in lupus research, clinical care and access and provides a framework to establish a roadmap for academia, federal agencies, industry, and all other lupus stakeholders to follow moving forward.

The next phase of the ALPHA Project will be to organize an international stakeholder meeting with the Global Advisory Committee and other lupus stakeholders, to be held in Washington, D.C. in January 2020, to implement specific solutions to address each barrier identified through this research.

To learn more, visit https://www.lupus.org/alpha.

THE
ALPHA
PROJECT
BY LUPUS FOUNDATION OF AMERICA

Contacts:

Karin Tse
Senior Research Coordinator, Health Outcomes
Lupus Foundation of America
Tse@lupus.org

Leslie Hanrahan
Senior Vice President, Education and Research
Lupus Foundation of America
Hanrahan@lupus.org

Summary Prepared By:

Yaritza Peña
Research Analyst
Tufts Center for the Study of Drug Development
Yari.pena@tufts.edu

Kenneth Getz
Director of Sponsored Programs and Associate Professor, Tufts University
Founder and Board Chair, CISCRP
Kenneth.Getz@tufts.edu

References:

1. Anjorin A, Lipsky P. Engaging African ancestry participants in SLE clinical trials. Lupus Science &amp; Medicine. 2018;5(1):e000297.
2. G.J. Pons-Estel, G.S. Alarcón, L. Sconfield, L. Reinlib, G.S. Coope. rUnderstanding the epidemiology and progression of systemic lupus erythematosus Semin. Arthritis Rheum., 39 (2010), pp. 257-268
3. Merrill JT, Manzi S, Aranow C, et al. Lupus community panel proposals for optimising clinical trials: 2018. Lupus Science &amp; Medicine. 2018;5(1):e000258.
4. The Lewin Group, Inc. Overcoming barriers to drug development in lupus. 2009:1-16. https://www.lupus.org/s3fs-public/documents/Overcoming_Barriers_to_Drug_Development_in_Lupus.pdf.

About the Lupus Foundation of America:

The **Lupus Foundation of America** is the national force devoted to solving the mystery of lupus, one of the world's cruelest, most unpredictable and devastating diseases, while giving caring support to those who suffer from its brutal impact. Through a comprehensive program of research, education, and advocacy, we lead the fight to improve the quality of life for all people affected by lupus. Learn more about the Lupus Foundation of America at lupus.org.

Help Us Solve
The Cruel Mystery
LUPUS™
FOUNDATION OF AMERICA

About Tufts Center for the Study of Drug Development:

The **Tufts Center for the Study of Drug Development** (Tufts CSDD) is an independent, academic, non-profit research center at Tufts University School of Medicine in Boston, Massachusetts. Our mission is to provide data-driven analysis and strategic insight to help drug developers, regulators, and policy makers improve the quality, efficiency and productivity of pharmaceutical R&D.

Established in 1976, Tufts CSDD conducts scholarly analyses addressing the economic, scientific, political, and legal factors that affect the development and regulation of human therapeutics. For over four decades, Tufts CSDD has been a prominent and influential voice in national and international debates on issues pertaining to biomedical innovation and the development of drugs and biologics. In addition, the Center hosts symposia, workshops, courses, and public forums on related topics, and publishes the *Tufts CSDD Impact Report*, a bimonthly newsletter providing analysis and insight to critical drug development issues.

Tufts Center for the
Study of Drug Development
TUFTS UNIVERSITY

An Independent, Academic, Non-profit Research Center at
Tufts University School of Medicine in Boston, Massachusetts

Tufts University School of Medicine:
The Tufts Center for the Study of Drug Development
75 Kneeland Street, Suite 1100 | Boston, MA 02111
csdd.tufts.edu | **csdd@tufts.edu** | 617-636-2170