

COST Action CA20121, Bench to bedside transition for pharmacological regulation of NRF2 in noncommunicable diseases (BenBedPhar)

Main proposer

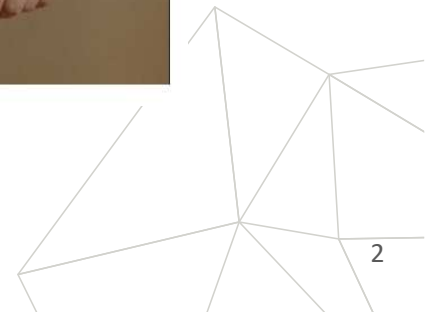


Antonio Cuadrado

Full professor of Biochemistry
and Molecular Biology
Department of Biochemistry
Faculty of Medicine
Autonomous University of Madrid (UAM)

<https://www.bq.uam.es/acuadrado/>

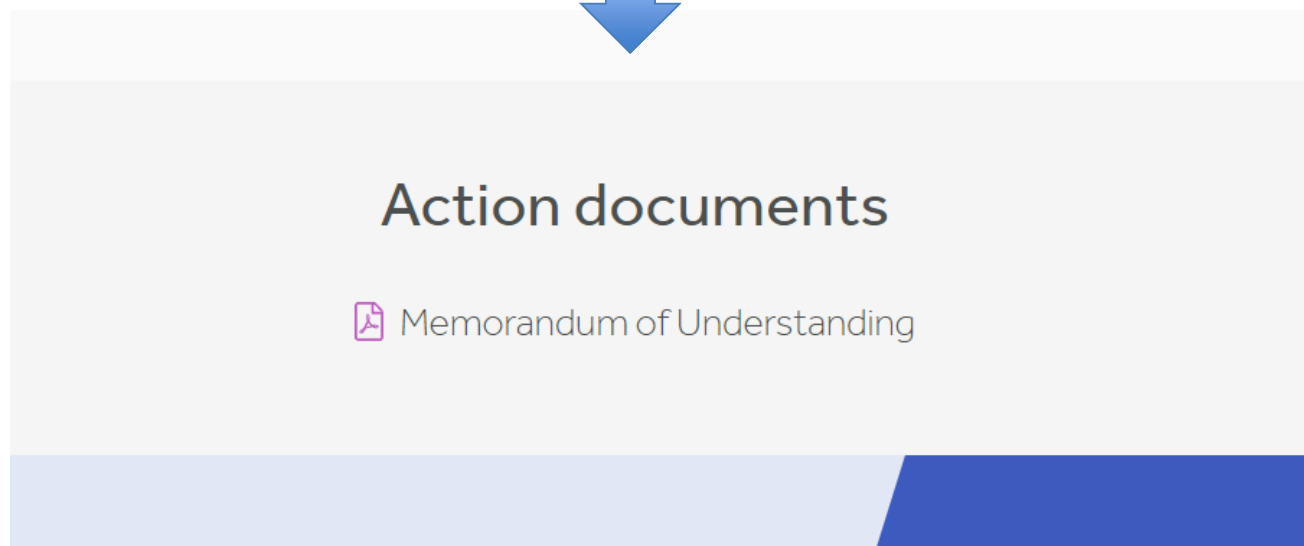
antonio.cuadrado@uam.es



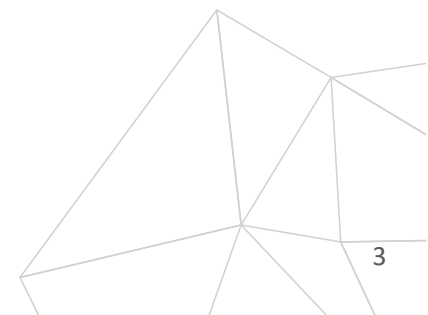
COST Action documents



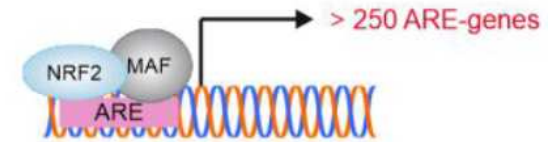
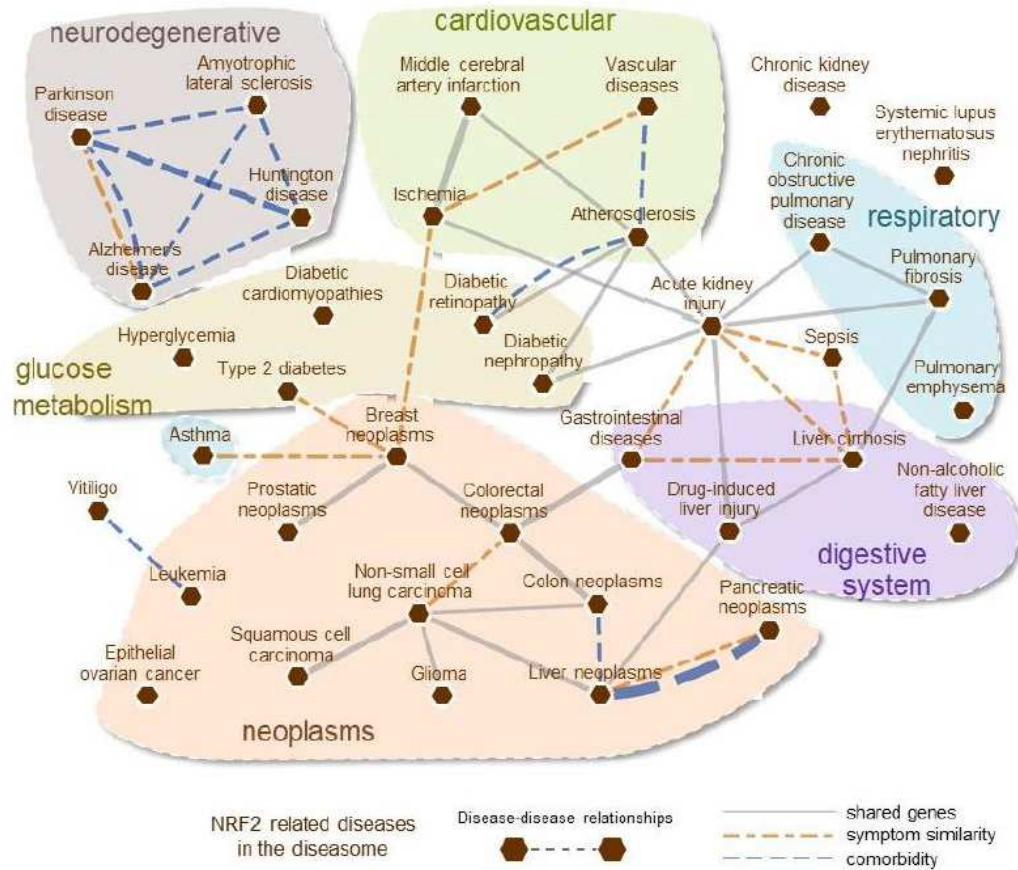
<https://www.cost.eu/actions/CA20121/>



