

ML⁴NGP

MACHINE LEARNING FOR NON GLOBULAR PROTEINS

Communication and Dissemination Mid- Report

Document Information

Document Version 1.0 | 24 January 2025

Deliverable Number and Name: D5.3 – Communication and Dissemination Mid-Report

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Dissemination Level: Public

Keywords: Communication, Dissemination, Exploitation

Abbreviations and acronyms

CG – Core Group

COST – European Cooperation in Science and Technology

EU – European Union

IPC – International Partner Countries

ITC – Inclusiveness Target Countries

ITC-CG – Conference Grants for Inclusiveness Target Countries participants

ML – Machine Learning

NGP – Non-Globular Proteins

ML4NGP – Machine Learning for Non-Globular Proteins

MC – Management Committee

MoU – Memorandum of Understanding

WG – Working Groups

SCC – Science Communication Coordinator

NNC – Near Neighbour Countries

STSM – Short-Term Scientific Missions

YRI – Young Researchers and Innovators

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1. Reporting

1.1. Purpose of the document

The present document (Deliverable 5.3) resumes the implementation of the dissemination and communication plan established at the beginning of the Action in the first two years (Months 1-24). The first version of the plan was drafted by the Science Communication Coordinator (SCC) and Working Group 5 (WG5) leader together with the Core Group (CG) and delivered at M6 (Deliverable 5.2). This document provides an overview of the main communication and dissemination activities and the progress of each activity, including the main goals achieved in line with the Memorandum of Understanding.

1.2. Intended readership

This deliverable is open to everybody with an interest in the results of communication, dissemination and long-term exploitation activities in the framework of ML4NGP COST Action CA21160.

2. Implementation of the Communication Plan

The science communication, dissemination and exploitation plan defined at the beginning of the Action ([Deliverable 5.2](#)) aims to strategically and effectively promote the ML4NGP results for different audiences. During the first two grant periods, the communication and dissemination strategy settled on four main objectives:

- a) Create an identity through graphically coherent material following visual identity guidelines to help ML4NGP be recognized globally.

- b) Identify the most adequate communication channels and strategies for successfully disseminating project activities, expanding the Action network, and promoting COST funding.
- c) Follow an open-access model to promote the widespread dissemination of scientific results and tools developed within the Action, empowering early-career researchers and innovators to lead cutting-edge advancements and strengthening the global Research and Innovation community in the field.
- d) Promote dissemination of Action outputs to a wide audience through online platforms, promotional materials and through organization and participation of events.

2.1. Communication strategies and objectives

Since the beginning of the Action, the CG has made an effort to define, adapt, and adjust the best communication strategies to ensure an efficient promotion of ML4NGP activities and main achievements for target audiences, especially the research and innovation community.

During the first two grant periods of the Action, we:

- Establish an effective toolset for internal communication among the CG members, working group (WG) members and management committee members.
- Set a communication toolkit with logos and templates for internal and external communication following ML4NGP and COST visual guidelines.
- Promote appealing initiatives and organize engaging events with high-level attendance from participants of the Action and external consortia.
- Implement an agenda for continuous monitoring of the activities being implemented in each WG through organization of regular WG meetings.
- Co-organize activities with external consortia and scientific organizations promoting a trustful environment for data and knowledge sharing

The successful implementation of the ML4NGP communication strategies was essential to further stimulate the engagement of Action members in future collaborative research and innovation by widening new collaborations. We were also committed to increasing the awareness of the EU-funded research to audiences within and beyond the scientific community in compliance with the COST communication guidelines.

2.2 Communication tools

A kit of communication tools has been successfully used since the beginning of the Action, while others were adjusted throughout the first grant period to meet the communication goals.

For internal communication, the Grant Holder Institution set up an email account and established **mailing lists** for each group (CG, working groups, management committee, all members). This email account is used to share Action content and relevant information with all members. For instant messaging, the core group has been using **Slack**, with great feedback from most of the members. All documentation produced within and by the Action is deposited in a secure cloud-based platform **GoogleDrive**, only accessible to Core group members. **Zoom** is used for online communication, whenever personal meetings are not possible.

Website

The website www.ml4ngp.eu (Figure 1) is the primary open-access platform for sharing all the activities, actions and outputs of ML4NGP COST Action.

