

# EFLM PREANALİTİK ÇALIŞMA GRUBU AKTİVİTELERİ

**Pınar Eker**

İstanbul İl Sağlık Müdürlüğü Kamu Sağlık Hizmetleri Başkanlığı-2 Merkezi  
Laboratuvarı-2

İstanbul,TURKİYE

Türk Biyokimya Derneği Preanalitik Çalışma Grubu Üyeliği

EFLM Preanalitik Faz Çalışma Grubu 'Corresponding Member'

# EFLM PREANALİTİK FAZ ÇALIŞMA GRUBU

**Preanalitik hatalar tüm laboratuvar hataları içinde ağırlıklıdır. Bu nedenle “ European Federation of Clinical Chemistry and Laboratory Medicine Working Group for Preanalytical Phase (EFLM WGPRE)”preanalitik politika ve pratiklerin standardize ve harmonize edilmesine öncülük etmek amacıyla kurulmuştur**

Ana-Maria Šimundić ,Clinical Institute of Chemistry of the University Hospital Center "Sestre milosrdnice” de laboratuvar tıbbı uzmanı;

Hırvatistan ‘Medical Biochemistry and Laboratory Medicine’ dernek başkanı;

‘ Biochemia Medica Chief Editor’ olarak görev yapmakta ve aynı zamanda; ‘EFLM Executive Board Secretary ‘ unvanı yanında ‘EFLM working group preanalytical phase’ da Chair olarak görevini sürdürmekte.



The screenshot displays the EFLM website interface. At the top, the EFLM logo is on the left, and the text "European Federation of Clinical Chemistry and Laboratory Medicine" is on the right, with "EFLM represents IFCC in Europe" below it. A search bar and a "Search" button are on the right. Below the logo, a row of national flags is shown, with a note: "Click on the flag to reach the website of EFLM National Societies." A navigation menu includes "WHO WE ARE", "EVENTS", "EFLM PUBLICATIONS", "EFLM MEMBERS", and "CONTACT US". The main content area is titled "Working Group: Preanalytical Phase" and features a profile for Ana-Maria Simundic, second term 2015-2016, with her photo and contact information. A sidebar on the right contains "Event-Highlights" and "Collaboration" sections.

# EFLM PREANALİTİK FAZ ÇALIŞMA GRUBU ÜYELERİ

## **CHAIR :Ana-Maria Šimundić Hırvatistan**

- EFLM Preanalitik çalışma grubu farklı ülkelerden 15 kişilik asil ve 'corresponding' üyeleri aracılığı ile belirli aralıklarla toplanmakta ve çalışmalarına devam etmektedir. 2013 yılından bu yana Oxford, Zagreb Paris, Porto ve tekrar Zagreb Belgrad, Amsterdam Münih ve Zagreb de toplantılar gerçekleştirilmiştir.

Kjell Grankvist

İsveç

Giuseppe Lippi

İtalya

Mads Nybo

Danimarka

Michael Cornes

İngiltere

Janne Cadamuro

Avusturya

Pınar Eker

Türkiye

Jose Tiago Guimaraes

Portekiz

Mercedes Ibarz

İspanya

Svetlana Kovalevskaya

Rusya

Gunn B.B. Kristensen

Norveç

Ludak Sprongi

Çek

Cumhuriyeti

Zorica Sumarac

Sırbistan

Edmee Von Dangen-Lases

Hollanda

Stephen Churc

İngiltere BD

Helene Ivanov

GreinerBioOne-

# TEMEL HEDEFLER

- Laboratuvar tıbbında preanalitik fazın önemini vurgulama;
- Kritik aktiviteler için öneriler hazırlama ve iyi uygulamaları tanımlama;
- Güncel preanalitik pratiklerle ilgili anketler düzenleme;
- Valide anketler yoluyla güncel preanalitik pratikleri birleştirme;
- Sempozyum,çalıştay,webinar,eğitimler düzenleme

# PARMA 2011 1.EFCC EUROPEAN CONFERENCE ON PREANAYTICAL PHASE

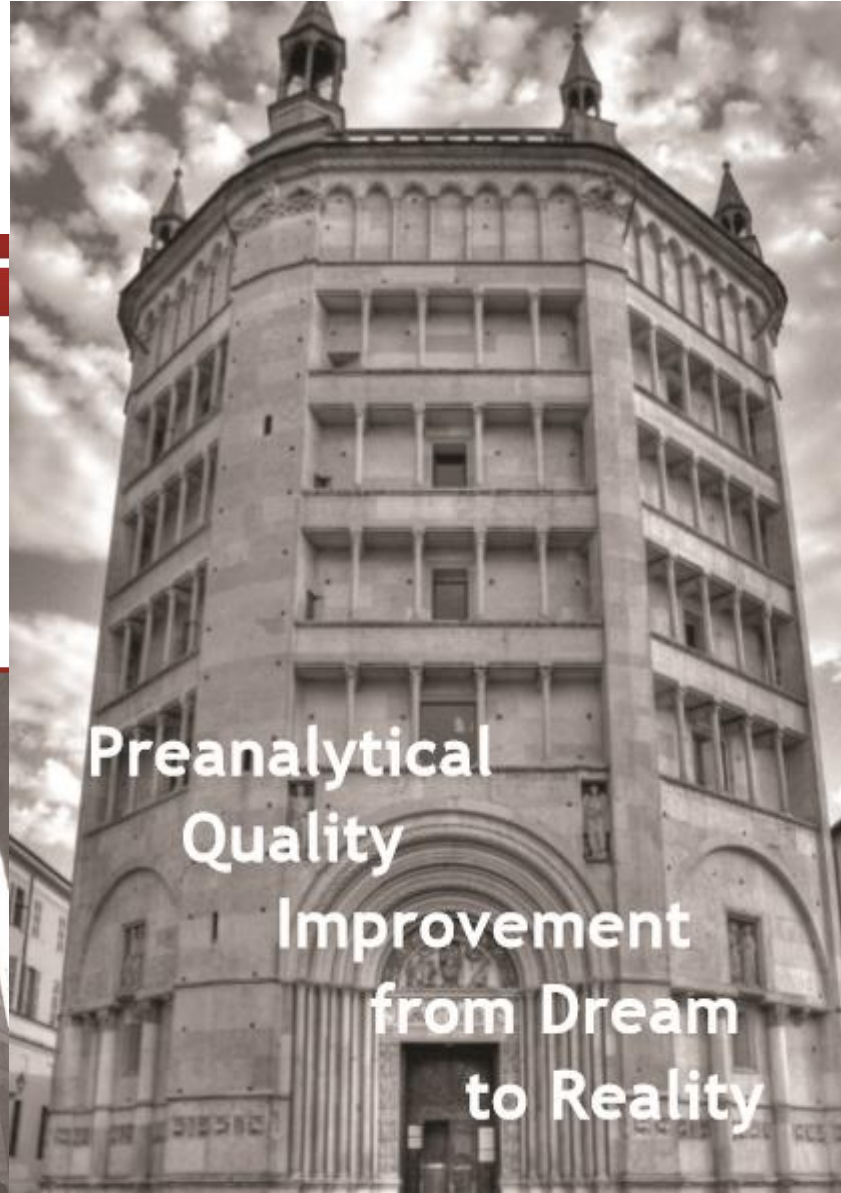
The major focus of this conference is the quality of the preanalytical phase of laboratory practices - a highly prominent and increasingly important topic in the era of increasing awareness of patient safety and implementing total quality management practices in clinical laboratories.