Also see: **COST implementation rules**



Transcription factor NRF2



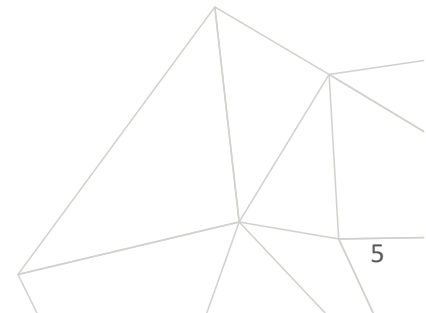
Redox balance	Metabolism	Inflammation	Proteostasis
<i>HMOX1</i> <i>NQO1</i> <i>GCLC</i> <i>GCLM</i>	<i>G6PDH</i> <i>TALDO1</i> <i>PPAT</i> <i>ACC1</i>	<i>MARCO</i> <i>CD36</i> <i>IL17D</i> ⊖ <i>IL6</i> <i>IL1</i>	<i>GPX8</i> <i>PSMB7</i> <i>SQSTM1</i> <i>CALCOCO2</i>



BenBedPhar Challenge



To translate **NRF2-related research** into the stream of EU social, clinical and economic sectors, providing **innovative therapeutics** for some Non-communicable diseases

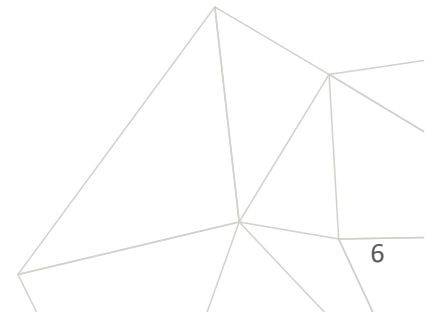


Evaluation (third time lucky!)



SUMMARY TABLE

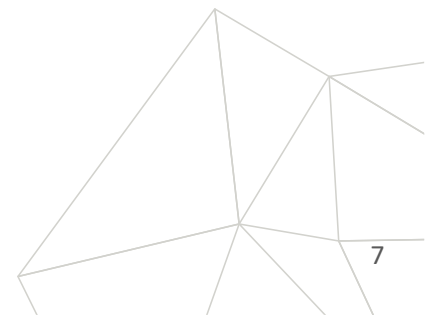
S&T EXCELLENCE			NETWORKING EXCELLENCE			IMPACT			IMPLEMENTATION	Marks
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Total
5	4	5	5	5	5	5	5	4	5	48



Comments of the Scientific Committee



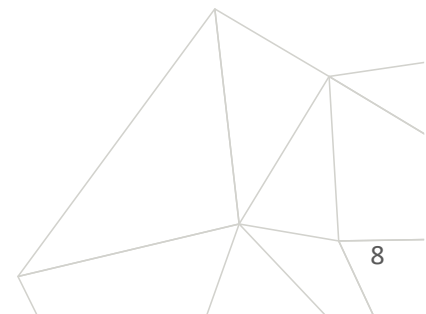
- The level of involvement of **Inclusiveness Target Countries (ITCs)** should be maintained and the plans described in the proposal for ensuring ITC involvement should be implemented.
- The level of involvement of **Early Career Investigators (ECIs)** should be increased and the plans described in the proposal for ensuring ECI involvement should be implemented.
- The **gender balance** should be maintained and the plans described in the proposal for ensuring gender balance should be implemented.



Research Coordination Objectives



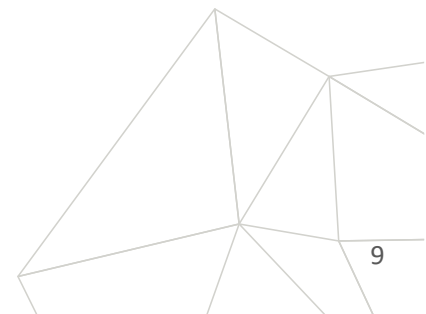
- Building a cohesive multidisciplinary pan-European network of stakeholders in the NRF2 field.
- Integration of knowledge in NRF2 and its relation to NCDs.
- Channelling of knowledge towards the EU Biopharmaceutical and clinical sectors.
- Dissemination of knowledge towards general public and policy makers.



