

ECFS-Diagnostic Network Working Group (DNWG)

Year of report: 2024

Date of initial approval of working group:
2004 (Sinaasappel)

Contact details of coordinator, vice coordinator and assistant (if applicable) including ECFS membership numbers:

Coordinator: Elke De Wachter_

Vice coordinator name: Nicholas Simmonds

Assistant name: Marlies Destoop_

Long term aims of the working group including estimated achievement date:

These are ongoing projects/aims with the need to change/support whenever needed:

- 1/ To achieve pan-European cooperation on definitions of CF and clinical entities of the CF-spectrum.
- 2/ Standardization of existing electrophysiological techniques. Development, validation and standardization of new diagnostic technologies.
- 3/ Interpretation of disease liability of *CFTR*-variants and discussion of challenging cases within the group and outside
- 4/ Improvement/support for sweat test facilities in Europe and in LMIC
- 5/ Cooperation with other networks:
 - ECFS-CTN and CFF TDN, standardization committee
 - ECFS NSWG: neonatal screening and diagnosis are closely related
 - European CF-Registry: expanding to CFSPID and *CFTR*-RD registries - supporting sweat test facilities in LMIC
 - ECFS education committee

Outcomes already achieved:

- 1/ Link between ECFS-DNWG and CFF: co-authorship of manuscripts, US-speaker at annual DNWG meeting
- 2/ Sweat test Project:
 - Sweat test survey (Cirilli 2017)
 - Hands-on Training at ECFC: Belgrade 2018, Liverpool 2019, Vienna 2023
 - ECFS Standards of care guidance for sweat testing. (Cirilli 2022; <https://doi.org/10.1016/j.jcf.2022.01.004>)
 - e-learning tool on ECFS education platform + recording the hands-on session at ECFC 2023
- 3/ *CFTR* biomarkers: standardization and validation for NPD, ICM. Organoids and beta-adrenergic sweat test (ongoing)
- 4/ *CFTR*-Related Disorders-Project: Leader: Carlo Castellani - Publication of 4 papers: (2 in 2024)

Report for this year)

- short term goals for the year
- current number of members
- measures taken to encourage ECFS membership
- outcomes/achievements (e.g. meetings, activities, website development, awards, publications etc).

1/ Short term goals for the year

- **Sweat test project.**

The third phase in the "Sweat test project" is to organize **hands-on sessions**, taking into account the latest published ECFS-recommendations. The aim is to support centres and help in problem-solving to achieve acceptable standards for good sweat testing practice as a diagnostic tool in their CF centre. This is an ongoing exercise, where we try to reach people from diverse countries who take care of sweat testing in their centre. These sessions are planned in cooperation with the ECFS-PR. This joint effort will further develop sweat testing standards in CF centres in LMIC that have already received initial support by an ECFS-PR program. After the successful session in Vienna in June 2023 (see report attached), we will organize a similar session on 5th June at the ECFC in Glasgow.

During last year's sweat test hands-on session, each sweat test technique was filmed (supported by the ECFS-education committee). Natalia Cirilli and colleagues have managed to edit these recorded sessions, in order to use each of them as a step-wise visual guide (e-learning). After a final review, these separate movies will be available on the ECFS website.

- Development of **new guidelines/recommendations on CFTR-related disorders (CFTR-RD):**

The Bombieri paper (JCF 2011) is over 10 years old and describes recommendations on how to establish the diagnosis of CFTR-RD. New insights in CFTR-disease liability led to the need of new recommendations on how to diagnose, treat and follow up people with a CFTR-RD. This project started in March 2020. CFTR-RD core group: Carlo Castellani, Kevin W Southern, Elke De Wachter, Nick Simmonds, Kris De Boeck, Isabelle Sermet-Gaudelus. We have published a series of four papers, covering key areas from diagnosis to management and then future directions/unmet needs. (see: publications)

- **Beta-adrenergic sweat test:** A core group (I Sermet, T Gonska, B Tümmler, P Melotti) is working on the harmonisation of the beta-adrenergic sweat test. The goal is to develop a standardized, harmonized protocol, aiming to validate this diagnostic method and implement this at a later stage in other clinics to overcome some limitations of the sweat test. During the annual meeting in Hannover (8-10 Feb 2024), a hands-on session was organized, led by the local team of Burkhard Tümmler (see report Hannover meeting).