1<sup>st</sup> EFCC-BD



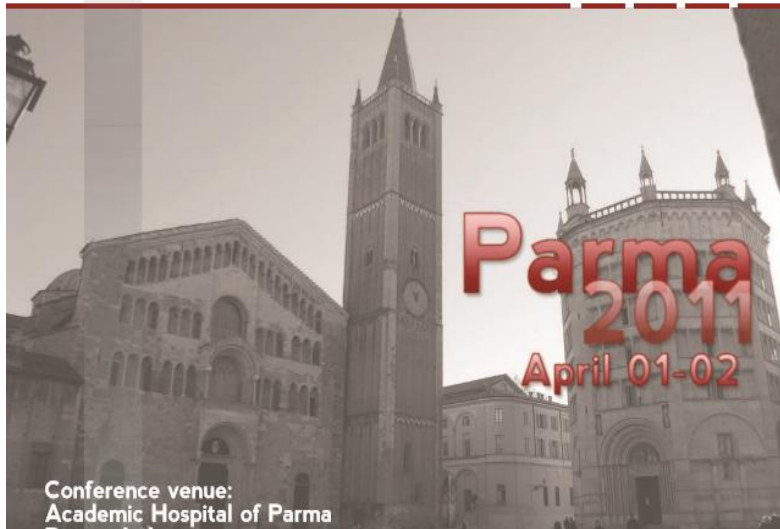
European Conference on Preanalytical Phase

*Preanalytical quality improvement - from dream to reality*



Preanalytical  
Quality  
Improvement  
from Dream  
to Reality

Bu konferansın temel odağı hasta güvenliği ve klinik laboratuvarlarda total kalite yönetim pratiklerinin uygulanması konusunda yükselen farkındalık alanı olarak öne çıkan **preanalitik faz** ve uygulamaları şeklindeydi.



Conference venue:  
Academic Hospital of Parma

# 28 AVRUPA ÜLKESİNDE ULUSAL REHBERLER VE FLEBOTOMİ EĞİTİMİ ÜZERİNE BİR ANKET ÇALIŞMASI EFLM WG-PA TARAFINDAN GERÇEKLEŞTİRİLDİ.(1.ANKET)

DE GRUYTER

DOI 10.1515/cclm-2013-0283 — Clin Chem Lab Med 2013; 51(8): 1585–1593

Ana-Maria Simundic\*, Michael Cornes, Kjell Grankvist, Giuseppe Lippi, Mads Nybo, Svjatlana Kovalevskaya, Ludek Sprongl, Zorica Sumarac and Stephen Church

## **Survey of national guidelines, education and training on phlebotomy in 28 European countries: an original report by the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) working group for the preanalytical phase (WG-PA)**

Aim:

- who performs phlebotomy in EFLM countries?
- differences in personnel?
- level of education and skills?
- are guidelines available?

- **Sonuçlar:**
- Büyük bir heterojenite saptanmıştır.
- Pekçok ülke ulusal rehberlere sahip değildir.
- Filebotomi medikal ve medikal olmayan kişilerce gerçekleştirilmektedir.
- Değişik düzeylerde eğitim ve pratik
- Hastalar tüm Avrupa genelinde aynı seviyede bakım almalıdır.

# AÇLIK NUMUNELERİNİN SATANDARDİZASYONU

1. Existing guidelines for phlebotomy need revision. Revised recommendations should include the exact definition of requirements for patient preparation for laboratory testing. Blood for all blood tests should be drawn preferably in the morning from 7 to 9 a.m. [30]. Fasting should last for 12 h, during which water consumption is permitted. Alcohol should be avoided for 24 h before blood sampling. In the morning before blood sampling, patients should refrain from cigarette smoking and caffeine containing drinks (tea, coffee, etc.).
2. Professional associations (IFCC, EFLM and other) should support harmonization efforts by disseminating standardized recommendations for fasting.
3. Laboratories worldwide should implement standardized procedures for blood sampling and patient preparation.
4. Laboratories should have policies for sample acceptance criteria related to fasting samples. Blood samples for routine testing should not be taken if a patient has not been appropriately prepared for sample collection. 'No sample is better than a bad sample' should always be the leading principle.
5. Laboratory professionals are responsible for disseminating information about fasting requirements to patients as well as to clinicians and general practitioners who are the preferred source of information for patients.