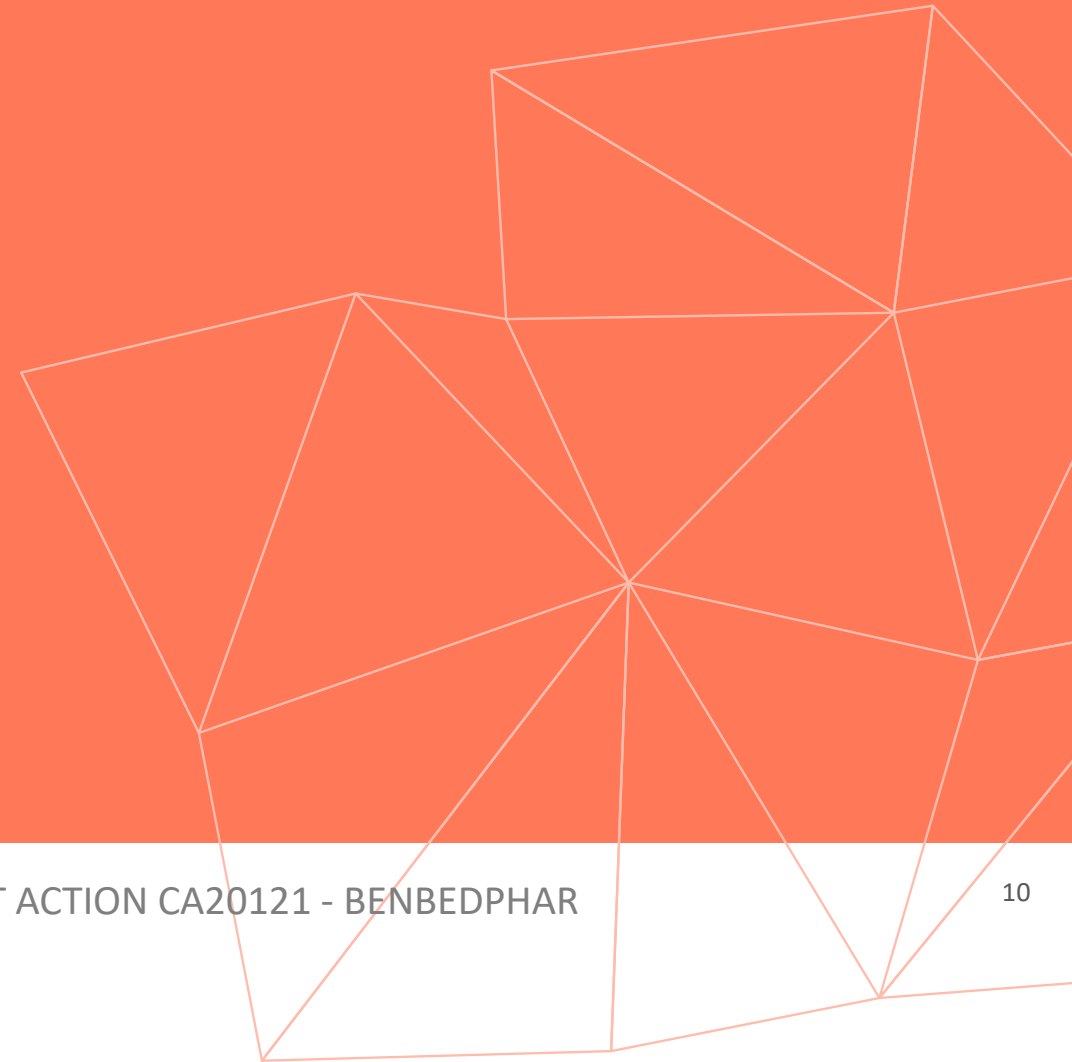
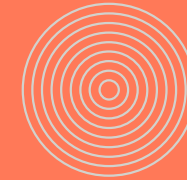
Capacity-building Objectives



