

To The Chairman of the Scientific  
Jury designated by Order  
№411/14.10.2019 г. by the  
Executive director of the MHAT  
“National Heart Hospital”

### Statement

by Prof. Borislav Georgiev Georgiev, PhD  
Head of the Cardiology Clinics, MHAT “National Heart Hospital” Sofia,  
Member of the Scientific Jury for the competition for the occupation of the academic  
position “Associate Professor” in the field of higher education Health and Sports, in the  
professional field Medicine and scientific specialty "Clinical laboratory", announced in the State  
Gazette no. 61 /02.08.2019

There is only one candidate for the above mentioned competition – assistant prof. Dobrinka Dineva Savova, MD, PhD, Department of Laboratory diagnostics at the MHAT “National Heart Hospital” Sofia. The presented documents by the applicant are in accordance with the requirements of the Law for the Development of the Academic Staff in the Republic of Bulgaria for acquiring the Academic position “Associate professor” and with the Rules for the Development of the Academic Staff in the MHAT “National Heart Hospital” Sofia. I don't find any gaps in the presented documents.

### Short CV data of the applicant

Dobrinka Dineva Savova, MD, PhD completed her higher education in medicine in the Medical Academy - Sofia in 1990. She has acquired specialties in Clinical laboratory - 2017. Dr. Dineva received her PhD degree in 2013 after successfully finishing her work on the topic: *“Monitoring of platelet activity by impedance aggregometry in the treatment of clopidogrel and / or aspirin in high-risk patients with coronary artery disease”*.

### 1. Scientific and research work

#### 1.1 Publications:

Dr. Dobrinka Dineva has presented for the competition the following:

- Monograph: *„Platelet biology, functional tests and their application in clinical practice to evaluate platelet response“*, 2019 г. ISBN: 978-619-7063-30-1
- 5 real full text publications in Bulgarian (in journals referenced and indexed in SCOPUS)
- 10 real full text publications in Bulgarian (in nonreferenced journals and with scientific review and published in edited collective volumes)
- 3 Chapters in monograph in Bulgarian with other contributors
- Number of citations: 27 in Bulgarian and English in referenced and indexed journals and in non-refereed scientific peer-reviewed journals

#### 1.2. Scientific forums

Dr. Dobrinka Dineva has presented 40 published abstracts of scientific researches in participations of scientific forums in Bulgaria or abroad.

From the publications presented and cited, Dr. Dobrinka Dineva covers the minimum state requirements of the Law for the Development of the Academic Staff in the Republic of Bulgaria from 2018 for acquiring the Academic position "Associate professor" and with the Rules for the Development of the Academic Staff in the MHAT "National Heart Hospital" Sofia.

## **2. Research profile, practical and applied activity**

In Accordance with the profile of scientific and clinical work in the Department of Laboratory diagnostics and her specialty in Clinical laboratory, the main fields of interest of the publications are laboratory aspects of platelet aggregation and coagulation.

## **3. The most significant scientific contributions**

### ***I. In the field of platelet aggregation***

1. For the first time in Bulgaria the method of impedance aggregation (A) has been validated.
2. The reference ranges for ADP, ASPI and TRAP tests for the Bulgarian population from a selected control group of healthy volunteers were determined (A).
3. Dose and time-dependent platelet inhibition of clopidogrel ( $\Gamma 10$ ) was monitored.
4. In a study of patients with coronary artery disease on clopidogrel and aspirin ( $\Gamma 11$ ) therapy, the frequency of high residual platelet activity was determined with MEA..
5. The diagnostic reliability of the ADP test was determined by ROC analysis ( $\Gamma 11$ ).
6. Platelet inhibition by ADP test of two drugs containing clopidogrel ( $\Gamma 12$ ) - Clopidogrel (Actavis) and Plavix (Sanofi-Aventis) was compared.
7. Based on ADP and ASPI test in patients with high residual platelet aggregation individualization of antiplatelet therapy (38) was performed.
8. In patients with low platelet aggregation (B), the incidence of patients receiving P2Y<sub>12</sub> receptor inhibitors (clopidogrel, prasugrel and ticagrelor) with LPR and bleeding was evaluated, and cut off value of the ADP-induced aggression for risk of hemorrhage was defined. Few studies have been conducted with dose modification and follow-ups.
9. An optimized clinical-laboratory algorithm has been developed to monitor the therapeutic response to antiplatelet agents to reduce recurrent ischemic and / or hemorrhagic complications in patients undergoing PCA (A).
10. Cutoff values of ADP and ASPI tests have been developed for risk of bleeding before and after ECC (B).
11. For the first time in Bulgaria, genetic tests ( $\Gamma 14$ ) in order to establish allele frequency of CYP2C19\*2 „loss-of-function” and CYP2C19\*17 „gain-of-function” and their influence on phenotype response evaluated by ADP-induced platelet aggregation in patients after PCI were performed.
12. Comparison of the degree of inhibition of platelet aggregation in chronic treatment with acetisal cardio 100 mg (Actavis), aspirin protect 100 mg (Bayer) was performed in patients with stable CAD on dual antiplatelet therapy - clopidogrel 75 mg and aspirin ( $\Gamma 12$ ).