- **Widespread screening for CF in lower- and middle-income countries (LMIC):** Leaders of this project are Samia Hamouda (Tunis, Tunisia) and Anne Munck (Paris, Fr). The objective is to increase awareness of CF by policy makers in LMIC, in order to improve financial support for the implementation of standards of care in countries with a high CF incidence.

Next steps

- Selection of 2 DNWG-members who will take over the role of coordinator and co-coordinator from June 2025 is underway. The mandate of Elke De Wachter as coordinator and Nicholas Simmonds as co-coordinator will finish in June 2025. Due to other commitments, it is not possible for Nicholas Simmonds to move onto the role of coordinator. Therefore, we will **select two new coordinators for the DNWG**. First announcement for this position was launched in June 2023. This announcement was repeated at the annual meeting in Hannover and disseminated by-mail to all DNWG members. Candidates were requested to send in a motivation letter

(deadline mid May 2024). Currently we have 1 combined application (coordinator and co-coordinator). Details will be shared with the ECFS-board. An official announcement will be made at the annual meeting in February 2025.

- Designing an organisational structure for a '**Diagnostic FORUM**': The idea is to organise meetings at fixed intervals (2 or 3-monthly) with a selected group of experts (DNWG-members), where real-life cases are presented and discussed. These cases should be submitted in advance to allow for sufficient preparation. After review of the evidence, the Diagnostic FORUM will provide a consensus opinion of the diagnosis. The eventual aim is to make this available for the wider ECFS community.

2/ Current number of members:

114 members

18 members will receive an e-mail asking if they still wish to be involved in the DNWG, as they have not participated in any event organized by the working group the last three years.

% ECFS members -> requested to Jess Matthews 2 weeks ago (see attached list of members with membership - last updated Feb 2024)

All participants of our annual DNWG-meeting (Hannover) have renewed their ECFS-membership. However, despite repeated reminders, not all members (those who did not attend the annual meeting) have responded. We should discuss with the board how to solve this issue and if DNWG members without ECFS membership should be withdrawn after repeated reminders.

3/ Measures to encourage ECFS membership

- An ECFS-DNWG logo was developed in 2021 to increase visibility AND to emphasise the link with the ECFS
- During each official meeting (symposia and annual meetings) this issue is stressed. "Being part of the European CF Society is mandatory to become/remain a member of the DNWG".
- Before each announcement of a meeting e-mails are sent to all DNWG members to remind them that ECFS-membership is mandatory to remain part of the working group.
- Only CONFIRMED ECFS members received funding for participation/accommodation/meals during our annual DNWG-meeting in February this year. This resulted in an important increase in ECFS-membership within the working group.

4/ Meetings (between May 2023-May 2024)

- Sweat test hands-on session: 6th June 2023 - Vienna, Austria
- DNWG session (open meeting) at the 46th ECFS Conference (Vienna): 9th June 2023
- 3rd DNWG-brainstorm meeting at NACFC (Arizona): 3rd November 2023.
- 21st Annual DNWG-meeting (Hannover): 8th-10th February 2024.

Programs and reports of each meeting are posted on the ECFS website and attached

5/ Website development

News regarding DNWG activities are posted on the website.

6/ Publications from the DNWG as a group:

CFTR-RD papers (4)

- Castellani C, De Boeck K, De Wachter E, Sermet-Gaudelus I, Simmonds NJ, Southern KW; ECFS Diagnostic Network Working Group. ECFS standards of care on CFTR-related disorders: Updated diagnostic criteria. *J Cyst Fibros.* 2022 Nov;21(6):908-921. doi: 10.1016/j.jcf.2022.09.011. Epub 2022 Oct 8. PMID: 36220763

- Sermet-Gaudelus I, Girodon E, Vermeulen F, Solomon GM, Melotti P, Graeber SY, Bronsveld I, Rowe SM, Wilschanski M, Tümmler B, Cutting GR, Gonska T. ECFS standards of care on CFTR-related disorders: Diagnostic criteria of CFTR dysfunction. *J Cyst Fibros.* 2022 Nov;21(6):922-936. doi: 10.1016/j.jcf.2022.09.005. Epub 2022 Oct 5. PMID: 36207272.