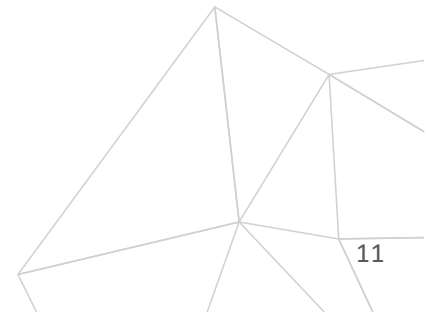
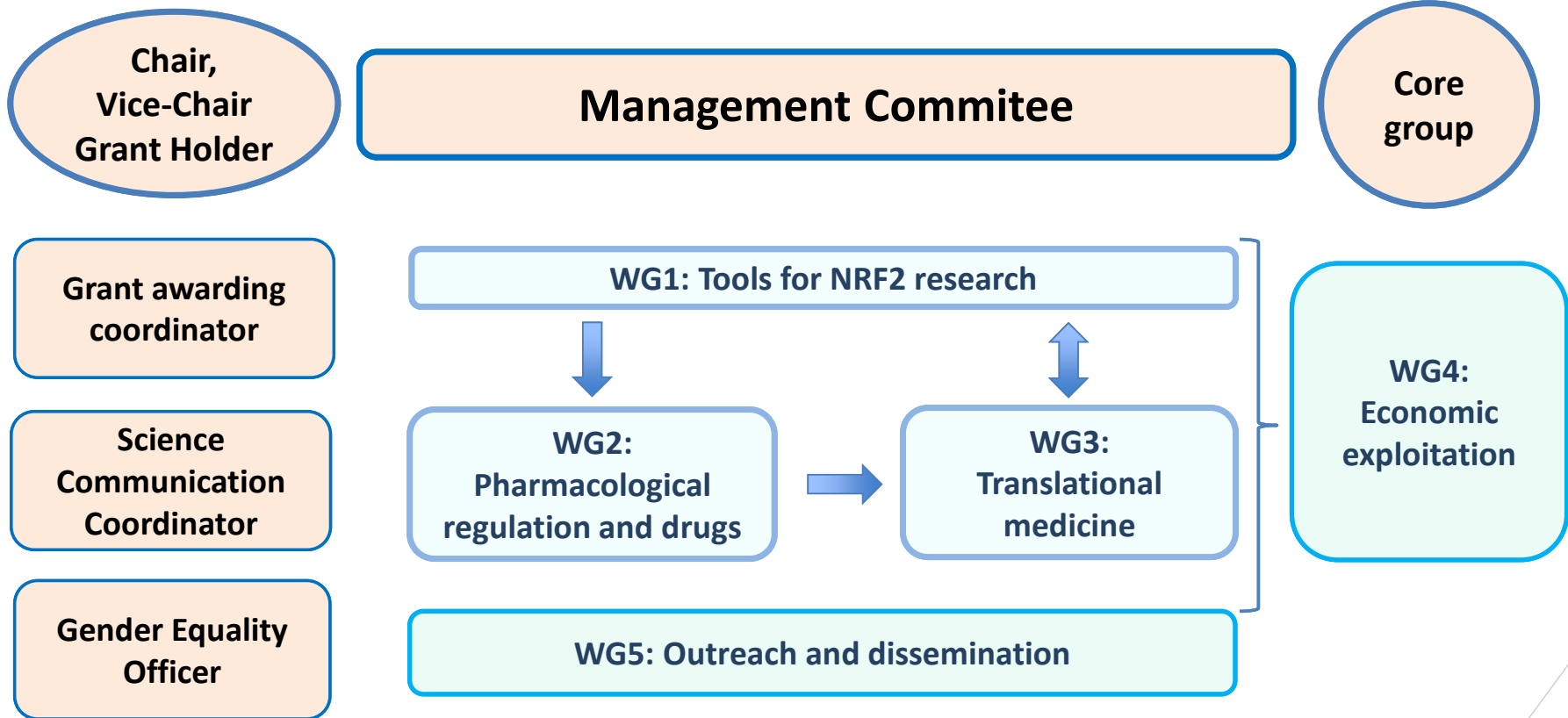
- Knowledge transfer and collaboration agreements among scientists and SMEs to help economical exploitation.
- Technological platforms: 1) drugs 2) biomarkers 3) animal models, 4) toolbox of reagents, 5) repositories of biological samples.
- Interdisciplinary training of young scientists (ECI).
- Access to state-of-the-art biomedical technologies.



Action Structure



BenBedPhar structure



Deliverables of WG1: Tools for NRF2 research



- Guidelines, standardized procedures and protocols.
- Toolbox of customized reagents.
- Inventory of NRF2-relevant biologic samples in biobanks.
- Technologic platform with NRF2-related databases, advanced technologies and bioinformatic tools.



Deliverables of WG2: Pharmacological regulation



- Inventory of NRF2-targeted drugs with clinical projection
- Registry of superior NRF2-related animal models of NCDs
- Biochemical NRF2 biomarkers
- Reports on new preclinical studies



Deliverables of WG3: Translational medicine.



- Panel of somatic mutations in the KEAP1/NRF2 system in cancer.
- Documented NRF2-related genetic variants and drug responses phenotypes in NCDs.
- Panel of blood-based biomarkers for clinical monitoring of NRF2-targeted therapy and the response of NCD patients.
- Documentation for future clinical trials on NRF2-targeted therapeutics in selected NCDs.



Deliverables of WG4: Economic exploitation.



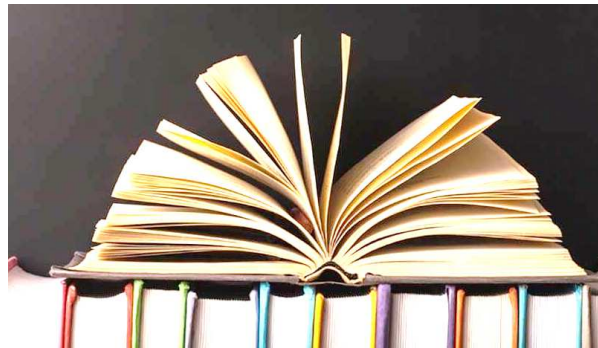
- Inventory of procedures, guidelines, lead drugs, biomarkers, and other technologic outcomes.
- Engagement of additional SMEs.
- Reports on consulting and Biopharma collaborations.
- Economical exploitation by BenBedPhar members of technologic outcomes.



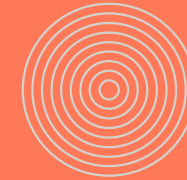
Deliverables of WG5: Outreach and dissemination.