Simundic AM, Cornes M, Grankvist K, Lippi G, Nybo M. Standardization of collection requirements for fasting samples: For the Working Group on Preanalytical Phase (WG-PA) of the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM). *Clin Chim Acta* 2013; Epub ahead of print

Clinica Chimica Acta 432 (2014) 33–37



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Clinica Chimica Acta

journal homepage: [www.elsevier.com/locate/clinchim](http://www.elsevier.com/locate/clinchim)



## Standardization of collection requirements for fasting samples For the Working Group on Preanalytical Phase (WG-PA) of the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)



A.M. Simundic<sup>a,b,\*</sup>, M. Cornes<sup>b,c</sup>, K. Grankvist<sup>b,d</sup>, G. Lippi<sup>b,e</sup>, M. Nybo<sup>b,f</sup>

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<sup>b</sup> The Working Group on the Preanalytical Phase (WG-PA) in the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)

<sup>c</sup> The Royal Wolverhampton, Hospitals NHS Trust, New Cross Hospital, Wolverhampton, UK

<sup>d</sup> Department of Medical Biosciences, Clinical Chemistry, Umea University, Umea, Sweden

<sup>e</sup> Laboratory of Clinical Chemistry and Hematology, Academic Hospital of Parma, Italy

<sup>f</sup> Department of Clinical Biochemistry and Pharmacology, Odense University Hospital, Odense, Denmark

### ARTICLE INFO

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Fasting

Guidelines

Quality improvement

### ABSTRACT

Standardized protocols for patient preparation for laboratory testing are currently lacking. Moreover, a great heterogeneity exists in the definitions of "fasting" currently being used among healthcare workers and in the literature. Marked metabolic and hormonal changes occur after food ingestion, mainly due to the absorption of fluids, lipids, proteins, carbohydrates and other food constituents. This postprandial response varies markedly in response to numerous factors, such as eating behavior, food composition, fasting duration, time of the day, chronic and acute smoking, coffee and alcohol consumption. It is therefore crucial to minimize the total variability by controlling as many of these modifying factors as possible. Control of the abovementioned effects on postprandial response can only be achieved by standardizing the way patients are prepared for laboratory testing, i.e. by defining the fasting duration, as well as what is and what is not allowed (e.g., coffee, tea, smoking, water) during the period of fasting prior to sample collection. The aim of this article is to describe the range of effects of different approaches to fasting on laboratory tests, and to provide a framework for the harmonization of definitions for fasting requirements for laboratory tests.

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# AÇLIK KONUSUNDA STANDARDİZASYON 2013

- Tüm Laboratuvar testleri için numune tercihan sabah 7-9 arasında alınmalıdır.
- Mevcut rehberlerde hasta hazırlığı tam tarif edilecek şekilde revizyon yapılmalıdır.
- Açlık 12 saatte sonlanmalıdır. Sıvı kullanımına izin verilmelidir. Kan alımından 24 saat öncesinde alkol alımından kaçınılmalıdır.
- Kan alımı yapılacak sabah sigaradan kaçınılmalı ve kafein içeren içecekler (çay,kahve gibi) alınmamalıdır.
- Bu kurallar dünya genelinde standardize edilmelidir.(IFCC,EFLM ve diğer aracılığı ile)



# KAN ALMA TÜP KAPAK RENKLERİNİN STANDARDİZASYONU İÇİN HARMONİZASYON 2014

## Amaç:

- Uluslararası kabul edilebilir renk kodları standardı geliştirmek
- EFLM WG-PRE ve WG-H sorumluluk almaya ve diyalog oluşturmaya aday
- Diyaloğa tüm ürün sağlayıcılar davet edildi.
- Üreticiler üzerinde anlaşılmış renk kod standardına uymalıdır.
- Standart belirleyici kurumlar (ISO CLSI) mevcut önerilere yeni bir renk kodlama standardı ilave etmelidir.

## Opinion paper

Ana-Maria Simundic\*, Michael P. Cornes, Kjell Grankvist, Giuseppe Lippi, Mads Nybo, Ferruccio Ceriotti, Elvar Theodorsson and Mauro Panteghini on behalf of the European Federation for Clinical Chemistry and Laboratory Medicine (EFLM)

## Colour coding for blood collection tube closures – a call for harmonisation

100130.1515/ccim-2014-0927

Received for publication September 19, 2014

**Abstract:** At least one in 10 patients experience adverse events while receiving hospital care. Many of the errors are related to laboratory diagnostics. Efforts to reduce laboratory errors over recent decades have primarily focused on the measurement process while pre- and post-analytical errors including errors in sampling, reporting

and decision-making have received much less attention. Proper sampling and additives to the samples are essential. Tubes and additives are identified not only in writing on the tubes but also by the colour of the tube closures. Unfortunately these colours have not been standardised, running the risk of error when tubes from one manufacturer are replaced by the tubes from another manufacturer that use different colour coding. EFLM therefore supports the worldwide harmonisation of the colour coding for blood collection tube closures and labels in order to reduce the risk of pre-analytical errors and improve the patient safety.

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**Keywords:** blood specimen collection; harmonization; quality of health care; standards; venipuncture.

# Preanalitik kalite geliştirilmesi; CLSI H3A6 (yeni adı GP41-A6) ile kan alımı prosedürlerinin uyumu için gözlemsel bir çalışma(2.ANKET)

## 2nd EFLM-BD

### European Conference on Preanalytical Phase

*Preanalytical quality improvement - in quality we trust*



**Compliance of blood sampling procedures with the CLSI H3-A6 guidelines: An observational study by the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) working group for the preanalytical phase (WG-PRE)**  
*Simundic AM, Church S, Cornes MP, Grankvist K, Lippi G, Nybo M, Nikolac N, van Dongen-Lases E, Eker P, Kovalevskaya S, Kristensen GBB, Sprongl L, Sumarac Z.*

# İKİNCİ ANKET ÇALIŞMASI

## Bu çalışmadan çıkan sonuçlar:

Uyum düzeyleri çok düşüktür.

Bazı kritik flebotomi basamaklarına uyulmamaktadır.