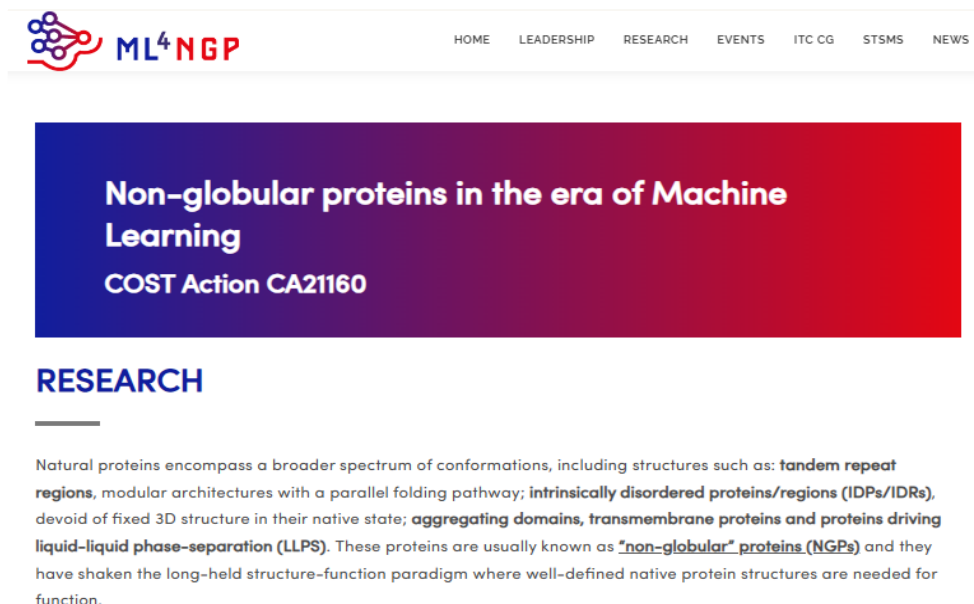


Figure 1: ML4NGP COST Action website (Research webpage).

The website was published online in March 2023, and it has been visited by more than 8900 visitors, with more than 28000 views and an average of 3 views per visitor. The views distribution on website pages relevant to ML4NGP activities is shown in Table 1.

The high number of views/visitors (Figure 2) reflects the opening of the application calls and the events calendar, with months close to May and July coinciding with the organization of the main meeting.

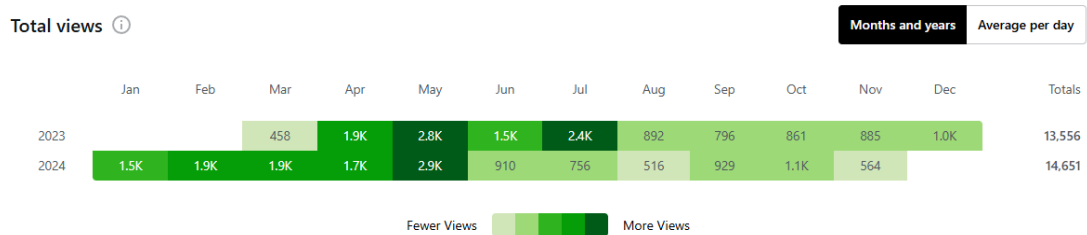


Figure 2: Heatmap reflecting the number of views by month.

Table 1: The number of views on the most visited website pages (data collected on November 2024).

POSTS AND PAGES	VIEWS
Homepage	6979
Main meeting in Thessaloniki	4062
Main meeting in Bratislava	3042
List of events	2847
Training School in Carmona	1617
STSMs	1307
ITC-CG	823

Twitter and LinkedIn

The X account (former Twitter, @ml4ngp) was launched in December 2022, two months after the kick-off meeting. A regular content schedule was only adopted after the website's launch (in March 2023). X account is used mostly to post activities organized by the Action, relevant external activities by third-parties, publications, major outputs and networking. After 24 months, we have a total of 273 followers (Figure 3).

The LinkedIn account was published in July 2023, and it has been used to advertise the Action activities and events calendar reaching specialized communities (mostly scientific

societies and networks). The LinkedIn page has 157 followers, more than 11800 impressions, and an engagement average rate of 14.8 (Figure 3).



Figure 3: ML4NGP accounts on LinkedIn (left) and X (right).

Informative Flyers and Action poster

A stand placard with information from ML4NGP Action was printed for the Training School in Porto, the first in-person event organized by the Action (Figure 4). The placard was printed on cardboard in a feasible size to allow transportation on hand luggage. Since this first event, the placard has been showcased in all ML4NGP events.