- Project-dedicated webpage
- Participation in social media and other events
- Yearly “BenBbedPhar Open day”
- Collaborative articles on NRF2 concepts, drugs, tools, etc



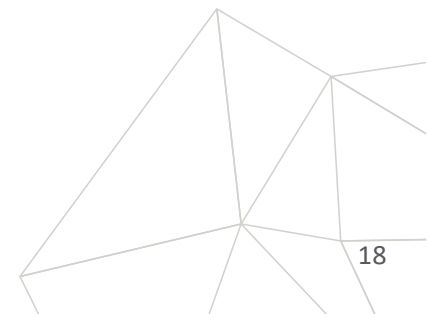
Leadership Positions



Leadership positions and responsibilities



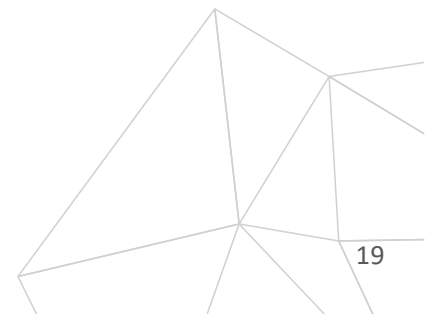
- **Chair**
 - Coordination and implementation of the Action
- **Vice Chair**
 - Assists and substitutes the Chair
- **Grant Holder Scientific Representative (GH SR)**
 - representative of the GH in the MC
- **Core Group**
 - Assist the chair and the MC
- **Working Group leaders and co-leaders**
 - Coordinate the WGs defined by the Action
- **Grant Awarding Coordinator**
 - Responsible of the grant awarding process
- **Science Communication Coordinator**
 - Dissemination and communication
- **Gender Equality Officer**
 - Gender balance. Job/family conciliation



Leadership positions



- **Chair:** Antonio Cuadrado (Spain)
- **Vice-Chair:** Gina Manda (Romania)
- **Grant holder scientific representative:** Manuela G. López (Spain)



Suggestions for WG leaders and co-leaders



- **WG1: Tools for NRF2 research**

leader: Anna Grochot-Przeczek (Poland)

co-leader: George Spyrou (Cyprus)

- **WG2: Pharmacological regulation and drugs**

leader: Albena Dinkova-Kostova (UK)

co-leader: Ana I. Rojo (Spain)

- **WG3: Translational medicine**

leader: Vita Dolzan (Slovenia)

co-leader: Brigitte Winklhofer-Roob (Austria)

- **WG4: Economic Exploitation**

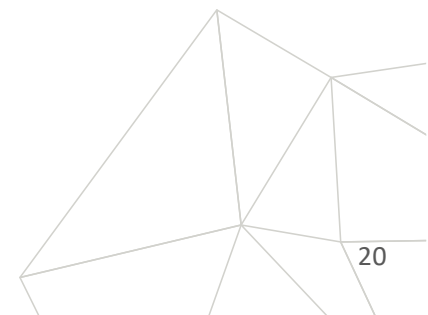
leader: Guy Cohen (Israel)

co-leader: Fernando Antunes (Portugal)

- **WG5: Outreach and dissemination**

leader: Brigitta Buttari (Italy)

co-leader: Harald Schmidt (Netherlands)

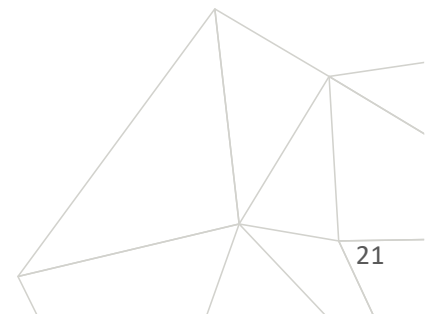


Other leadership positions:

- Grant Awarding Coordinator: Irina Milisav (Slovenia)
- Science Communication Coordinator: Aleksandra Buha (Serbia)
- Gender Equality Officer: Elena Milanesi (Romania)
- International Advisors:
 - Masayuki Yamamoto (Japan)
 - Hozumi Motohashi (Japan)
 - Donna Zhang (USA)
 - Gina DeNicola (USA)

News and views
for quarterly letters

Participation in TS

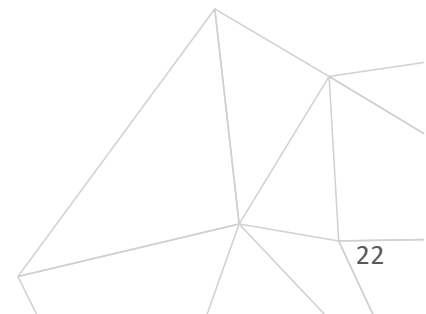


Core group:

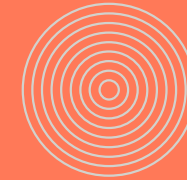


Chair, Vice-Chair, GH scientific representative	3
WG leaders and co-leaders	10
Grant Awarding Coordinator	1
Science Communication Coordinator	1
Gender Equality Officer	1
Total	16

- 7 ITCs
- 11 Women
- 6 Young researchers



Grant Holder



Financial matters and management



Annotated Rules for COST actions

Brussels, 27 July 2021
COST 094/21

ANNOTATED RULES FOR COST ACTIONS

(Level C – COST Actions)

The Executive Board (EB) of the COST Association

Having regard to the [Rules and Principles for COST activities](#) (level A) and to the [Rules for COST Actions](#) (level B) enabling the EB to adopt Annotated Rules, hereinafter referred to as level C rules,

Adopts the present Annotated Rules for COST Actions (level C).

