SUMMER, 2024

CITRIN FOUNDATION QUARTERLY NEWSLETTER

RESEARCH UPDATES

We are pleased to announce the recent publication of new review articles on citrin deficiency (CD), published in the Journal of Inherited Metabolic Disease (JIMD).

The first publication, titled ***"The therapeutic landscape of citrin deficiency"***, (DOI: link) offers a comprehensive review of current treatment strategies for Citrin Deficiency (CD), evaluating their effectiveness, limitations, and explore potential new therapeutic options. It also provides an in-depth analysis of medium-chain triglycerides (MCT), the most widely utilized supplement for CD, assessing its impact on different CD phenotypes across multiple studies. This work is the result of a collaboration between Prof. Johannes Häberle's team and the Citrin Foundation. We would like to express our deep gratitude to Prof. Häberle for his pivotal role in this publication.

This paper complements the previously announced pulication titled "***Clinical landscape of citrin deficiency: A global perspective on a multifaceted condition***", (DOI: link), with both articles set to be published back-to-back in an upcoming special issue of JIMD.

The next paper, authored by Prof. Johannes Häberle titled ***"Citrin deficiency – The East-side story"*** (DOI: link), provides a succinct overview of the history and phenotypes of CD, the importance of considering CD in differential diagnoses, and the current global prevalence of the condition.

Together, these publications represent a significant step forward in CD research. We extend our congratulations to all authors for their contributions and for achieving this important milestone.

CONFERENCES AND EVENTS

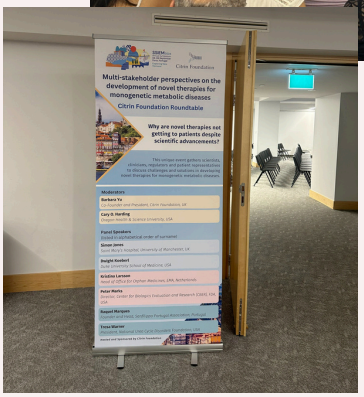
Society for the Study of Inborn Errors of Metabolism (SSIEM) Annual Symposium, September 2024, Porto, Portugal

Citrin Foundation Sponsored Roundtable

At this year's SSIEM meeting in Porto, Citrin Foundation hosted a unique roundtable discussion titled ***"Multi-Stakeholder Perspectives on the Development of Novel Therapies for Monogenetic Metabolic Diseases."***. Moderated by **Barbara Yu,** co-founder of the Foundation, and **Prof. Cary O. Harding**, from Oregon Health & Science University, the session brought together a highly relevant and diverse group of panellists, including the top global regulators, **Dr. Peter Marks**, Director of the Center for Biologics Evaluation and Research at the FDA, and **Kristina Larsson**, Head of the Office for Orphan Medicines at the EMA, alongside **Prof. Simon Jones** from St. Mary's Hospital at the University of Manchester, **Prof. Dwight Koeberl** from Duke University School of Medicine, **Raquel Marques**, Founder and Head of the Sanfilippo Portugal Association, and **Tresa Warner**, President of the National Urea Cycle Disorders Foundation.

The panel explored the challenges of translating preclinical findings into clinical trials for monogenic metabolic diseases, with a focus on identifying appropriate biomarkers and clinical endpoints. They also discussed how to optimize clinical trial designs for different therapies, including the need for control groups, particularly in pediatric patients, and the advantages of involving patients and regulators early in the process. The session concluded on a positive note, highlighting the progress being made by the leading regulatory bodies to streamline the approval process for orphan drugs, and the potential for global collaboration in this effort.

The event underscored the collaborative efforts needed to overcome barriers and advance novel therapies for patients. We are grateful to all of those who took part, particularly our panellists who contributed their valuable expertise and insight.



SSIEM Poster Presentation by Citrin Foundation

The Foundation also presented a poster titled ***"Unravelling the Enigma of Citrin Deficiency: A Novel Holistic Multidisciplinary Approach".*** The poster outlined the complexity of CD and provided an overview of the Foundation's multidisciplinary approach to address these challenges. By highlighting the intricate and complex nature of CD, the poster called for collaborative efforts and invited those interested to join us in advancing research and treatment for this condition.

65th Annual Meeting of the Japanese Society for Inherited Metabolic Diseases (JSIMD), November 2024, Tokyo, Japan

The Foundation will host a Citrin Deficiency Symposium during the 65th Annual Meeting of the JSIMD on the *"Advancements in Novel Therapies and New Cellular Models for Citrin Deficiency"*. The symposium will take place on 8th November from 15:00 to 16:30 (JST). **Barbara Yu** from the Foundation will be giving an overview presentation. The session will feature **Prof. Joseph Baur** from the University of Pennsylvania who will present on the use of novel redox-modulating compounds as potential therapies for CD. **Dr. Julien Baruteau** from Great Ormond Street Hospital for Children, University College London, will talk about the recent developments in mRNA therapies and potential applications for CD. Finally, **Prof. Jun Kido** from Kumamoto University will present on the evaluation of therapies in new cellular models of CD.