- Güvenlik konusu
- Hastaya zarar
- Numune kalitesi

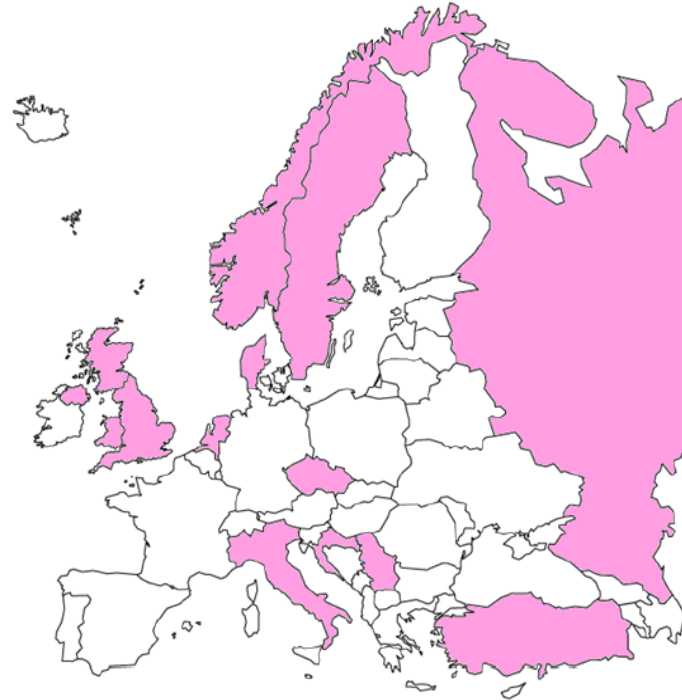
Numune ve hasta ID prosedürü : en kritik nokta

Tüm flebotomi alanları geliştirilme ihtiyacındadır.

CLSI H3-A6 revizyona gerek duymaktadır.

- Her basamak eşit derecede önemli değil
- Bazı basamaklar kanıta dayalı değil.

## Our 2nd project – observational study



This study was performed during June 2013 – March 2014.

**12 countries** have participated in this study:

1. Croatia,
2. Czech Republic,
3. Denmark,
4. Italy,
5. Kazakhstan,
6. Netherlands,
7. Norway,
8. Russia,
9. Serbia,
10. Sweden,
11. Turkey,
12. UK

N=336

The median number of audits per country was 33 (18 – 36).

- compliance with CLSI H3-A6 standard was assessed through witness audits (3 phlebotomies per each phlebotomist)

# HASTA KİMLİKLENDİRME VE TÜP ETİKETLEME İÇİN HARMONİZASYON ÇAĞRISI

Bu 'Position paper,' da EFLM WG-PRE filebotomi pratiklerinin dünyada harmonizasyonu konusundaki devam eden destek isteğini ifade etmiştir. Dokümanda filebotomi basamaklarından en önemli iki tanesine acilen dikkat çekilmektedir:

1.Tüp etiketlenmesi

2.Hasta kimliklendirmesi

**Önemli basamakların harmonizasyonu preanalitik hataların potansiyel riskini düşürecektir ve hasta güvenliğini arttıracaktır.**

DE GRUYTER

Clin Chem Lab Med 2016; aop

## EFLM Position Paper

Edmée C. van Dongen-Lases, Michael P. Cornes, Kjell Grankvist, Mercedes Ibarz, Gunn B.B. Kristensen, Giuseppe Lippi, Mads Nybo and Ana-Maria Simundic\*, on behalf of the Working Group for Preanalytical Phase (WG-PRE), European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)

## Patient identification and tube labelling – a call for harmonisation

DOI 10.1515/cclm-2015-1089

Received November 7, 2015; accepted November 13, 2015

**Abstract:** Venous blood sampling (phlebotomy) is the most common invasive procedure performed in patient care. Guidelines on the correct practice of phlebotomy are available, including the H3-A6 guideline issued by the Clinical Laboratory Standards Institute (CLSI). As the quality of practices and procedures related to venous blood sample collection in European countries was unknown, the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) Working Group for the Preanalytical Phase conducted an observational study in 12 European countries. The study demonstrated that the level of compliance of phlebotomy procedures with the CLSI H3-A6 guideline was unacceptably low, and that patient identification and tube labelling are amongst the most critical steps in need of immediate attention and improvement.

The process of patient identification and tube labelling is an essential safety barrier to prevent patient identity mix-up. Therefore, the EFLM Working Group aims to encourage

and support worldwide harmonisation of patient identification and tube labelling procedures in order to reduce the risk of preanalytical errors and improve patient safety. With this Position paper we wish to raise awareness and provide recommendations for proper patient and sample identification procedures.

**Keywords:** harmonisation; patient identification; patient safety; phlebotomy; preanalytical phase; tube labelling.

## Background and aims

Venous blood sampling (also known as “phlebotomy”) is the most common invasive procedure carried out in healthcare. It involves several distinct processes, all of which are vulnerable to errors [1, 2] potentially putting the patient safety at risk. Guidelines on the correct practice of phlebotomy are available, including the H3-A6 guideline issued by the Clinical Laboratory Standards

# PREANALİTİK FAZIN STANDARDİZASYONU VE HARMONİZASYONU 2015

## Uyumun izinde kalite gelişimi



 The Association for  
Clinical Biochemistry &  
Laboratory Medicine  
*Better Science, Better Testing, Better Care*

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sagepub.co.uk/journalsPermissions.nav  
DOI: 10.1177/0004563216643969  
acb.sagepub.com  


### The role of European Federation of Clinical Chemistry and Laboratory Medicine Working Group for Preanalytical Phase in standardization and harmonization of the preanalytical phase in Europe

Michael P Cornes<sup>1</sup>, Stephen Church<sup>2</sup>, Edmée van Dongen-Lases<sup>3</sup>, Kjell Grankvist<sup>4</sup>, João T Guimarães<sup>5</sup>, Mercedes Ibarz<sup>6</sup>, Svetlana Kovalevskaya<sup>7</sup>, Gunn BB Kristensen<sup>8</sup>, Giuseppe Lippi<sup>9</sup>, Mads Nybo<sup>10</sup>, Ludek Sprongl<sup>11</sup>, Zorica Sumarac<sup>12</sup>, Ana-Maria Simundic<sup>13</sup>, on behalf of the Working Group for Preanalytical Phase (WG-PRE) and European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)