The present Annotated Rules aim at providing a practical handbook to COST Actions participants in support of the [Rules for COST Actions](#) implementing the [Rules and Principles for COST activities](#).



Grant Holder GH-CA20121-1



- **Organization:** [Universidad Autonoma de Madrid](#)
- **Science Representative:** Dr. Manuela García Lopez
- **Administrative Representative:** Dr. Maribel Escoll
- **Finance Representative:** Dr. Rafael Oliveros
- **Legal Representative:** Dr. Daniel Jaque



- **Scientific officer:** Inga Dadeshidze
- **Administrativa officer:** Jeannette Nchungoru

COST action Grant Agreement between COST association and Grant Holder

CA20121 Grant Period 1 2021-11-01 to 2022-10-31) Grant Agreement documentation e-signed by both parties is now available in Grant Holder Legal Representative e-COST account for your re...



COST Association Notification <noreply@cost.eu>

viernes, 3 de diciembre de 2021, 13:16

Para vicerectorado.pcientifica@uam.es; CC: jeannette.nchungoru@cost.eu; manuela.garcia@uam.es; rafael.oliveros@uam.es; + 1 más



Dear Grant Holder Legal Representative (GHLR) of Action CA20121,

The CA20121 Grant Period 1 (2021-11-01 to 2022-10-31) Grant Agreement documentation (Grant Agreement and Annex A) has been e-signed by the COST Association Director and is now available in the Grant Holder Legal Representative e-COST account for your records.

Best regards,

COST Association

COST Association | Avenue du Boulevard-Bolwerklaan 21
1210 Brussels | Belgium
Tel: +32 2 533 38 00
helpdesk@cost.eu | <https://www.cost.eu>

E-49.A — Mail generated by e-COST on 03 December 2021 at 13:16:52



WORKPLAN

Annex A - Work And Budget plan

CA20121

Bench to bedside transition for pharmacological regulation of NRF2 in noncommunicable diseases
Grant Period from 01/11/2021 to 31/10/2022

Summary Budget

Networking Tool	Quant.	Budget
Meetings	4	EUR 81 216.00
Training Schools	0	EUR 0.00
Short Term Scientific Missions (STSM)	4	EUR 13 500.00
ITC Conference Grant	6	EUR 9 480.00
COST Action Dissemination	1	EUR 4 000.00
Other Expenses Related to Scientific Activities (OERSA)	1	EUR 499.65
		SCIENCE EXPENDITURE : EUR 108 695.65
Financial and Scientific Administration and Coordination (FSAC) - MAX.	15%	EUR 16 304.35
		TOTAL GRANT : EUR 125 000.00



Details for Short Term Scientific Missions (STSM)

STSM Summary

Number Of STSMs :	4
Amount Per STSM :	EUR 3 375.00
Total Budget For STSMs :	EUR 13 500.00

Details for ITC Conference Grant

(Inclusiveness-Target-Countries)

ITC Conference Grant Summary

Number Of Grants :	6
Amount Per Grant :	EUR 1 580.00
Total Budget For Grants :	EUR 9 480.00



Details for COST Action Dissemination

Item 1

Title :	COST Action CA20121 - BenBedPhar
Expected Release Date :	28/02/2022
Publisher Or Supplier :	Tuinbit, Madrid, Spain (info@tuinbit.com)
Type :	Action Website
Amount :	EUR 4 000.00

Details for Other Expenses Related to Scientific Activities (OERSA)

Expense 1

Title :	Zoom licence
Amount :	EUR 499.65

Spent: 186,40€ (annual subscription + one month extension for large meeting)

Draft agreement on the short-term Grant Period goals

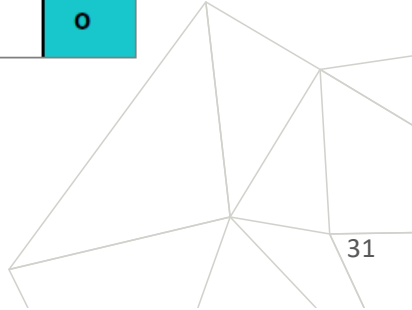
Support to Draft Work and Budget Plan



Tasks for first grant period



	YEAR 1			
Kick-off meeting and report	o			
Quarterly newsletter	o	o	o	o
MC Meetings and reports		o		o
WG Meetings and reports		o		o
Scientific Conferences		o		o
TSs and reports				
MOOCs and reports				o
Launch calls for STSMs				o
Gender Equality Officer				o

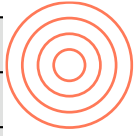


Goals/deliverables

Online meetings of WGs every 3 months

YEAR 1

WG1.1 Standardized procedures/protocols.				
WG1.2 Toolbox of customized reagents. Updates:				
WG1.3 Biobanks data and updates:				
WG1.4 Technology platform and updates:				
WG2.1 Inventory of repurposing/new NRF2 drugs				o
WG2.2 Registry of animal models and updates.				
WG2.3 Biomarkers in animal models				
WG3.1 Genetic & biochemical biomarker profiles				
WG3.2 Panel of somatic KEAP1/NRF2 mutations				o
WG3.3 Genetic variants. Drug endophenotypes				
WG3.4 Panel of blood-based biomarkers				
WG3.5 Directions for future clinical trials				
WG4.1 Database on NRF2 drugs,				
WG4.2 Recruitment of more Biopharma Co.				
WG4.3 Consulting and Biopharma collaborations				o
WG5.1 Webpage www.benbedphar.eu & updates		o	o	o
WG5.2 Participation in social media & events				o
WG5.3 BenBedPhar Open days and social media				o
WG5.4 Joint publications and communications				