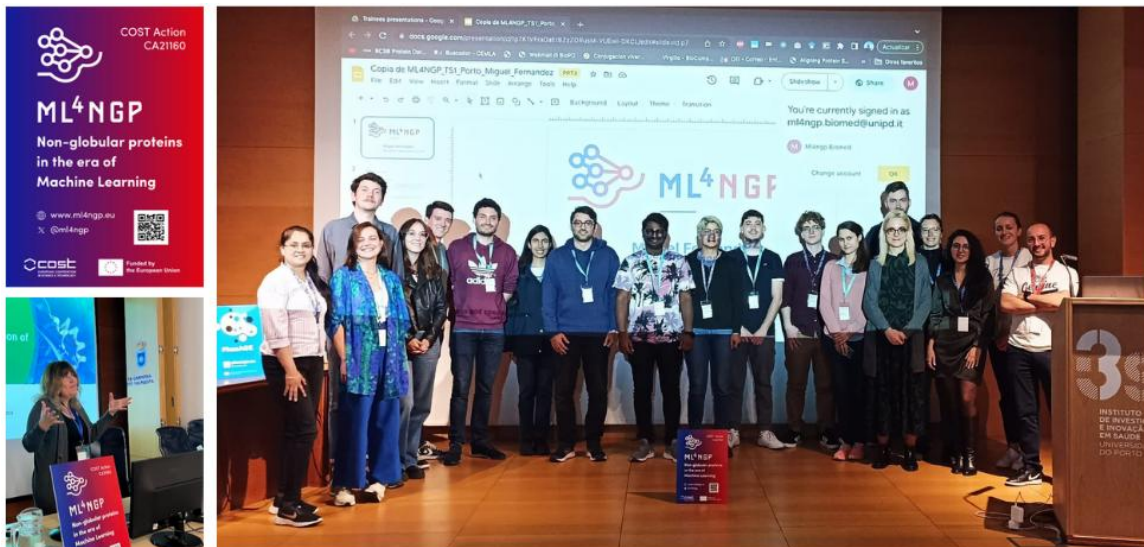


Figure 4: ML4NGP placard showcased at ML4NGP events.

A general flyer was prepared for the dissemination of the Action and delivered at the first annual meeting (Figure 5). The flyer contains information about the scientific scope, the Core team, the WGs goals and the main activities planned for the Action. It is available for download on the ML4NGP website and the COST website.



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SCIENTIFIC FOCUS

This Action aims that experimental frameworks are designed to provide information to computational methods, and computational methods are developed, trained and benchmarked with experimental data.

- Standardize experimental procedures for NGPs, and promote quality data generation, deposition, and curation.
- Develop guidelines for using ML approaches to understand the function and evolution of different NGPs subtypes.
- Encourage integrative structural biology approaches for NGPs experimental and computational characterization.
- Benchmark the latest ML methods for NGPs.
- Raise awareness of the functional importance of NGPs, and bridge the research gap in the field to facilitate the community's understanding of this complex topic.

WG1
 NGPs primary experimental data generation, curation and deposition.

WG2
 Machine learning and NGP structural biology.

WG3
 Assessment of state-of-the-art ML approaches in the NGP field.

WG4
 Functional and biological characterization of NGPs.

WG5
 Networking, communication and dissemination of Action.

CONFERENCE GRANTS

ITC Conference Grants are aimed at supporting Young Researchers from participating Inclusiveness Target Countries (ITCs) and Near Neighbour Country (NNC) to attend international science and technology related conferences not specifically organised by the the Action.

TRAINING SCHOOLS

Training Schools provide the opportunity for intensive training and networking of Young Researchers, supported by in depth discussions and hands-on practical sessions with internationally leading researchers.

WORKSHOPS

Workshops are dedicated to stimulate brain storming and exchange of challenges and ideas among WGs. Within each WG, workshops will build upon acquired knowledge and put forward the next workshop.

SHORT-TERM SCIENTIFIC MISSIONS

Short Term Scientific Missions (STSMs) aim at supporting individual mobility and training of Young Researchers through general activities of Working Groups. A number of STSMs will be financed each year for exchange of technologies and training between institutions.

BACKGROUND

Protein structures have been biased towards the well-known globular proteins, while non-globular proteins (NGPs) have not been fully characterized. NGPs include structures such as tandem repeat regions, intrinsically disordered proteins/regions (IDPs/IDRs), aggregating domains, transmembrane proteins, and proteins driving liquid-liquid phase-separation (LLPS). NGPs have shaken the long-held structure-function paradigm where well-defined native protein structures are needed for function. NGPs represent about 30–40% of the residues in higher eukaryotic proteomes, and are implicated in many biological processes such as DNA and RNA binding, transcription, translation, cell-cycle regulation, and signaling, as well as several diseases when their behavior is altered. Understanding the structural basis of NGPs is crucial for developing new therapies and novel biomaterials.

CONFERENCES

Annual conferences aiming to ensure effective coordination, assessing the progress made, and planning for future activities. These conferences facilitate communication and dissemination of information among the WGs, with plenary talks showcasing individual research findings and discussions on the future advancements in the field.

Figure 5: Front and back page of the trifold ML4NGP flyer.