- Simmonds NJ, Southern KW, De Wachter E, De Boeck K, Bodewes F, Mainz JG, Middleton PG, Schwarz C, Vloeberghs V, Wilschanski M, Bourrat E, Chalmers JD, Ooi CY, Debray D, Downey DG, Eschenhagen P, Girodon E, Hickman G, Koitschev A, Nazareth D, Nick JA, Peckham D, VanDevanter D, Raynal C, Scheers I, Waller MD, Sermet-Gaudelus I, Castellani C; ECFS Diagnostic Network Working Group.. et al ECFS standards of care on CFTR-related disorders: Identification and care of the disorders. *J Cyst Fibros.* 2024 Mar 19:S1569-1993(24)00037-7. doi: 10.1016/j.jcf.2024.03.008. Epub ahead of print. PMID: 38508949.

- De Wachter E, De Boeck K, Sermet-Gaudelus I, Simmonds NJ, Munck A, Naehrlich L, Barben J, Boyd C, Veen SJ, Carr SB, Fajac I, Farrell PM, Girodon E, Gonska T, Grody WW, Jain M, Jung A, Kerem E, Raraigh KS, van Koningsbruggen-Rietschel S, Waller MD, Southern KW, Castellani C; ECFS Diagnostic Network Working Group.l. ECFS standards of care on CFTR-related disorders: Towards a comprehensive program for affected individuals. *J Cyst Fibros.* 2024 Feb 21:S1569-1993(24)00011-0. doi: 10.1016/j.jcf.2024.01.012. Epub ahead of print. PMID: 38388234.

Aims for the coming year: May 2024-May 2025/ Planned meetings (2024-2025):

- 1.1 Sweat test hands-on session (5th June 2024)
- 1.2 DNWG meeting (7th June, 12.30-14.30)
- 1.3 DNWG-brainstorming meeting - NACFC 2024
- 1.4 Annual ECFS-DNWG meeting 6-8th Feb 2025 - *location announced on Fri 7th June 2024*

2/ Continue the work on CFTR-RD project – particularly around dissemination, registries and the other points discussed in Paper 4 (De Wachter JCF 2024)

3/ Develop and deliver CFTR-related disorders presentation for the ECFS Education eLearning Programme

4/ Sweat test project: e-learning tool (filmed sessions in Vienna); Plan more sweat test hands-on sessions

5/ Establish a 'Diagnostic Forum'

6/ Cooperate with the new coordinators that will take over in June 2025

Summary:

DNWG is an active group of enthusiastic CF specialists with special interest in diagnostic issues. It consists of CF physicians, geneticists, clinical biochemists, basic scientists, and other MDT members, making a very complementary group. This enables us to have diverse and strong expertise. We have made significant progress but there are still many important scientific and clinical issues to be resolved, which the DNWG has the capability and expertise to achieve. These include: the interpretation of *CFTR* mutations and their disease liability; the CF spectrum and the interpretation of biomarkers for *CFTR* activity; and *CFTR* activity and its translation to the individual patient.

Breakdown of expenses:

Annual DNWG meeting in Hannover:

61 attendees

Sponsorship for ECFS-DNWG: total amount 10000 + 2500 + ? euro
(ECFS, Elitech, Christiane Herzog Stiftung, Deutsches Zentrum für Lungenforschung)

Expenses: 13195.03 euro (hotel 2 nights, meeting rooms, YI-award)
(without catering, dinner, social event: these were financed by German Sponsors)

Total balance of the Annual meeting: -695.03 euro

Attached an overview of the DNWG-budget (excel file)

Budget amount requested for next year:

We would like to receive the annual 10.000 euro to support the annual DNWG-meeting 2025, YI-award and to set-up futu hands-on sweat test sessions (covering partly the rent of the room)