British Inherited Metabolic Disease Group (BIMDG) Annual Meeting, June 2024, Newport, United Kingdom

In June, our Patient Engagement Team attended the British Inherited Metabolic Disease Group Meeting in Newport, South Wales. This event is the largest meeting of its kind in the United Kingdom and Ireland. Our team was able to catch up with members of our professional network and foster new collaborations.

UPCOMING EXPERT TALKS

The Foundation has curated a programme of Expert Talks for our consortium and wider network. We have invited speakers who are leading experts in their respective fields to give presentations covering a range of topics relevant to our network and our mission. Please contact us if you are interested to attend.

Speaker: Prof. Donald E. Ingber
Founding Director, Wyss Institute for Biologically Inspired Engineering, Harvard University
Topic: Organ-on-a-chip technology & AI drug discovery approach
Date: Wednesday, 18th September
Time: 9am EST / 2pm GMT / 10pm JST

Theme: Organ-on-a-chip technologies as well as the use of artificial intelligence (AI) in high-throughput whole organism genetic screening and how this technology can accelerate the discovery and development of novel therapies for rare diseases.

Speaker: Dr. Andrew Anzalone
Co-Founder and Head of Prime Editing Platform, Prime Medicine
Topic: Prime Editing Technology
Date: Tuesday, 8th October
Time: 9am EST / 2pm GMT / 10pm JST

Theme: The latest developments in prime editing technology and its applications for clinical use.

Speaker: Hisaharu Shinohara
General Manager, GW Pharmaceuticals Japan
Topic: Rare diseases law and orphan drug approval in Japan
Date: Thursday, 21st November
Time: 7am EST / 12pm GMT / 9pm JST

Theme: The current regulatory landscape for rare diseases in Japan, including recent approvals for novel therapies, new measures and future outlooks.

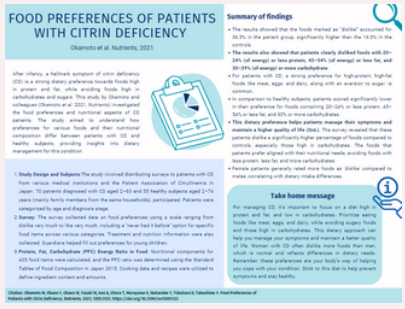
PATIENT ENGAGEMENT

Vietnamese Resources

The Foundation is aware of a large patient cohort in Vietnam. We have had a variety of our resources professionally translated into Vietnamese so that we can reach those who may not speak English. These can be found on our patient website.

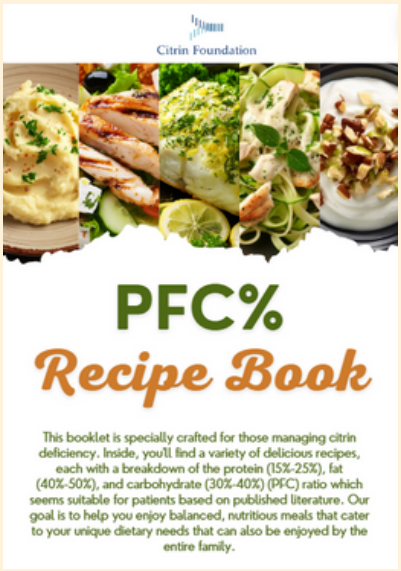
Research Summaries

We understand that finding the time to read full-length research papers can be challenging, and the technical language may sometimes be difficult for some of our members to fully comprehend. Therefore, we have prepared concise summaries of key research papers on citrin deficiency. These summaries are available under the Publications tab on the patient website.



PFC Recipe Cookbook

Our new PFC recipe booklet for citrin deficiency patients is now available to download on our patient website. We hope this resource helps make the day-to-day planning of meals easier for patients and parents.



Peer Support Community Overview

Launched in January 2023, our global peer support group now includes over 30 members from around the world. This group provides a space for patients and families to share experiences, support one another, and collaborate with the Foundation's Patient Engagement team, fostering new resources and initiatives. Some of the key topics discussed have been breastfeeding, MCT oil supplementation, food recommendations, and symptom management.

Thank you for being a part of the Foundation's journey to finding a cure for citrin deficiency. We welcome suggestions on how we can improve our resources as well as ideas for new projects to explore.

If you would like to get in touch, please email us at info@citrinfoundation.org for general inquiries or grants@citrinfoundation.org for research grant inquiries.

You can look forward to the next edition of our newsletter in the Autumn.