Newsletters

To date, [three newsletters have been published](#) (every six months, as described in the Science Communication, Dissemination and Exploitation plan, and in agreement with Memorandum of Understanding, MoU). Each newsletter offers a comprehensive update on the latest developments within the Action, including an overview of recent events, testimonials from grantees, and participant feedback. Additionally, it includes the planned activities for the next grant period, providing members with a clear view of ongoing and future networking initiatives. The newsletters are drafted and produced by the SCC with the assistance of the MC Action Chair and Vice Chair and distributed via email to all Action members. They are also openly available on our website in support of transparent and open-access dissemination.

Promotional video and YouTube Channel

A YouTube channel has been established as a dedicated platform to host and share video-based content created within the ML4NGP COST Action (<https://www.youtube.com/@ML4NGP>). Among the featured content is a professionally produced [promotional video](#), offering an engaging introduction to our mission, network, and the many collaboration and funding opportunities available through the Action (Figure 6).

This video highlights key benefits for members, including grants for conference travel, collaborative project funding, and events fostering knowledge exchange and networking. As part of a communication strategy to boost social media and expand ML4NGP at a global scale, this video was released as a celebration of the second anniversary of the Action (on 25 October 2024). Another video hosted on YouTube captures the main [highlights from our main meeting in Thessaloniki](#), showcasing key moments, groundbreaking presentations, and expert insights that shaped the event.



Figure 6: ML4NGP COST Action promotional video. (link available)

Through this channel, we aim to broaden engagement and provide accessible and dynamic insights into the initiatives developed within the Action. The interviews with Action researchers and innovators under the “ML4NGP Talks” are also hosted on this YouTube Channel.

Documents and templates

A Communication Toolkit containing templates for presentations, meeting minutes and agendas, logo and typeface is available for all Action members in a shared folder. A document with guidelines for communication and dissemination was also shared with the Action members with information on how to acknowledge funding from COST (Annex 1).

3. Dissemination strategy

From the start, the ML4NGP COST Action is committed to follow the COST Principle of Openness based on Open Science with strategies to ensure high-quality innovative research results and collaborative dissemination of the Action outcomes. The

dissemination strategies are defined to target groups that might directly benefit from the Action results, including the scientific community, public authorities, suppliers and industry. To reach the defined objectives set in the MoU, a set of dissemination activities has already been implemented, including open-access scientific publications and reports, the organization of workshops, training schools and conferences, and demonstrations in scientific events.

4.1. Dissemination tools and actions

Events organized by the Action

Several scientific events were organized to promote dissemination of the research and achievements and fostering network among participants (Table 2). These events aimed to promote not only the sharing of knowledge, networking and public discussion on advances and challenges in the field (mainly the main meetings) but also the transfer of knowledge and capacity building within and beyond the Action (mainly workshops and training schools). Moreover, we have been fully committed to creating an inclusive environment to support the growth of the professional career of young and senior researchers from ITC, NNC and IPC by:

- fomenting the participation of Young Researchers and Innovators (YRIs) from these countries in events organized by the Action,
- supporting their attendance at external high-level conferences and short-term visits to other research laboratories,
- promoting their involvement as local organizers of meetings and training activities.

Table 2: Networking activities organized by ML4NGP COST Action during the first two grant periods.

TITLE	TYPE EVENT	DATE	COUNTRY	Nr OF ATTENDEES
ML4NGP Training School "Protein aggregation, intrinsic disorder and phase separation in the era of machine learning"	Training School	19-21 April 2023	Portugal	27
Workshop on Structural Ensembles of Intrinsically Disordered Proteins	Workshop	07-08 May 2023	Czech Republic	18

1st ML4NGP MEETING on Machine Learning and Non-globular proteins	Meeting	05–07 July 2023	Slovakia	108
Workshop on computational methods for tandem repeat proteins	Workshop	26–28 September 2023	France	30
ML4NGP-REFRACT Training School on Computational Tools to Study Non-Globular Proteins	Training School	13–16 February 2023	Spain	40
2nd ML4NGP MEETING on Machine Learning and Non-globular proteins	Meeting	13–17 May 2024	Greece	125
Workshop on Single-Molecule FRET of Non-globular proteins	Workshop	25–27 September 2024	Portugal	34

To enhance visibility and global cooperation of researchers within the Action network, the annual meetings were organized in ITCs. These conferences provided a platform for researchers to share their knowledge and findings while promoting the interconnectedness of the whole research community in the field. The organization of WG meetings as part of the meeting’s program was also essential to set the stage for sharing insights and refining the working group’s approach, ensuring alignment with current trends and best practices in the field. Training schools were also organized for early-stage researchers, offering the latest advancements and technologies in the field of non-globular proteins (NGP). Both Training Schools equipped participants with essential skills to contribute to a long-term impact on the field’s progress, and the feedback received from the participants was very positive.

