



14th EBF Open Symposium
Science – Our Universal Language

**BM and CoU –
where are we today and where are we going?**

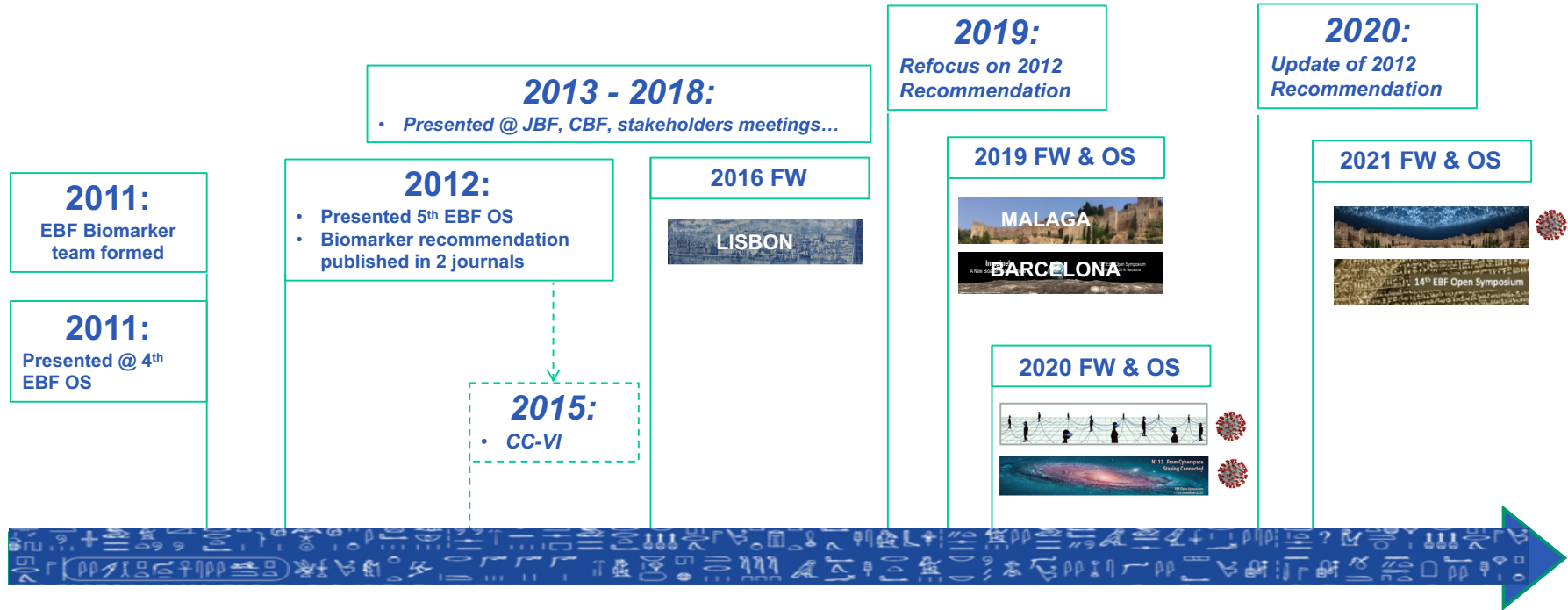
Philip Timmerman, EBF

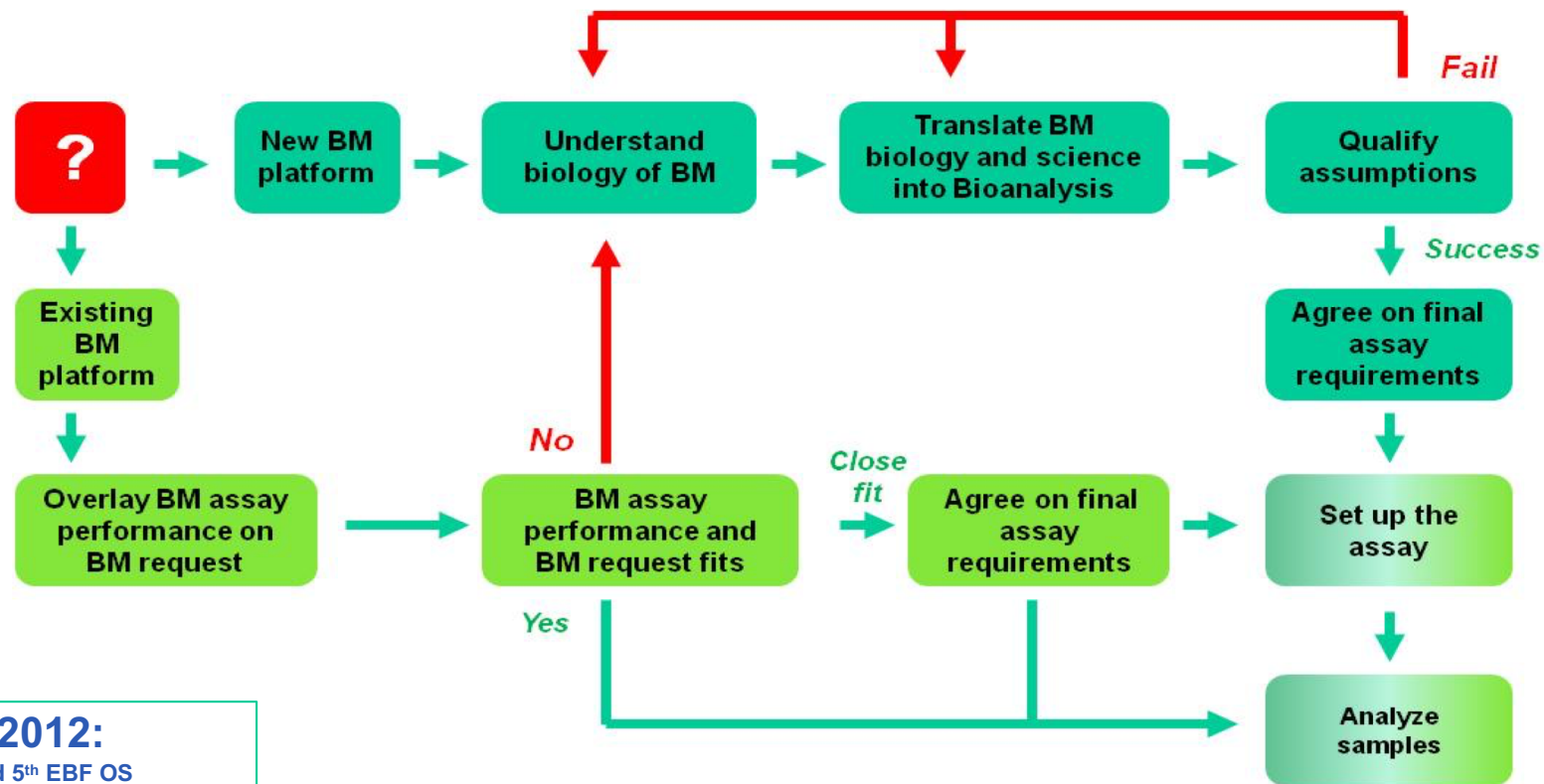
24-26 November 2021, Barcelona

Our challenge...