COST is supported by the Horizon 2020 Framework Programme of the European Union

COST ACTION CA20121 - BenBedPhar

Webpage: WG5 and Science Communication Coordinator

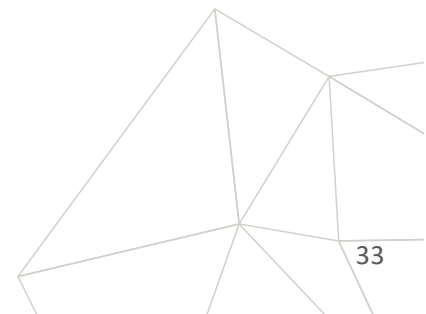


1. Web page

- Contracting. Up to €4,500 for the first grant period: design and maintenance.

2. Zoom Licence:

- 500€/Year.



Webpage: <https://benbedphar.org/>



cost
EUROPEAN COOPERATION
IN SCIENCE & TECHNOLOGY

BenBedPhar

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COST Action CA20121
Bench to Bedside transition for
Pharmacological regulation of NRF2
in non communicable diseases

Know more



COST is supported by the
Horizon 2020 Framework Programme
of the European Union

COST ACTION CA20121 - BenBedPhar



Logo competition



- Send your logos to our Science Communication Coordinator: until November 10th
- Display from November 10th to 15th
- e-votes until November 15th



Redox webinars with Sapienza University of Rome

Prof. Luciano Saso (Deputy Rector for European University Networks)



First MOOC (Massive Open Online Courses)



- Sponsored by the Autonomous University of Madrid
- UAMx belongs to the edX platform funded by MIT
- UAMx provides the online platform and other resources
- 1 ECTS (10 h lectures plus 15 h of study)
- Certificate (~ 25 euros). University and professors.
- Topic: general vs. specific
- Date?
- Professors ?



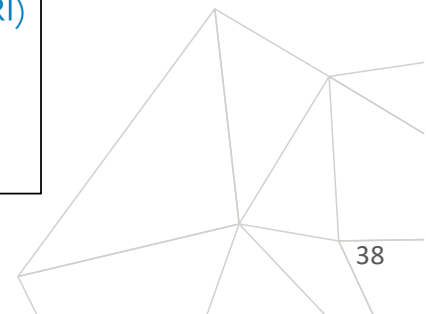
Joint publications



- Virtual Special Issue in FRBM. IF: 7.37 this year.
- Free publication and colour figures,
- The deadline for submission is June 1st, 2022.





The screenshot shows the Elsevier website for the journal 'Free Radical Biology & Medicine'. The page includes the Elsevier logo, a search icon, and a shopping cart icon. The breadcrumb trail is 'Home > Journals > Free Radical Biology & Medicine'. The journal cover is displayed on the left, and the main content area contains the journal title, its affiliations with the Society for Redox Biology and Medicine, the Society for Free Radical Research-Europe, and the International Society for Free Radical Research (SFRR). It also lists the ISSN (0891-5849) and publishing options for Open Access (OA) and Subscription. At the bottom, there are links for 'Guide for authors', 'Track your paper', and 'Order journal'.



Other joint publications

- Antioxidants (deadline December 31).
Experimental papers are preferred
- Redox Biology and several other journals
in the coming years.



antioxidants

an Open Access Journal by MDPI

IMPACT FACTOR 6.312
Covered in: PubMed

Transcription Factor Nrf2

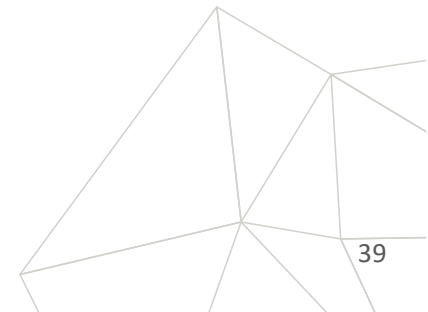
Guest Editor:

Prof. Dr. Antonio Cuadrado
Lab Neuroprotective Strategies
for Neurodegenerative Diseases,
Faculty of Medicine, Autonomous
University of Madrid (UAM), Spain
antonio.cuadrado@uam.es