Additionally, Workshops were also organized to bring together experts to discuss current and upcoming challenges and reassess WG activities. These discussions were fundamental to identify potential strategies and the need for new tools, aiming not only to enhance the Action’s impact but also to ensure a long-term impact in the field.

Publications

During the first two grant periods, the Action encouraged interdisciplinary joint publications between different research groups by supporting, in part, open access publication fees. The

list of publications - which can be also found on our website - with original open access papers and reviews jointly published in peer-reviewed journals includes:

2023

Escobedo, N., et al., *Combining Protein Conformational Diversity and Phylogenetic Information Using CoDNaS and CoDNaS-Q*. *Curr Protoc*, 2023. **3**(5): p. e764
<https://doi.org/10.1002/cpz1.764>

Del Conte, A., et al., *CAID prediction portal: a comprehensive service for predicting intrinsic disorder and binding regions in proteins*. *Nucleic Acids Res*, 2023. **51**(W1): p. W62-W69
<https://doi.org/10.1093/nar/gkad430>

Arrias, P.N., et al., *The repetitive structure of DNA clamps: An overlooked protein tandem repeat*. *J Struct Biol*, 2023. **215**(3): p. 108001 <https://doi.org/10.1016/j.jsb.2023.108001>

Conte, A.D., et al., *Critical assessment of protein intrinsic disorder prediction (CAID) - Results of round 2*. *Proteins*, 2023 <https://doi.org/10.1002/prot.26582>

Monzon, AM., et al., *A STRP-ed definition of Structured Tandem Repeats in Proteins*. *Journal of Structural Biology*, 2023: p. 108023 <https://doi.org/10.1016/j.jsb.2023.108023>

García-Pardo, J., et al. *A3DyDB: exploring structural aggregation propensities in the yeast proteome*. *Microb Cell Fact*, 2023. **22**, p186
<https://microbialcellfactories.biomedcentral.com/articles/10.1186/s12934-023-02182-3>

Chafouri, H., et. al, *PED in 2024: improving the community deposition of structural ensembles for intrinsically disordered proteins*. *Nucleic Acids Res*, 2023
<https://doi.org/10.1093/nar/gkad947>

Aspromonte M.C., et al. *DisProt in 2024: improving function annotation of intrinsically disordered proteins*. *Nucleic Acids Res*, 2023 <https://doi.org/10.1093/nar/gkad928>

García-Pardo J., Ventura S. *Cryo-EM structures of functional and pathological amyloid ribonucleoprotein assemblies*. *Trends Biochem Sci*. 2023
<https://pubmed.ncbi.nlm.nih.gov/37926650/>

Vasović LM, et al., *Intrinsically disordered proteins and liquid-liquid phase separation in SARS-CoV-2 interactomes*. *J Cell Biochem*, 2023
<https://onlinelibrary.wiley.com/doi/full/10.1002/jcb.30502>

Mier P, Andrade-Navarro MA. *The nucleotide landscape of polyXY regions*. *Comput Struct Biotechnol J*, 2023 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10652141/>

2024

Bondarev SA, et al., *AmyloComp: A Bioinformatic Tool for Prediction of Amyloid Co-aggregation*. *J Mol Biol*, 2024
<https://www.sciencedirect.com/science/article/pii/S0022283624000032?via%3Dihub>

Bartolomé-Nafría, A., García-Pardo, J., & Ventura, S. *Mutations in human prion-like domains: pathogenic but not always amyloidogenic*. *Prion*, 2024
<https://doi.org/10.1080/19336896.2024.2329186>

Gavalda-Garcia J, Díaz A, Vranken W, bio2Byte Tools deployment as a Python package and Galaxy tool to predict protein biophysical properties, *Bioinformatics*, Volume 40, Issue 9, September 2024, btae543, <https://doi.org/10.1093/bioinformatics/btae543>

Clementel D, Arrías PN, Mozaffari S, Osmanli Z, Castro XA, RepeatsDB curators, Ferrari C, Kajava AV, Tosatto SCE, Monzon AM, RepeatsDB in 2025: expanding annotations of structured tandem repeats proteins on AlphaFoldDB, *Nucleic Acids Research*, 2024;, gkae965, <https://doi.org/10.1093/nar/gkae965>

Mac Donagh J, Marchesini A, Spiga A, Fallico MJ, Arrías PN, Monzon AM, Vagiona A-C, Gonçalves-Kulik M, Mier P, Andrade-Navarro MA. Structured Tandem Repeats in Protein Interactions. *International Journal of Molecular Sciences*. 2024; 25(5):2994. <https://doi.org/10.3390/ijms25052994>

