

Dear NMOSD Colleagues,

It was wonderful to see many of you at the recent GJCF meetings. Thank you all for your excellent input in development of the **CROCTINO** project, a **C**ollaborative **R**etrospective Study on Retinal **OCT** in **N**euromyelitis **O**ptica. This is one of two projects designed to build a high-quality image repository intended to accelerate research toward clinical advances in NMOSD. Both projects reflect the outstanding input and collegiality among ICC members and other stakeholders. Quarterly **CROCTINO Report** volumes will keep you updated on the status and key next steps of your new collaboration. As always, important to the success of this effort will be your ongoing active participation in study design and analysis.

- **Background & Objectives**

Imaging and biomarkers thereof are becoming progressively important tools to understand pathogenesis, accurately diagnose, and appreciate therapeutic effects in NMOSD. The **CROCTINO** project and its companion project – **PAMRINO** – share four principal milestones: **1)** establish an image repository infrastructure; **2)** acquire & qualify image sets; **3)** analyze images by consensus; and **4)** validate & refine hypotheses. Each project is supported by a GJCF 2-year CURE grant.

Beyond developing the NMOSD imaging repository infrastructure, a key goal of this project is to ensure its functionality for collaborative research. In this respect, the project priorities identified by ICC membership include:

- To afford researchers access to a large, high-quality collection of imaging studies & data from NMOSD cases;
- To identify and characterize imaging correlates of central nervous system damage & dysfunction in NMOSD;
- To evaluate potential relationships among causal lesions, disease symptoms, & treatment interventions;
- To identify potential imaging endpoints for validation and application to NMOSD therapeutic evaluation;
- To enhance the skills of NMOSD caregivers and networks in use of imaging to improve NMOSD patient care.

- **Rationale & Methodology**

Emerging OCT studies have suggested characteristic retinal damage patterns in NMOSD. However, due to variations in image acquisition, analysis & interpretation, and with limited sample sizes, findings are not yet optimally consistent or understood. Thus, **CROCTINO** will collect a larger scope of optimized OCT datasets using standardized methods. Consensus methods and associated clinical data to be collected with images have been developed through the International Clinical Consortium (ICC).

- **Overarching Study Design**

The **CROCTINO** project aims to collect 450 OCT datasets: 350 from diagnosed NMOSD patients, and 100 from matched healthy controls. A clinical core dataset will be collected with each OCT imaging set; the images & data will be stored at the University of Utah Data Coordinating Center (DCC). As a standardization and quality control effort, imaging and data will be reviewed by neurologist and neuro-ophthalmologist members of the Imaging Solution Core Team (ISCT). Criteria for repository inclusion will include imaging quality and completeness of associated clinical data. Priority & consensus pilot hypotheses will be tested as the repository grows to evaluate and refine its usefulness in addressing real-world aspects of NMOSD.

- **Global Collaboration Team**

To date, 18 academic centers from Asia, Europe, and North & South America have agreed to contribute images and related data to the project. Thus, we hope to meet the goal of obtaining, curating, and uploading 350 OCT datasets from NMOSD patients, and 100 matched healthy control subjects by July 1, 2017. Thank you for understanding that only OCT source sets which meet standard image, post-processing, and associated data quality can be accepted.

- **Transparent Data Sharing**

A core tenet of this project is collaborative and transparent data access. The secure IT infrastructure for data sharing is nearing implementation and is expected to begin operation by July 1, 2016. Additionally, a website will soon be launched to provide contact and other information regarding all collaborators pertaining to this project.

- **Programmatic Next Steps**

CROCTINO is designed as a collaborative project to benefit patient care and advance the NMOSD research community. Your ongoing participation in its design and performance is encouraged. Thus, your action is requested:

1. Along with OCT imaging data from NMOSD patients and healthy controls, **CROCTINO** collects a basic dataset of associated demographic, clinical and functional data. The current draft of the **CROCTINO** electronic case report form (eCRF) is attached for your convenience. Please offer any feedback by **Monday, May 30, 2016**.
2. Please assure valid ethics approval and informed consent of any patients for sharing of anonymized data.
3. **CROCTINO** is currently designed as a cross-sectional retrospective study. However, an additional sub-study with longitudinal data is currently in planning. Please let us know if you have longitudinal OCT data that you are willing and able to share for review and potential inclusion in the **CROCTINO** imaging repository.
4. A parallel project focusing on MRI in Neuromyelitis Optica (**PAMRINO**) is under development, and we will be grateful for your collaboration in it as well. Please anticipate receiving more information soon, and let us know if you have MRI data from your NMOSD patients which you are willing and able to share.

- **Communication is the Key**

Your input is welcomed and valued. Please feel free to contact your CROCTINO team members listed below.

Imaging Solutions Core Team

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On behalf of NMOSD patients and families, thank you for your time and effort on this exciting new project.