#### Abstract

Patient safety is a leading challenge in healthcare and from the laboratory perspective it is now well established that preanalytical errors are the major contributor to the overall rate of diagnostic and therapeutic errors. To address this, the European Federation of Clinical Chemistry and Laboratory Medicine Working Group for Preanalytical Phase (EFLM WG-PRE) was established to lead in standardization and harmonization of preanalytical policies and practices at a European level. One of the key activities of the WG-PRE is the organization of the biennial EFLM-BD conference on the preanalytical phase to provide a forum for National Societies (NS) to discuss their issues. Since 2012, a year after the first Preanalytical phase conference, there has been a rapid growth in the number of NS with a working group engaged in preanalytical phase activities and there are now at least 19 countries that have one. As a result of discussions with NS at the third conference held in March 2015 five key areas were identified as requiring harmonisation. These were test ordering, sample transport and storage, patient preparation, sampling procedures and management of unsuitable specimens. The article below summarises the work that has and will be done in these areas. The goal of this initiative is to ensure the EFLM WG-PRE produces work that meets the needs of the European laboratory medicine community. Progress made in the identified areas will be updated at the next preanalytical phase conference and show that we have produced guidance that has enhanced standardisation in the preanalytical phase and improved patient safety throughout Europe.

11:30 – 12:50

#### Short reports from EFLM National Societies

1. Austria and Germany – Janne Cadamuro
2. Croatia – Nora Nikolac
3. Czech Republic – Martina Bunesova
4. France – Michel Vaubourdolle
5. Italy – Gabriel Lima Oliveira
6. Lithuania – Dalius Vitkus
7. Macedonia – Sonja Kuzmanovska
8. Nordic countries – Mads Nybo
9. Poland – Bogdan Solnica
10. Russia – Svjetlana Kovalevskaya
11. Spain – Nuria Barba
12. Serbia – Bojana Lugic
13. The Netherlands – Edmee van Dongen Lases
14. Turkey – Dogan Yucel
15. UK – Barbara de la Salle

# KLİNİK LABORATUVARLARDA KAN ALMA TÜPLERİNİN LOKAL VALİDASYONU 2016

DE GRUYTER

Clin Chem Lab Med 2016; aop

## EFLM Opinion Paper

Giuseppe Lippi, Michael P. Cornes, Kjell Grankvist, Mads Nybo and Ana-Maria Simundic\*, on behalf of the Working Group for Preanalytical Phase (WG-PRE), European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)

## EFLM WG-Preanalytical phase opinion paper: local validation of blood collection tubes in clinical laboratories

DOI 10.1515/cclm-2015-1274

Accepted for publication January 2, 2016

**Abstract:** The selection or procurement of blood collection devices in healthcare facilities is often an underestimated issue. This is probably due to different factors including the lack of knowledge of policymakers, hospital administrators and even laboratory managers about the importance of preanalytical quality and phlebotomy process, as well as to the absence of reliable guidelines or recommendations on how to precisely assess the quality of blood collection devices around the globe. With the awareness that a gap remains between manufacturers' and local validation of blood collection devices, the Working Group for Preanalytical Phase (WG-PRE) of the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)

has drafted a consensus document aimed to provide a set of essential requisites, technical criteria (e.g. presence of physical defects, malfunctioning, safety problems) and clinical issues for supporting laboratory professionals in organization blood collection tubes tenders and validating new devices before local routine implementation. The laboratory professionals should also make sure that the tenders accurately and strictly define the responsibilities for validation experiments and the potential consequences in the case the validation outcome shows that tubes do not fulfill the expectations.

**Keywords:** blood collection; blood tubes; errors; preanalytical variability; venipuncture.

## Introduction

- Bir konsensus dokümanı niteliğindedir.
- Kan alma tüp ihalelerinde lab profesyonellerine destek sağlamak amaçlıdır.
- Kan alma tüplerinin rutin implemantasyonu öncesi validasyonunu kolaylaştırmak amacıyla bir set hazırlığı amaçlanmıştır.
- CLSI GP34-A uygulanmak noktasında zorlayıcı ve karışık.

# Türk Biyokimya Derneđi Preanalitik alıřma Grubu ULUSAL VENÖZ KAN ALMA FLEBOTOMİ KILAVUZU -2015



## HAZIRLAYANLAR

Fehime Benli AKSUNGAR

Nedim ALBAYRAK

Cihan COŐKUN

İpek INAROĐLU

Ayfer OLAK

Canan DEMİRTAŐ

Pınar EKER

Funda GÜEL

Aylin HAKLIGÖR

Berrin Berik İNAL

Bađnu ORHAN

iđdem SÖNMEZ

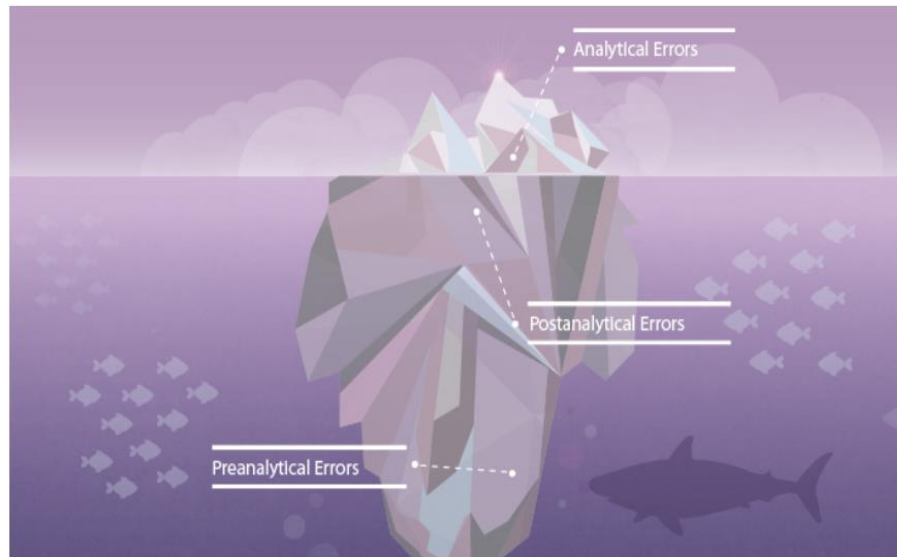
Mehmet ŐENEŐ

Fatma TANELİ

## Avoiding Titanic Errors

The preanalytical phase is subject to more error than any other part of the testing cycle – what can we do to improve it?