Piovesan D, Zago D, Joshi P, De Paolis Kaluza MC, Mehdiabadi M, Ramola R, Monzon AM, Reade W, Friedberg I, Radivojac P, Tosatto SCE. CAFA-evaluator: a Python tool for benchmarking ontological classification methods. *Bioinform Adv*. 2024 Mar 14;4(1):vbae043. <https://doi.org/10.1093/bioadv/vbae043>

Piovesan, D., Del Conte, A., Mehdiabadi, M., Aspromonte, M.C., Blum, M., Tesei, G., von Bülow, S., Lindorff-Larsen, K., & Tosatto, S.C. (2024). MOBIDB in 2025: integrating ensemble properties and function annotations for intrinsically disordered proteins. *Nucleic acids research*. <https://doi.org/10.1093/nar/gkae969>

Atafi, O. A., Clementel, D., Kyritsis, K., Capriotti, E., Farrell, G., Fragkouli, S., Castro, L. J., Hatos, A., Lenaerts, T., Mazurenko, S., Mozaffari, S., Pradelli, F., Ruch, P., Savojardo, C., Turina, P., Zambelli, F., Piovesan, D., Monzon, A. M., Psomopoulos, F., & Tosatto, S. C. E. (2024). DOME Registry: Implementing community-wide recommendations for reporting supervised machine learning in biology. *arXiv (Cornell University)*. <https://doi.org/10.48550/arxiv.2408.07721>

Mozaffari, S., Arrías, P. N., Clementel, D., Piovesan, D., Ferrari, C., Tosatto, S. C. E., & Monzon, A. M. (2024). STRPsearch: fast detection of structured tandem repeat proteins. *bioRxiv (Cold Spring Harbor Laboratory)*. <https://doi.org/10.1101/2024.07.10.602726>

Del Conte, A., Camagni, G. F., Clementel, D., Minervini, G., Monzon, A. M., Ferrari, C., Piovesan, D., & Tosatto, S. C. E. (2024). RING 4.0: faster residue interaction networks with novel interaction types across over 35,000 different chemical structures. *Nucleic Acids Research*, 52(W1), W306–W312. <https://doi.org/10.1093/nar/gkae337>

Zenodo

At the end of the second grant period, the ML4NGP community was created on the Zenodo platform <https://zenodo.org/communities/ml4ngp/>. This community aims to serve as an open repository of content being produced by the Action following FAIR principles, including reports and deliverables, best practices and standards for the experimental protocols, and white papers. General presentations and project overviews will also be publicly shared in

the ML4NGP community. The content uploaded so far includes the deliverables that were foreseen for the Action and general presentations.

Deliverables

The ML4NGP Action has set a list of deliverables to help define and achieve measurable outputs that contribute to the objectives of each WG.

During the first two grant periods, the Action delivered three reports:

- Mobility and Training Plan (WG5, Deliverable D5.1, as part of the ML4NGP HandBook of Operations) - achieved at M6.
- Dissemination and Exploitation Plan (WG5, deliverable D5.2) - achieved at M6.
- Report on state-of-the-art ML approaches focused on different phenomena of NGPs (WG3, Deliverable D3.1) - achieved on M24.

The deliverables are available on the ML4NGP website and can be downloaded from the ML4NGP Zenodo Community (Table 3).

Table 3: List of deliverables and other content uploaded in Zenodo ML4NGP community.

Title	Type	DOI
Science Communication, Dissemination and Exploitation Plan	Deliverable	https://doi.org/10.5281/zenodo.14164811
HandBook of Operations	Deliverable	https://doi.org/10.5281/zenodo.14164897
Machine Learning Tools to Study Non-Globular proteins	Deliverable/Report	https://doi.org/10.5281/zenodo.14200161
ML4NGP at NSF 6th AccelNet Meeting	Presentation	https://doi.org/10.5281/zenodo.14652353

ML4NGP Talks

The ML4NGP TALKS are a series of insightful and exclusive interviews with leading researchers and members of the ML4NGP COST Action, exploring the future of machine

learning applications in the study of non-globular proteins. This series of interviews is expected to help disseminate research and innovation within the field and raise awareness of the challenges and major advances in the research of non-globular proteins while maximizing the creation of new knowledge and breakthrough discoveries beyond ML4NGP Action.

In our first episode, we interviewed Prof Michele Vendruscolo (<https://orcid.org/0000-0002-3616-1610>), who shared insightful comments about the prediction of non-globular protein structures using machine learning-based computational tools, and how these innovations are advancing our understanding of molecular interactions and cellular functions. For the second interview, we hosted Prof Christine Orengo (<https://orcid.org/0000-0002-7141-8936>), who shared her thoughts on the potential of artificial intelligence and deep learning models to investigate not only protein structure and function but also to explore protein interactions and their role in more global perspective of cellular function (and dysfunction).