Message from the Guest Editor

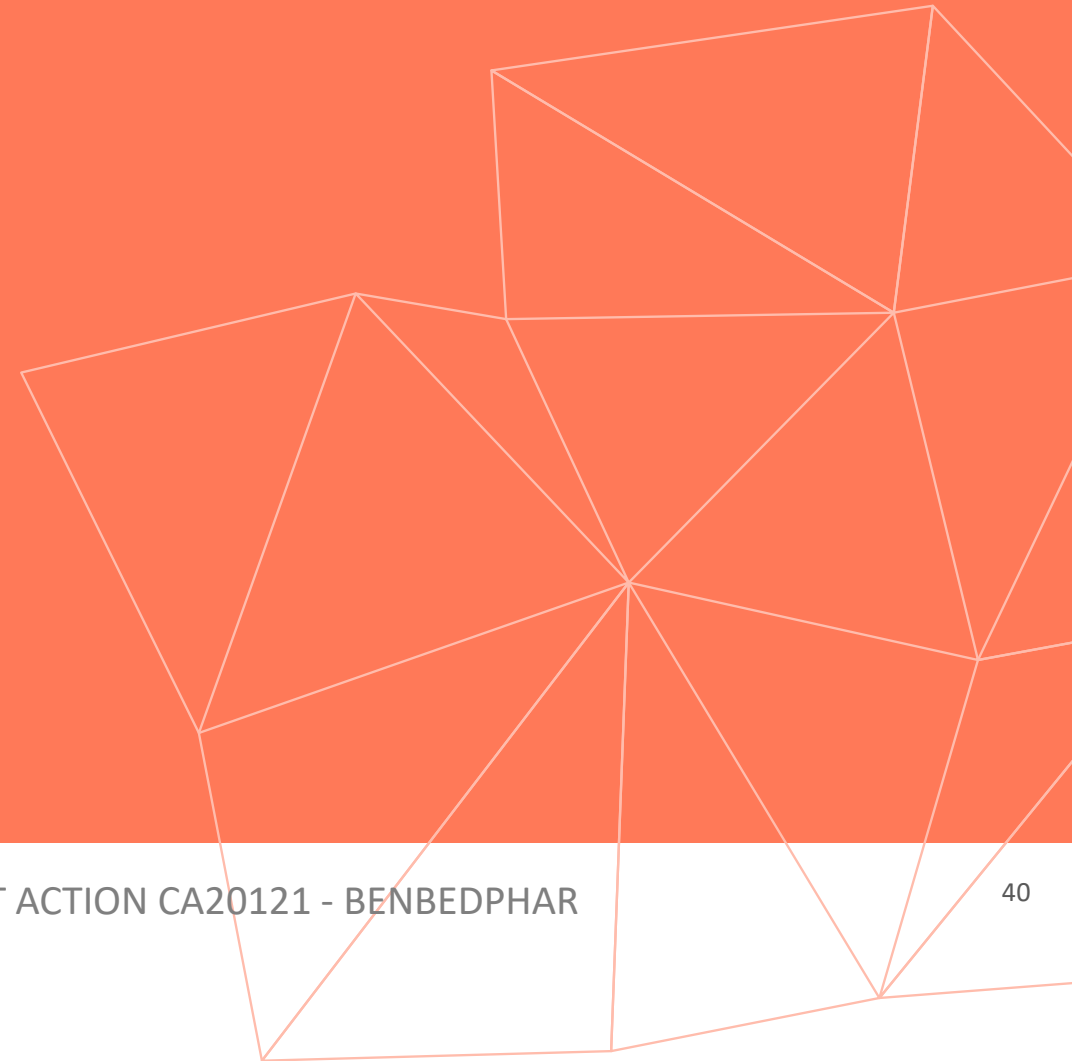
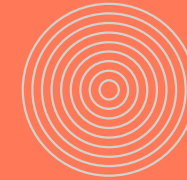
Many non-communicable diseases (NCDs) share common pathomechanisms, that might benefit from acting on a common molecular target: the transcription factor NRF2 (nuclear factor (erythroid-derived 2)-like 2). NRF2 regulates the expression of about 250 genes encoding a network of enzymes involved in NADPH-, glutathione-, and thioredoxin-mediated reactions, inhibition of inflammation, induction of autophagy genes, etc. Through this transcriptional network, NRF2 coordinates multifaceted responses to diverse forms of stress for

Deadline for manuscript submissions:
31 December 2021



Proposal for WBP

Next Grant Period



First grant period: 125,000 euros (to be further corrected)



Kick-off meeting and report		Paid by COST
Quarterly newsletter (webpage)		Costs included in webpage maintenance
Spring 2 nd Meeting and reports (40 participants)	38.180	945€/person: flight plus 3 nights plus allowance
Fall 3 rd Meeting and reports (40 participants ?)	38.180	945€/person: flight plus 3 nights plus allowance
Hybrid meetings 16 participants	17.536	945€/person: flight plus 3 nights plus allowance
MOOCs and reports		No costs. This will be covered by the organizing universities
Launch calls for STSMs and report	12.600	participants flight plus up to 30 days each
WG5.1 Webpage www.benbedphar.eu & updates	1.100	Get quote
WG5.2 Participation in social media & events	1.100	Flyers, banners, etc.
WG5.3 BenBedPhar Open days and social media		
Total general expenses	108.696	
The grant holder (15%)	16.304	Administrative help: Teresa Varela
Total budget first year	124.932	



Second MC meeting: Madrid, May 19-20, 2022



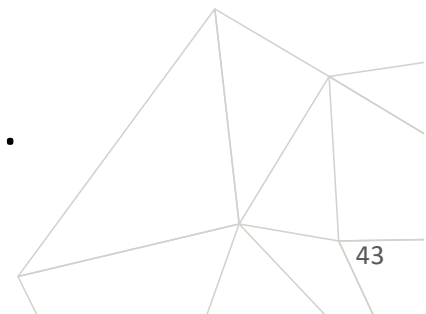
- ~29 participants paid by BenBedPhar
- 10 participants paid by Spanish Ministry and UAM
- Venue: Hotel Chamatin The One
- Activities of WG4
- Invitation to Biopharma
- Invitation to International Advisors



Meetings for the year 2022



- International Society of Antioxidant, Nutrition and Health
Paris Redox Meeting (most likely in June).
Prof. Harry van Goor (President)
- Society for Free Radical Research-Europe
Suggested by Giovanni Mann, Niki Chondrogianni and Brigitte Winklhofer-Roob
- HO Conference
Roberto Moterlini will find if this meetings are still going on after the pandemic
- WG5 looks for agreements with other meetings for the year 2023.



What will you start
tomorrow to contribute
to the success of this
Network?



Thanks and good luck to **BenBedPhar!!!**