By Ana-Maria Šimundić



### About the author

Ana-Maria Šimundić



Ana-Maria is President of the Croatian Society of Medical Biochemistry and Laboratory Medicine, and serves as EFLM Executive Board Secretary and Chair of their working group for Preanalytical Phase (WG-PA). She is currently serving as Head of the Clinical unit for Medical Biochemistry and Analytical Toxicology at Sestre milosrdnice University Hospital center. She is an assessor for ISO 15189 Accreditation and Conformity Assessment. Since 2011, she has served as the Executive Board Secretary of the EFLM.

Ana-Maria has published several book chapters and over 80 publications, and has





# Members' Musings

The views of the members of the **EFLM Working Group for Preanalytical Phase**



## Pinar Eker



Pinar Eker (PE) is a biochemistry and clinical chemistry specialist at Umraniye Research and Training Hospital, Istanbul, Turkey.

## Kjell Grankvist



Kjell Grankvist (KG) is a professor and senior consultant of the Department of Medical Biosciences, Clinical Chemistry, Umeå University, Sweden.

## Mercè Ibarz



Mercè Ibarz (MI) is head of the Clinical Biochemistry Unit and the laboratory quality assurance manager at the University Hospital Arnau de Vilanova, ICS Lleida, Spain.

## Gunn Berit Berge Kristensen



Gunn Berit Berge Kristensen (GBBK) is head of the Norwegian EQA organization for medical laboratories in Norway.

## Edmée van Dongen-Lases



Edmée van Dongen-Lases (EVDL) is a clinical chemist and staff member at the Department of Clinical Chemistry of the Academic Medical Center in Amsterdam, The Netherlands.

## Giuseppe Lippi



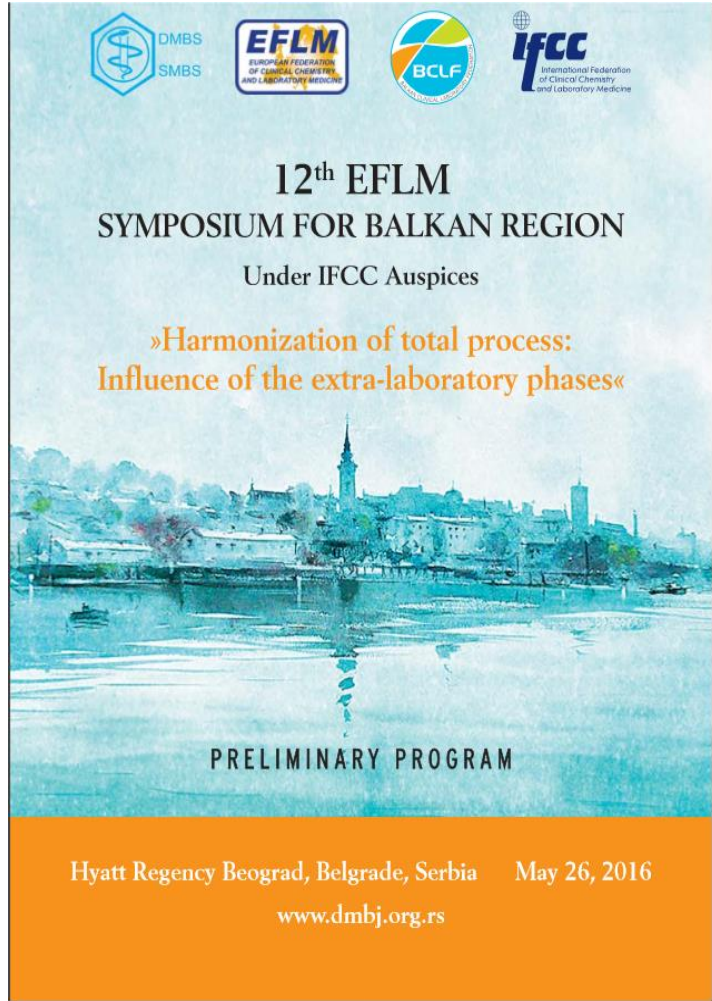
Giuseppe Lippi (GL) is director of the clinical chemistry and haematology laboratory of the University Hospital of Parma, Italy.

# 'The PATHOLOGIST' Soruları

- Preanalitik faz neden laboratuvar hatalarının en büyük kaynağıdır?
- Laboratuvarların protokol tasarlarken preanalitik hata olasılığının artışına neden olacak en sık yaptıkları hatalar nelerdir?
- Sizin deneyiminize göre preanalitik hataların en sık nedeni nedir?
- Preanalitik hatalardan kaçınmanın en kolay yolları nelerdir ve nasıl gerçekleşir?
- Laboratuvarları preanalitik hatalardan korumak için en öncelikli önereceğiniz şey nedir?

# 26 MAYIS 12. EFLM BALKAN SEMPOZYUMU

## ‘Harmonization of total process: Influence of the extra-laboratory phase’



Klinisyen düzeyinde pre ve post  
analitik fazlar hakkında farkındalık

Clinical awareness about pre and post analytical phase on North  
Anatolian Union hospitals central laboratory  
*Pinar Eker (Istanbul, Turkey)*

28 MAYIS 2016 BELGRAD EFLM PRE- WG TOPLANTI

## EFLM WG-PRE, Amsterdam meeting 23/3/17

- Venöz kan alma rehberine eşlik eden diğer dökümanlar tamamlandı
- - ‘Knowledge test, Checklist, PPT presentation, Posters, Videos’
  - Vakum ve aspirasyon metodları için iki ayrı video hazırlandı.