Getting in right

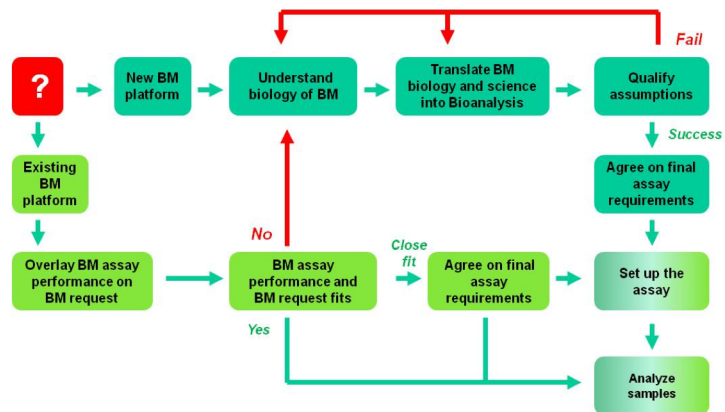
EBF and BM - A 10y Journey





2012:

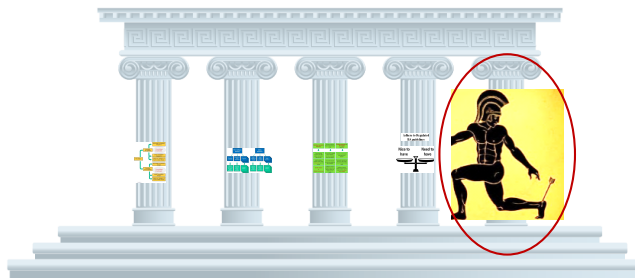
- Presented 5th EBF OS
- Biomarker recommendation published in 2 journals



2013 - 2018:

- Presented @ JBF, CBF, stakeholders meetings...