### ***II. In the field of coagulation***

1. Changes in the laboratory hemostatic and hematological test results for the evaluation of coagulation and fibrinolysis and related post-operative bleeding in 440 patients from the Cardiac Surgery Unit of the National Heart Hospital ( $\Gamma 6$ ) are presented.
2. The principles of laboratory monitoring with heparin and low molecular weight heparins treatment ( $\Gamma 7$ ) are presented. For the first time in Bulgaria the results of measurment the anti-XA

activity on STA Compact analyzer in the treatment with low molecular weight heparins in 15 patients with CAD and PTE are presented.

3. The advantages of INR determination from capillary blood for monitoring oral anticoagulant therapy with Point of Care self-monitoring devices - Coagucheck S (Г9) have been demonstrated.

4. For the first time in Bulgaria a comparison of the anticoagulant effect of acenocoumarol (Unipharm) and sintrom (Novartis) in outpatients (Г8) was made.

5. The results from the first-time monitoring in our country of low molecular-weight heparins in pregnant women with hereditary thrombophilic defects (Г2) are presented.

## ***II. Methodology-diagnostic contributions***

1. Clinical-chemical and immuno-turbidimetric methods validated with analytically reliable self-validation of the following analyzers: AU 400, AU 480, Access-2 - Beckman Coulter.

2. Adapted programs for chromogenic and chromometric coagulation tests of the following hemostasis analyzers: Sysmex CS-2000i, Sysmex CS-2500 - Siemens, ACL TOP 500 - IL, STA Compact - Diagnostica Stago, Diatron - Diagon. Comparison of the results of individual tests for PT, aPTT, Fib with reagents and devices from different manufacturers to achieve optimal sensitivity of the results in patients treated with oral anticoagulants and heparin.

3. Introduction of tests for evaluation of perioperative bleeding of MULTIPATE and ROTEM devices.

4. Methodical assistance in programming of analytical parameters, staff training and consultations in case of problems in routine work with clinical-chemical (AU 480, AU 640), immunological (Access-2), haematological (DxH 800) and haemostasis (Grifols) ) analysers in many hospitals.

## **4. Educational, scientific and organizational activity**

Dr. Dobrinka Dineva has been an associate scientist III, II and I degree and an assistant professor in clinical laboratory since 1991, with a teaching load of educational and teaching activity of specialized physicians and 4th year students of medicine in internal diseases program - module of cardiology (information by National Heart Hospital).

The academic teaching hours of Dr. Dobrinka Dineva corresponds to the requirements occupying the academic position of "Associate Professor".

## **5. Membership in scientific organizations.**

Dr. Dobrinka Dineva is a member of the following national and international scientific organizations:

- Bulgarian Society for Clinical Laboratory
- American Association for Clinical Chemistry
- International Society on Thrombosis and Haemostasis

According to the minimum requirements of the MHAT "National Heart Hospital" and National Center for Information and Documentation for occupation of the academic position of Associate Professor, Dr. Dobrinka Dineva meets more than the minimum requirements.

Set of metrics	Content	Associate Professor (minimal)	Points collected
A	Indicator 1	50	50
B	Indicator 3	100	100
Г	Sum of Indicators 5-9	200	267.3
Д	Sum of Indicators 10-12	50	160

<b>Total</b>	<b>400</b>	<b>577.3</b>
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Indicators	Minimum Points	Content	Points
<b>A</b>	50	1. Thesis for PhD degree	50
	"Monitoring of platelet activity by impedance aggregometry in the treatment of clopidogrel and / or aspirin in high-risk patients with coronary artery disease".		
<b>B</b>	100	3. Monograph: „Platelet biology, functional tests and their application in clinical practice to evaluate platelet response“, 2019 г. ISBN: 978-619-7063-30-1	100
	60/n	7. real full text publications in Bulgarian (in journals referenced and indexed in SCOPUS)	145
	30/n	8. Real full text publications in Bulgarian (in nonreferenced journals and with scientific review and published in edited collective volumes)	75,7
	20/n	9. Chapters in monograph in Bulgarian with other contributors	46,6
<b>Д</b>	15, 10, 5	10-12. Citations in Bulgarian and English in referenced and indexed journals and in non-refereed scientific peer-reviewed journals	160

Based on the above clinical and scientific data of Dr. Dobrinka Dineva, she can be characterized as researcher capable of independent creative scientific work in the field of clinical laboratory in internal diseases, and in particular in cardiology,

In conclusion, I believe that Dobrinka Dineva Savova, MD, PhD meets the requirements of the Academic Staff Development Act in the Republic of Bulgaria and the Regulations for the Academic Staff of Development in the MHAT "National Heart Hospital" for the occupation of Academic position "**Associate professor**". This makes me confident to recommend to the members of the distinguished scientific jury to vote positively for the academic position "**Associate Professor**" in the field of higher education 7. "Health and Sports", professional direction 7.1 "Medicine" and scientific specialty "Clinical laboratory".

15.11.2019 г.



(prof. Borislav Georgiev, MD PhD)

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15.11.2019 г.



(prof. Borislav Georgiev, MD PhD)