ML4NGP Connect: Webinars and Training Series

For the third grant period, we are setting up a new initiative called **ML4NGP Connect**, a series of webinars and virtual training sessions designed to share cutting-edge knowledge in the field of machine learning and non-globular proteins. For this initiative, an internal call of interest is now open to recruiting Action members eager to contribute their expertise through talks or hands-on computational training sessions.

The primary aim of ML4NGP Connect is to foster capacity building among young researchers within the ML4NGP COST Action while advancing the principles of transparency and open-access knowledge sharing upheld by the COST Association. This will be achieved by opening this initiative to all interested participants (within and beyond this COST Action). Additionally, the involvement of some speakers and trainers linked to other European networks (e.g. ELIXIR, IDPfun2, IDPseminars) enriches this initiative by bridging diverse consortia working in the same or related fields, amplifying the impact of our network and strengthening European collaboration in this research field.

Attendance at external conferences

The Action Chair was present at meetings non-organized by the ML4NGP Action (Table 4), with the presence of experts in the field and European and international funding authorities.

Table 4: Dissemination activities to promote ML4NGP COST Action.

Activity	Target Audience	Outcome	Link
Action presentation at the 6th Annual AccelNet Meeting, October 16-18, 2024 (Washington DC, USA)	Scientific Community, AccelNet project leaders, NSF representatives, Governmental representatives, project managers, early career investigators	The event provided the stage for sharing insights and common challenges in funding from AccelNet and COST Association. The participants shared experiences, discussed challenges, and exchanged ideas on data sharing and management and international collaboration. It also offered an opportunity to engage with AccelNet program directors and NSF representatives about funding priorities for addressing global challenges.	https://ml4ngp.eu/2024/10/22/ml4ngp-at-accelnet-meeting/
Action presentation at the Conference "Towards excellence and convergence research in theoretical biology" (COST Action DYNALIFE), May 2 - 4, 2023 (Venice, Italy)	Scientific community, DYNALIFE Action members, Theoretical Biologists, Computer scientists and DYNALIFE Core Group members	The purpose of this meeting was to explore potential synergies between two COST Actions , as there are some Action members who participate in both initiatives.	https://www.dynalife.eu/_files/ugd/fc90c7_d58d85993335441f8_dff0cb297942c5d.pdf

4.2. Need for improvement

To enhance the implementation of the science communication and dissemination plan within the ML4NGP COST Action, several areas for improvement have been identified. First,

the lack of educational material from Action training events, particularly Training Schools, is being mitigated through a series of hands-on training and webinars. Future efforts will include recording theoretical sessions during Training Schools and making them accessible post-event. Second, engagement from WG5 members has been limited, despite initial meetings. The SCC will explore additional strategies to foster participation and sustained involvement. Third, the current focus on the scientific community has highlighted a need to engage broader stakeholders, such as representatives from the pharmaceutical and biotechnological industries, health system agents, policymakers, regulators, and machine-learning tool developers. Future meetings will incorporate roundtables with these stakeholders, and direct invitations will be extended to key representatives, particularly developers. Finally, while we have yet to publish Wikipedia articles about NGP and machine-learning (ML) tools, this gap is being addressed by publishing open-access joint articles, which are available for download on our website.

5. Mobility and training Program

STSMs and ITC-CGs

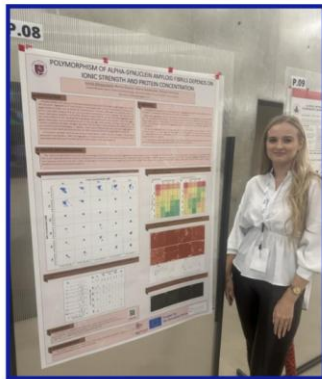
During the first 24 months, 11 researchers (of which 10 were young researchers) were involved in short-term scientific missions sustaining joint collaborations between partners from different institutions and countries. In compliance with our commitment to contribute to the capacity building of less-research-intensive countries, 55% of the short-term scientific missions (STSMs) were granted to young researchers from ITC.

Moreover, the Action awarded 7 young researchers from ITC with conference grants to support the dissemination of their research at international high-level conferences not organized by the Action. We collected feedback from some grantees (Fig. 7 and Fig. 8) who acknowledge these funding opportunities as great opportunities to support their scientific research and foster collaboration with other Action's members, expanding their network and expertise and also contributing to their own personal growth.



TESTIMONIAL

ITC CONFERENCE GRANTS



I am very grateful for the COST Action CA21160 ITC Conference grant for giving me the opportunity to participate in the PhasAGE III International Conference. There were two poster sessions during which I presented my research regarding alpha-synuclein polymorphism dependence on protein concentration and solution ionic strength. (...)