EBF recommendation – 4 pillars



The 5th pillar - COMMUNICATION

Communicate, communicate, communicate:

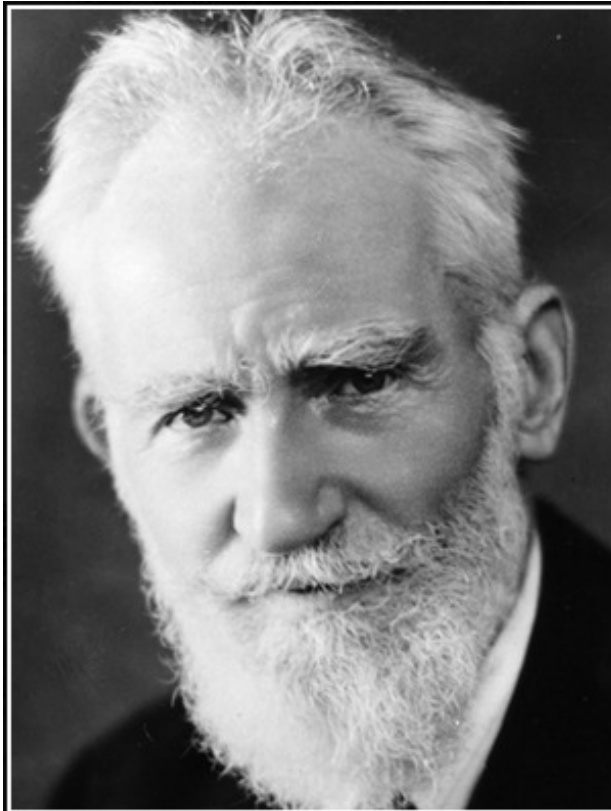
- To understand the biology, pharmacological effect... of the BM
- To understand what the data will be used for
 - Scientific decisions taken
 - Safety decisions taken
 - Other?
- To share what is possible from a BA perspective (can be more or less)
- To share what is not realistic from a BA perspective
- To ensure optimal cost/benefit

The 5th pillar - COMMUNICATION

Communicate, communicate, communicate

- To understand the biology, pharmacology, and the BM
- To understand what the data will tell you
 - Scientific decisions taken
 - Safety decisions taken
 - Other?
- To share information from a BA perspective (can be more or less)
- To be realistic from a BA perspective
- To estimate the potential cost/benefit