- [https://www.amazon.de/cloudrive/share/kgbpuLPinJ4427OZHtmG0xp4Z5KVvRXIFxK19UV1I5/folder/GX3u0mjUS-2Q5fa3GIXb7w/Eeo66knkQnKgche048VExQ?\\_encoding=UTF8&\\*Version\\*=1&\\*entries\\*=0&mgh=1](https://www.amazon.de/cloudrive/share/kgbpuLPinJ4427OZHtmG0xp4Z5KVvRXIFxK19UV1I5/folder/GX3u0mjUS-2Q5fa3GIXb7w/Eeo66knkQnKgche048VExQ?_encoding=UTF8&*Version*=1&*entries*=0&mgh=1)

EUROPEAN FEDERATION OF CLINICAL CHEMISTRY  
AND LABORATORY MEDICINE

## **EFLM Working Group „Preanalytical Phase“**

Ana-Maria Simundic (Chair) (CR); Kjell Grankvist (SE); Giuseppe Lippi (IT);  
Mads Nybo (DK); Michael Cornes (UK); Janne Cadamuro (AT); Pinar Eker (TR);  
João Tiago Guimarães (PT); Mercedes Ibarz (ES); Svetlana Kovalevskaya (RU);  
Gunn B.B. Kristensen (NO/EQALM); Ludek Sprongl (CZ); Zorica Sumarac (RS) ;  
Edmée van Dongen-Lases (NL); Pieter Vermeersch (BE); Alexander von Meyer  
(DE); Barbara De La Salle (EQUALM); Stephen Church (BD); Helene Ivanov  
(GBO); Christa Seipelt (Sarstedt)

<https://www.eflm.eu/site/page/a/1156>

Version 1 / 2017

**Knowledge test**

**to**

**“A guide to venous blood sample collection  
and sample handling”**

<https://drive.google.com/open?id=0B0Hb9j6MR7nINTkxWF9GOGGR2ZjQ>

## Knowledge test

### Version 1

Correct answers are marked in red (Please choose only one answer option per question)

To what degree are preanalytical variables responsible for errors within the total testing process?

1. ~20%
2. ~40%
3. ~60%
4. ~90%



















Most preanalytical steps occur:

1. In the laboratory reception process
2. During sample processing in the laboratory
3. Outside of the laboratory
4. During the reporting process

Do preanalytical errors have impact on patient outcome and safety?

1. Yes
2. No

Please assign the collection tubes to the correct tube color:

Becton Dickinson ISO 6710 / CLSI H1-A5		Greiner BioOne CLSI GP41-A6	Sarstedt	Your answer (Please check the right answer option)
			<input type="radio"/> Fluoride <input type="radio"/> EDTA <input type="radio"/> Citrate <input type="radio"/> Serum <input type="radio"/> Heparin <input type="radio"/> ESR	
			<input type="radio"/> Fluoride <input type="radio"/> EDTA <input type="radio"/> Citrate <input type="radio"/> Serum <input type="radio"/> Heparin <input type="radio"/> ESR	
			<input type="radio"/> Fluoride <input type="radio"/> EDTA <input type="radio"/> Citrate <input type="radio"/> Serum <input type="radio"/> Heparin <input type="radio"/> ESR	
			<input type="radio"/> Fluoride <input type="radio"/> EDTA <input type="radio"/> Citrate <input type="radio"/> Serum <input type="radio"/> Heparin <input type="radio"/> ESR	
			<input type="radio"/> Fluoride <input type="radio"/> EDTA <input type="radio"/> Citrate <input type="radio"/> Serum <input type="radio"/> Heparin <input type="radio"/> ESR	
			<input type="radio"/> Fluoride <input type="radio"/> EDTA <input type="radio"/> Citrate <input type="radio"/> Serum <input type="radio"/> Heparin	

# Alkolle cilt temizliğinin alkol ölçümüne etkisi

- **The alcohol used for cleansing the venipuncture site does not jeopardize blood and plasma alcohol measurement with head-space gas chromatography and an enzymatic assay**
- [Giuseppe Lippi](#), [Ana-Maria Simundic](#), [Giacomo Musile](#), [Elisa Danese](#), [Gianluca Salvagno](#), and [Franco Tagliaro](#)
- [Biochem Med \(Zagreb\)](#). 2017 Jun 15; 27(2): 398–403.
- İdeal filebotomide antiseptik olarak venöz girişim öncesi kullanılan alkol içerikli ürünlerin hatalı pozitif alkol ölçüm sonuçlarına yol açmadığı gösterildi.

EFLM WG-PRE M¼nih Toplantısı 9 Kasım 2017

Venöz numune alımı projesi d¼k¼manı ulusal derneklere y¼nlendirildi.

17 Kasım 2017 de Ankara T¼rk Biyokimya Pre analitik alıřma Grubu deęerlendirme toplantısı





# Tasarlanan 'WEBINAR' lar

- 'Harmonisation in PA' 14 Kasım 2017
- 'Venous Blood sampling' 27 Ocak 2018 (ertelendi Zorica Sumarac rahatsızlığı nedeniyle)
- 'Tube validation' Nisan 2018
- 'Order of draw' 15 Mayıs 2018
- 'Catheter collection' Eylül 2018
- 'Pre analytical mysteries' 26 Kasım 2018

New available EFLM recorded webinar

The recording of the EFLM webinar "**Harmonization of preanalytical phase in Europe**" (Speaker: Ana-Maria Simundic) is now freely [available for replay here](#) (no login required)

## Harmonization of preanalytical phase in Europe



**Speaker:** Ana-Maria Simundic (HR)

**Moderator:** João Tiago Guimarães (PT)

**Recorded on** 21<sup>st</sup> November at 18:00 CET

### Abstract

European National Societies, members of EFLM, have agreed in Porto, during the 3rd EFLM-BD European Preanalytical Phase Conference that harmonization of preanalytical practices and policies is necessary and possible in each and every country in Europe as well as internationally, at the European level. The Working group for Preanalytical phase (WG-PRE) of the European Federation for Clinical Chemistry and Laboratory Medicine (EFLM), has taken the leading role in this process. The aim of this e-seminar is to present past, ongoing and future WG-PRE activities and various projects which aim is to improve the quality of preanalytical phase in Europe as well as to promote wide harmonization of preanalytical practices, patient safety improvement and reduction of unnecessary waste and healthcare expenses.

# EFLM WG-PRE Zagreb February 8<sup>th</sup> 2018

- **Venous Blood Sampling Guideline**
- 14 tane ülkeden taslak rehber için öneri geldi.
- Revizyonlar tamamlandığında doküman tekrar ulusal derneklere gönderilecek.