Overall, participation in this conference provided an opportunity not only to present my research results and to receive advice on how to improve the study quality, but also to deepen my knowledge on the topic of liquid-liquid phase separation.

Kamile Mikalauskaite, Slovakia
III PhasAGE International Conference, Porto, Portugal, 2023



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www.ml4ngp.eu |

Figure 7: Testimonial from a young researcher awarded an ITC Conference Grant.

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14 DEC 2023 – 31 OCT 2024



Soma Varga at the Institute of Biochemistry, Johannes Kepler Universität Linz (Austria).

“I can gratefully say that the STSM fully reached its purpose, and I would like to sincerely thank to the organizers for making it possible to me. During my time in JKU I had the honour to join a flourishing research group with extremely enthusiastic and helpful researchers. The high standards here motivated me to perform on my best level in everyday work, and I can hopefully say that I was also able to contribute to the Institute of Biochemistry. (...) I truly believe that my time spent on JKU through the STSM is an important chapter of my PhD which sets the path for my future goals.”

Soma Varga, PhD student from Hungary





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Figure 8: Testimonial from a young researcher awarded with a STSM.

6. Impact and metrics

After two years, we achieved important milestones (Figure 9). We ended the second grant period with 304 Action members from 46 countries. We organized a total of 7 events – two main meetings, two Training Schools and 3 Workshops hosting more than 380 participants. The Action also delivered 21 joint open-access publications showcasing the strong commitment in fostering collaboration and advancing research across NGP and ML research.

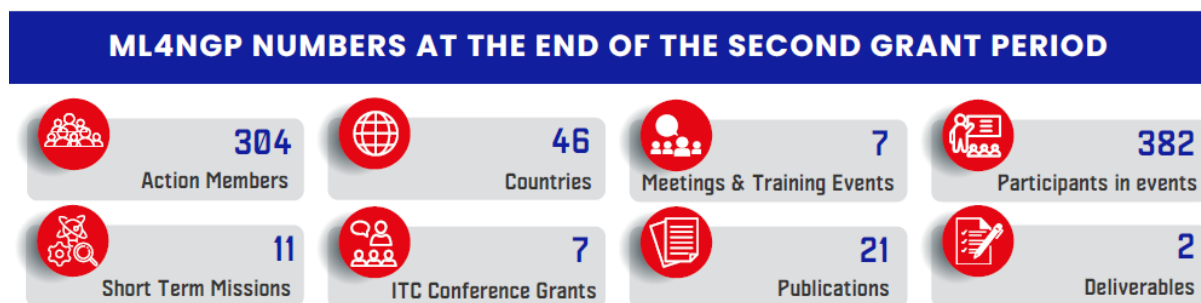


Figure 9: Analysis of ML4NGP numbers.

Annex 1

ML4NGP Communication Guidelines

What are the Action communication channels?

The website of the COST Action ML4NGP – www.ml4ngp.eu – is the central repository channel with all relevant information about research, events and timeline.

Any important subject related with the website should be sent by email to info@ml4ngp.eu with the topic “ML4NGP website” on the subject line.

X Account - <https://x.com/ml4ngp>

LinkedIn Page - <https://www.linkedin.com/company/ml4ngp/>

Are you producing something that relates to the Action?

The acknowledgement of COST funding is a mandatory communication requirement.

The following acknowledgement shall always be added to any material produced with COST funding:

“This [article]/[publication]/[project] is based upon work from COST Action ML4NGP, CA21160, supported by COST (European Cooperation in Science and Technology).”

Are you organizing an event sponsored by the Action?

The acknowledgement of COST funding is a mandatory communication requirement.

The following acknowledgement shall always be added to any material for events organized with COST funding:

“This event is part of the activities of the COST Action ML4NGP, CA21160, supported by COST (European Cooperation in Science and Technology).”

Do you have a presentation to make or something to write about the ML4NGP COST Action?

A Communication Toolkit was designed for internal and external communication that includes the ML4NGP logo, funding logos, PowerPoint and Word templates. Please find the ML4NGP Communication Toolkit on the internal communication repository of the project – [link](#). If you need color variations of logos, please send an email to info@ml4ngp.eu with the topic “ML4NGP toolkit” on the subject line.



How to refer to the Action on social media?

To easily find messages with a specific theme or content related to the Action activities, always use the following on Twitter:

- hashtags: #ML4NGP, #COSTactions, #ScienceWithoutBorders
- handles: @ml4ngp, @COSTprogramme, @EU_Commission
- variations: #ML4NGPteam, #ML4NGPreserach, #ML4NGPmeeting