= CoU in 2012 language

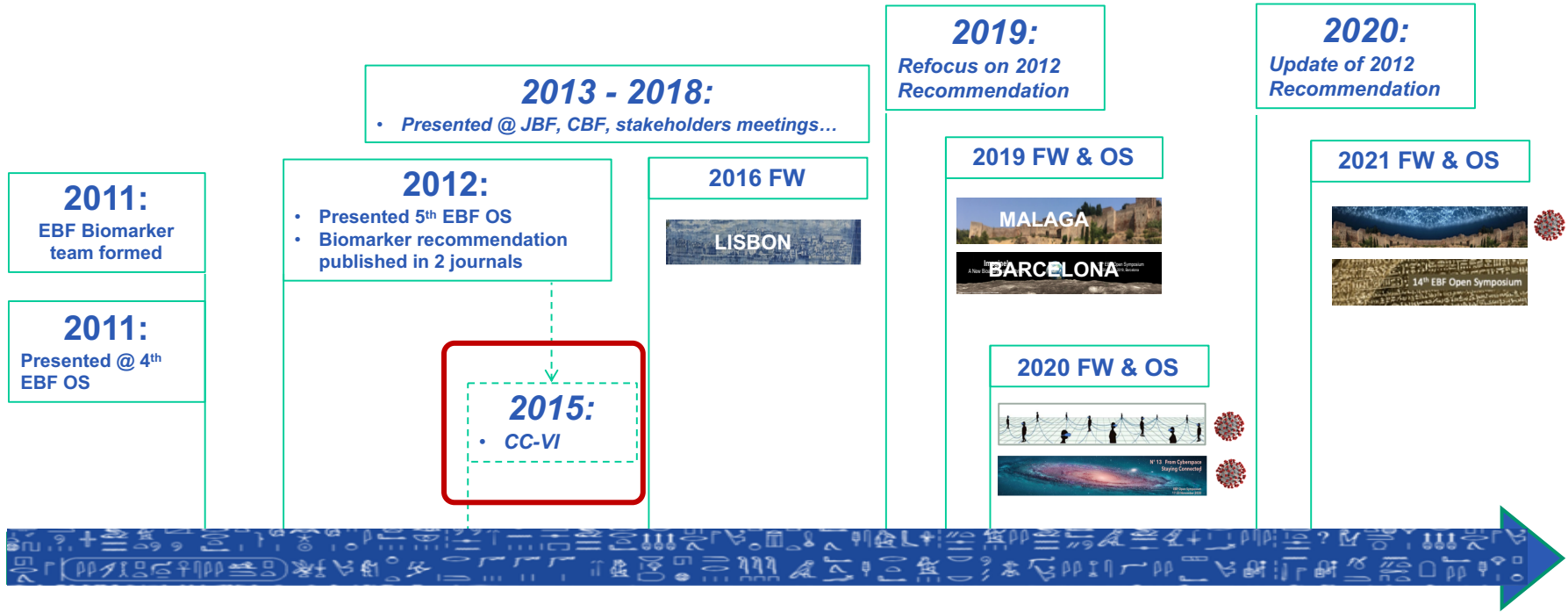


The single biggest problem in
communication is the illusion that it
has taken place.

— *George Bernard Shaw* —

AZ QUOTES

EBF and BM - A 10y Journey



B. Biomarkers

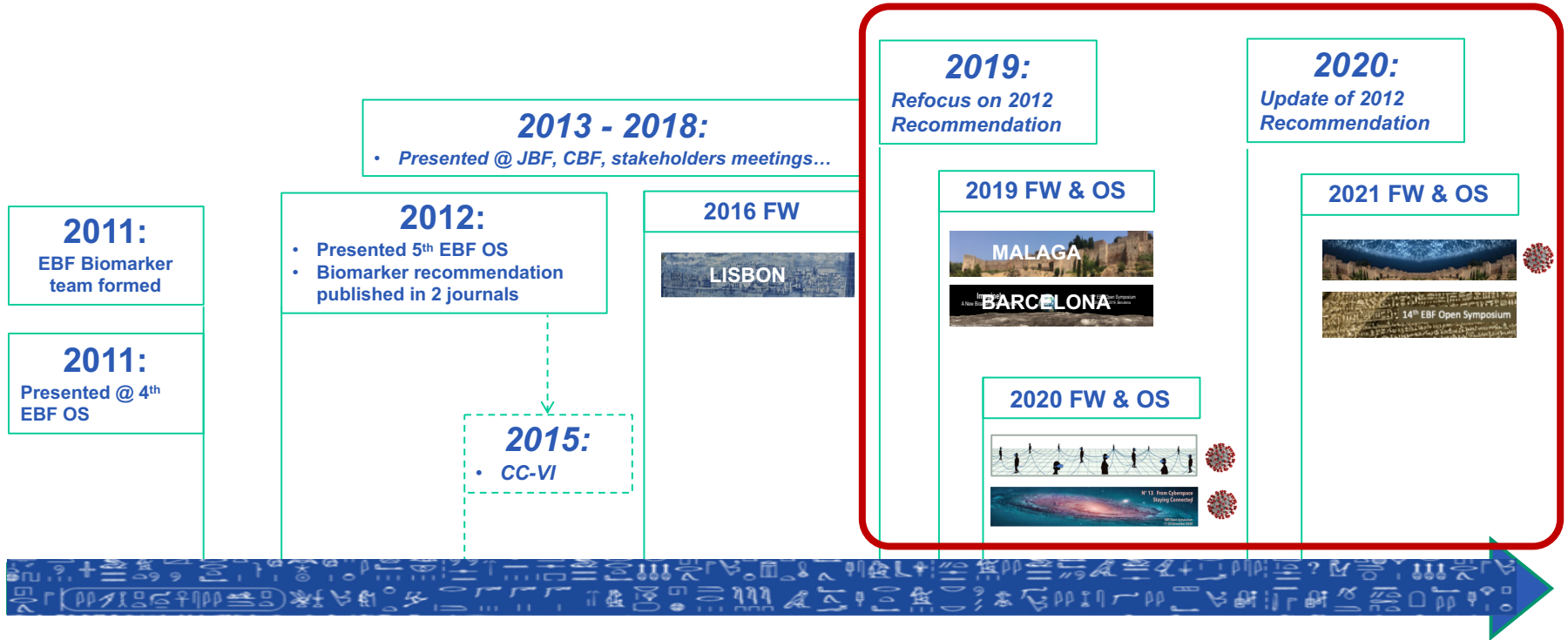
The recommendations in this guidance only pertain to the validation of assays to measure in vivo biomarker concentrations in biological matrices such as blood or urine. Considerable effort also goes into defining the biological function of biomarkers, and confusion may arise regarding terminology (e.g. biomarker method validation vs biomarker qualification).