<https://www.youtube.com/watch?v=UIDrqw8BSsI>

Tüp validasyonu nasıl gerçekleştirilir

**EFLM**  
EUROPEAN FEDERATION OF CLINICAL CHEMISTRY  
AND LABORATORY MEDICINE

**EFLM Webinar- April 3<sup>rd</sup> 2018**

# How to perform tube validation?

**João Tiago Guimarães**

Department of Clinical Pathology  
São João Hospital Center

Department of Biomedicine  
Faculty of Medicine  
University of Porto

Institute of Public Health  
University of Porto

SAO JOAO

U PORTO  
FACULDADE DE MEDICINA  
UNIVERSIDADE DO PORTO

ISP

Chat (Everyone)

- Ivgen Vukob: Hello!
- Deniz Fağrı: Hello :-)
- Natalya Shestova: Hello
- João Tiago Guimarães: Hello! Training here in Porto!
- Ivgen Vukob: Hello from sunny Ukraine
- Natalya Shestova: Hello from sunny Ural's Russian spring
- Giuseppe Loggi: Yes I hear you
- Giuseppe Loggi: Only one
- Vedrana Mirkovic: Hello from Belgrade, Serbia
- Olivera Čuković: Hello!
- Natacha Chokrevska Zografka: Hello from Skopje, Macedonia
- Ane Števelj: Hello from Norway
- Hedviga Pivcenšková: Hello from Prešov, Slovakia
- Hedviga Pivcenšková: In Slovakia it sunny day
- Viktorie Horskova: Hello to everyone!
- Ercan Saruhan: Hello from Mugla,Turkey
- Mª del Patrocinio Chacra: Hello from Spain
- Roberto Mora: Hello from Spain too
- Carmela Moreno: Hello everyone, welcome back from Spain
- Krzysztof Lado: Hello
- Elina de Rábada: Hello!
- Christina: Hello from ... by the ...
- ... Hello from ...




# Advances in Clinical Chemistry

Volume 84, 2018, Pages 101-123



## Chapter Four - Blood Glucose Determination: Effect of Tube Additives

Giuseppe Lippi\* <sup>1,2</sup> , Mads Nybo <sup>†, 2</sup>, Janne Cadamuro <sup>‡, 2</sup>, Joao T. Guimaraes <sup>§, ¶, ||, 2</sup>, Edmée van Dongen-Lases <sup>#, 2</sup>, Ana-Maria Simundic\*\* <sup>2</sup>

### Blood Glucose Determination: Effect of Tube Additives

- Güncel literatür taranarak kanıta dayalı veriler ışığında kan glukoz ölçümlerinde sitrat tamponlu tüpün diğer tüplere oranla doğru ve güvenilir glukoz sonuçları üretmede üstünlüğü gösterildi.

- Practical recommendations for managing hemolyzed samples in clinical chemistry testing

Clin Chem Lab Med. 2018 Apr 25;56(5):718-727. doi: 10.1515/cclm-2017-1104.

## **Practical recommendations for managing hemolyzed samples in clinical chemistry testing.**

Lippi G<sup>1</sup>, Cadamuro J<sup>2</sup>, von Meyer A<sup>3</sup>, Simundic AM<sup>4</sup>; European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) Working Group for Preanalytical Phase (WG-PRE).

Serum yada plazmada otomatize H-index ölçümü yüksek oranda önerilmekte ancak bu ölçümde düşük performans gözle değerlendirmeyi daha etkili hale getirir.

# EFLM-AACC Conference 2019

- 8-9 Kasım 2019 için planlandı
- Washington D.C. Yer olarak kararlaştırıldı

# YENİ PROJE KONULARI

- **Proje 1. Üretici Deklerasyonları**

Üreticiler Cut off değerlerini nasıl oluşturuyorlar ve bunları müşterilere nasıl raporluyorlar?

- **Proje 2. Sitratl  tüpler**

*Advances in Clinical Chemistry* de alıřma yayınlandı.

alıřmada glukoz ölçümünde sitratın en iyi tampon olduėu gösterildi



## Proje3. Tüp validasyonu

- Amaç Venöz Filebotomi Rehberini gerekli araçlarla birlikte bir EFLM rehberi haline dönüştürmek
- CLSI TÜP VALİDASYON REHBERİ UYGULANMASI ZOR VE KARIŞIK



## Proje 4 .Diagnostik yollar/İstem Yönetimi

- Bir anket çalışması planlandı.
- Pilot uygulama yapılacak (10 Birinci basamak hekimine, 10 Uzmana yollanacak)
- Pilot çalışmadan sonra European Medical Association ' a yollanacak ve Ulusal Tıp dernekleriyle paylaşılacak.

## Proje 5. Kataterden numune alımı

- Hemşireler için bir anket ve arkasından bir gözlemsel çalışma tasarlandı

## Proje 6 .Glukoz tüplerinde hemoliz

- Tanımlayıcı bir çalışma olmadığından çok merkezli gözlemsel bir çalışma tasarlandı.
- Mümkün olduğunca çok üreticinin katılımı planlanıyor.

5<sup>th</sup> EFLM-BD European Conference on the  
Preanalytical Phase  
Preanalytical challenges – time for solutions  
[www.preanalytical-phase.org](http://www.preanalytical-phase.org)

- Mart 22-23 2019 da Zagreb de düzenlenecek
- Yeni teknolojilerle ilgili preanalitik süreçler ve diğer matrisler açısından preanalitik süreçler , (örn. BOS and gaita)
- Mikrobiyoloji ve diğer üreticilerle ilişki geliştirme
- Akreditasyon ve ISO 15189 da preanalitik
- Vaka sunumları '*Preanalytical mysteries*'olarak *Biochem Med* de yayınlanacak.

# ÇALIŞMALAR DEVAM EDİYOR...



**GELECEK TOPLANTI Kasım /Aralık 2018**

Dinlediğiniz için teşekkürler.

**EFLM WG-PRE meeting München  
Thursday, 9 November 2017**