Biomarkers are increasingly used to assess the effects of new drugs and therapeutic biological products in patient populations. Because of the important roles biomarkers can play in evaluating the safety, activity, or effectiveness of a new medical product, it is critical to ensure the integrity of the data generated by assays used to measure them. Biomarkers can be used for a wide variety of purposes during drug development; therefore, a FFP approach should be used when determining the appropriate extent of method validation. When biomarker data will be used to support a regulatory decision making, such as the pivotal determination of safety and/or effectiveness or to support dosing instructions in product labeling, the assay should be fully validated.

For assays intended to support early drug development (e.g., candidate selection, go-no-go decisions, proof-of-concept), the sponsor should incorporate the extent of method validation they deem appropriate.

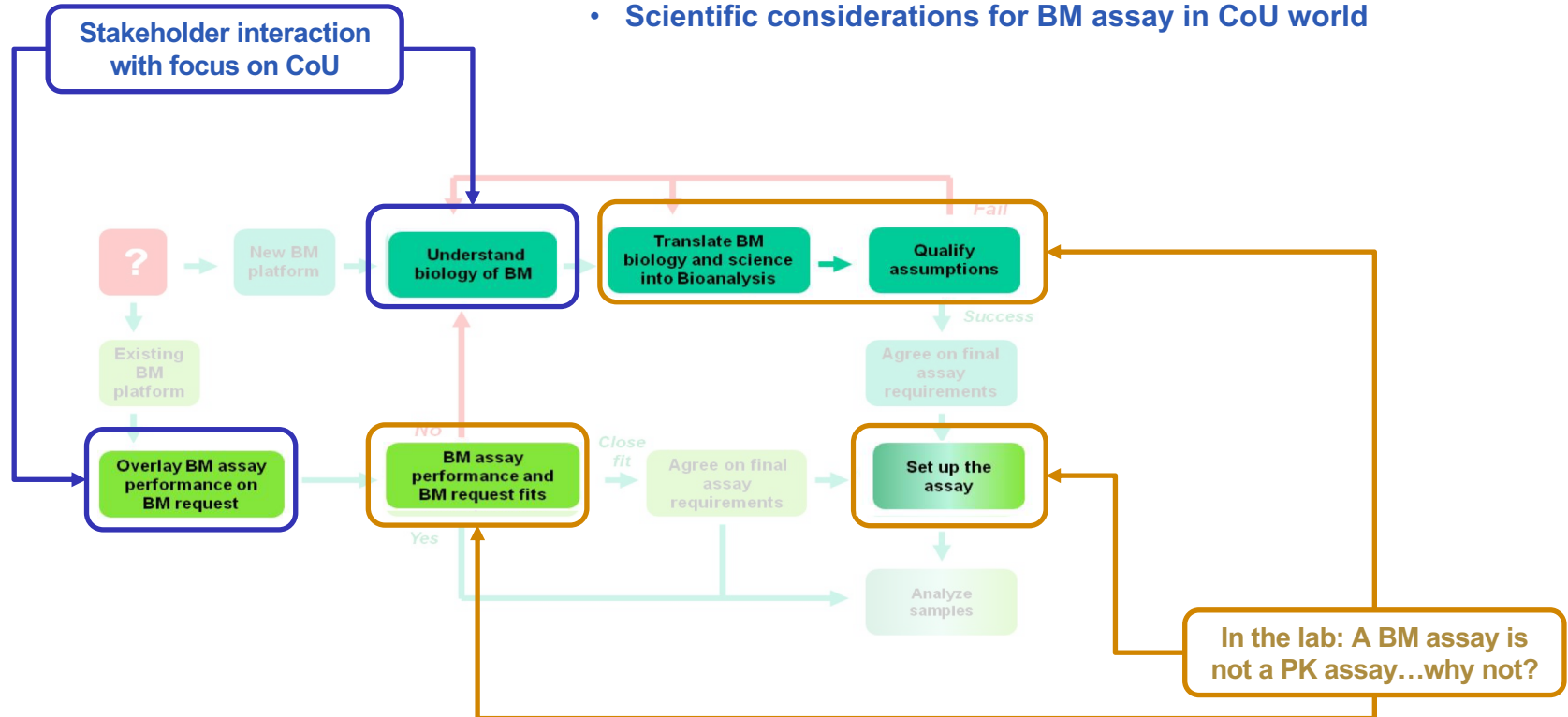
Method validation for biomarker assays should address the same questions as method validation for drug assays. The accuracy, precision, sensitivity, selectivity, parallelism, range, reproducibility, and stability of a biomarker assay are important characteristics that define the method. The approach used for drug assays should be the starting point for validation of biomarker assays, although the FDA realizes that some characteristics may not apply or that different considerations may need to be addressed.

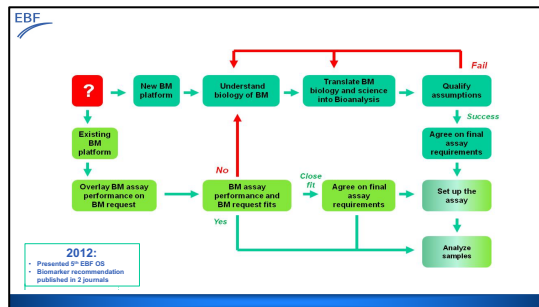
Together with AAPS-OSD #BeAScientist



Additions to 2012 in “2020 Recommendation”

- Communication & stakeholder interaction
- Scientific considerations for BM assay in CoU world





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WHITE PAPER

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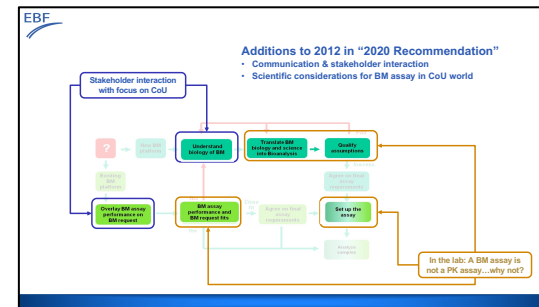
European Bioanalysis Forum recommendation on method establishment and bioanalysis of biomarkers in support of drug development

Bioanalysis (2012) 4(15), 1883–1894

Philip Timmerman^{a*}, Christian Herling^a, Daniela Stoellner^a, Birgit Jaitner^a, Susanne Pihl^a, Karen Elsbj^a, Neil Henderson^a, Begona Barroso^a, Stephanie Fischmann^a, Arjen Compañen^a, Amanda Versteilen^a, Stewart Bates^a, Clare Kingsley^a & Ulrich Kunz^a

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Contributors and other EBF member companies are listed at end of article.



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White Paper

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Bioanalysis

Update to the European Bioanalysis Forum recommendation on biomarkers assays; bringing context of use into practice

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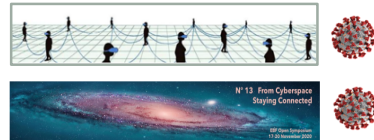
*Author for correspondence: chair@e-b-f.eu

And: <https://e-b-f.eu/conferences/past-conferences-2/> for all slides ever presented

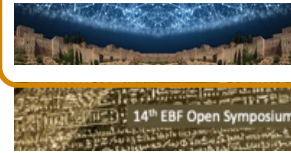
2019 FW & OS



2020 FW & OS



2021 FW & OS



Another Survey



To EBF Core

Jan 2021

A recent survey in the EBF

1. What are you still struggling with related to BM validation and analysis?
2. What are you still struggling with related to CoU specifically?
3. Pharma:
 - Who else (besides you?) is still struggling with CoU?
 - What are they still struggling with CoU?
4. CRO:
 - Who else (besides you?) is still struggling with CoU?
 - What are they still struggling with CoU?

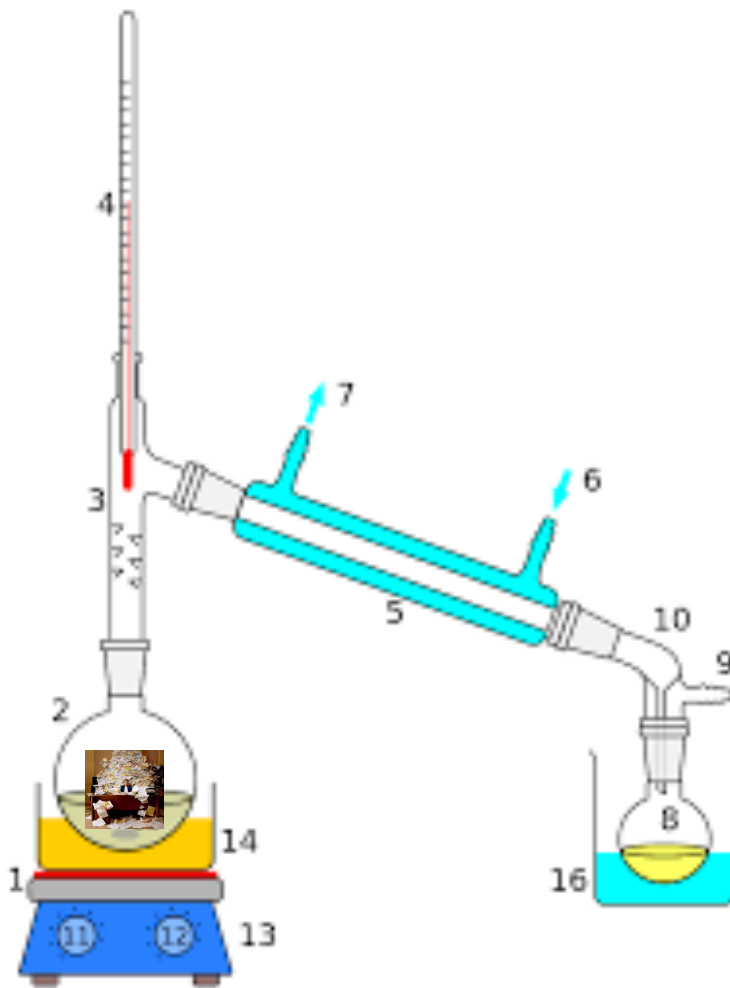
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To Delegates

Pre-meeting survey to delegates

- Q1:** I am relatively new in the BM field (< 1y) and my choice (personal or requested by my management) is to use the SOP I use for PK studies for the BM analysis
- Q2:** I am experienced in the BM field (> 1y) and my choice is to use the SOP I use for PK studies for the Biomarker analysis
- Q3:** I am experienced in the BM field (> 1y) and my management's choice is to use the SOP I use for PK studies for the BM analysis
- Q4:** (more than 1 answer is possible) I am aware of the CoU discussions and:
- Q5:** For me, the major hurdles to bring CoU into practice are:
- Q6:** Some suggestions to overcome major hurdles to bring CoU into practice

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Q6: Some assumptions to overcome the major hurdles to bring CoLI into practice

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- I am convinced
- Assurance that regulatory authorities are open to 'alternative approaches'.....
- Assurance that data will be accepted if we follow different approaches for different studies
- Define differences between CoU and FFP
- To arrive to a sort of guideline/written instructions for biomarker analysis
- To let me understand which is the best approach to follow.....

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Q6: Some suggestions to overcome the major hurdles to bring CoIL into practice

For my management:

- † These five regulatory agencies make official statements about the use of defining Call for bioimprovements, as well as clearly state that PIR studies should not necessarily apply to bioimprovements.

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C6. *Some suggestions to overcome the major barrier to bring CoIL into practice*

Final

- [illegible]

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Q6. Some suggestions to overcome the major hurdles to bring CRISPR into practice

[illegible]

- * Treat the regulatory system as a race where official statements about the size of deferring costs for scientists are critical to a country's success or failure; do not necessarily apply to bioterrorist studies
- * Promotion of training through white papers have
- * Assurance that regulatory authorities are open to alternative approaches ...
- * Assurance that work will be accepted if new different approaches for different studies
- * Guidance on what would constitute a technology-enabling for various course GABA.
- * Trade and respect to scientists and PhD
- * Education on the science – the "PvC" as actually young scientific
- * Secure communication from regulators that scientific approach and NCI & guidance to appropriate
- * Give a solid and clear message to the public that there is no barrier in biomedical research and achieving clinical utility. A search from the questions and interrelated answers that the UK community is struggling with the evolution of their original note. Suggested reading: Michael C. M. & Bell, J.R. (2006) Regulatory Science: The Evolution of Biomedical Research. University of Washington and Sunningdale Graduate in Chronic Disease (2007), pp 17-20(2128)

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Q6. Some suggestions to overcome the major hurdles to bring CRISPR into practice

Example and answer

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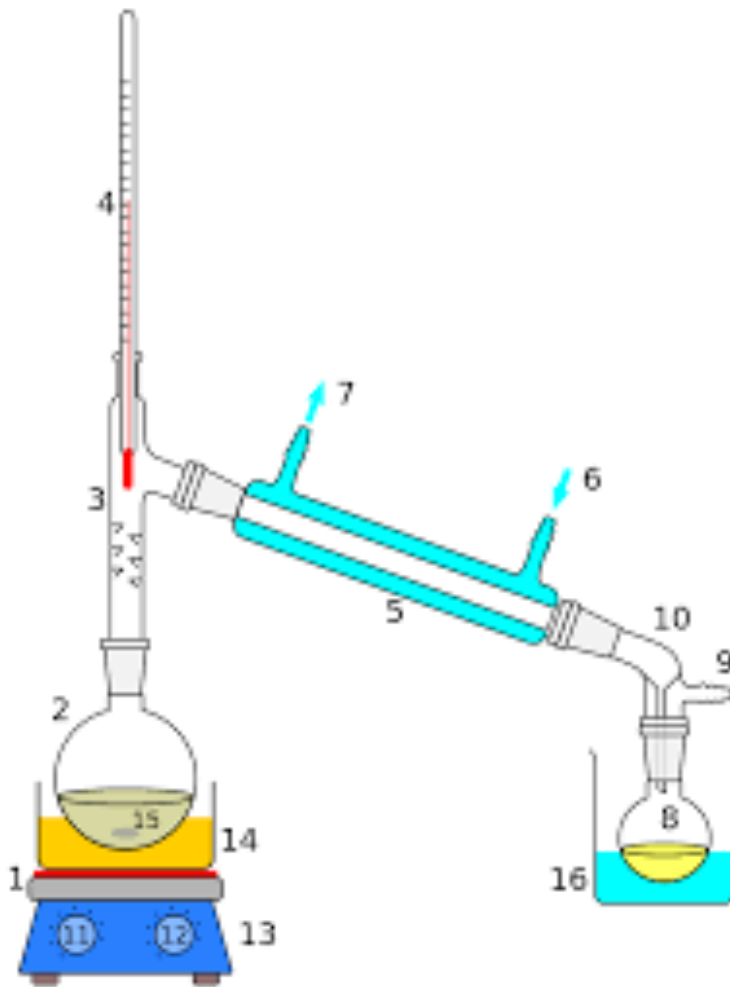
CR

Of: Some suggestions to overcome the major hurdles to bring Coll into action

For the health authorities

1. *soluble* is an adjective. It has to be only beneficial from using Gold.
 2. *soluble* was being explained that good solution will be the basis for discussion on solubility type and acceptance criteria.
 3. *All the previous cases*
 4. *Color studies where the BSE did not detect the specificity of the Bismarck Gold* and reliable data must be obtained, with known correct identity of BSM. But also it's on the specificity and identification of the dye.
 5. *Introduce color studies in your discussion* BSEs, in Bismarck for impurities on DETA all the way to regulatory and compliance meeting (compliance Bismarck and oligo-cyto). But finding out a QMS discussion is not bad.
 6. *Conclusion the dialogue*
 7. *For E2M Patients up to give input to have Gold solubility should be done*
 8. *My main concern is to be respectful to the concept of Gold, specifically of the Bismarck solubility with the P2M P2M*

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Is my organisation
ready to apply CoU?

me
the BA lab
my management
the end user
QA

the health authorities

10:20 12:10 Session 1: Biomarkers - Organisational design driving CoU (Plenary)
Session Chair: Kyra Cowan (Merck KGaA)

Next

10:30 10:50 Kyra Cowan, on behalf of the EBF
Organisational design driving/preventing CoU - a challenge or an opportunity - a stakeholder perspective - a Pharma/Sponsor perspective

10:50 11:10 Michaela Golob, on behalf of the EBF
Organisational design driving/preventing CoU - a challenge or an opportunity - a stakeholder perspective - a CRO/vendor perspective

11:10 11:30 Peter Groenen, Idorsia
Organisational design driving/preventing CoU - a challenge or an opportunity - a stakeholder perspective

11:30 11:50 Anna Laurén, Novo Nordisk
Updating the organisational process and responsibility split for translational work with biomarkers and CoU – a pharma perspective

11:50 12:10 Q&A and Introduction to the Workshop (Session 5)