

НАУКОВИЙ ПРОСТІР: АКТУАЛЬНІ ПИТАННЯ, ДОСЯГНЕННЯ ТА ІННОВАЦІЇ

І 13 ТРАВНЯ 2022 РІК

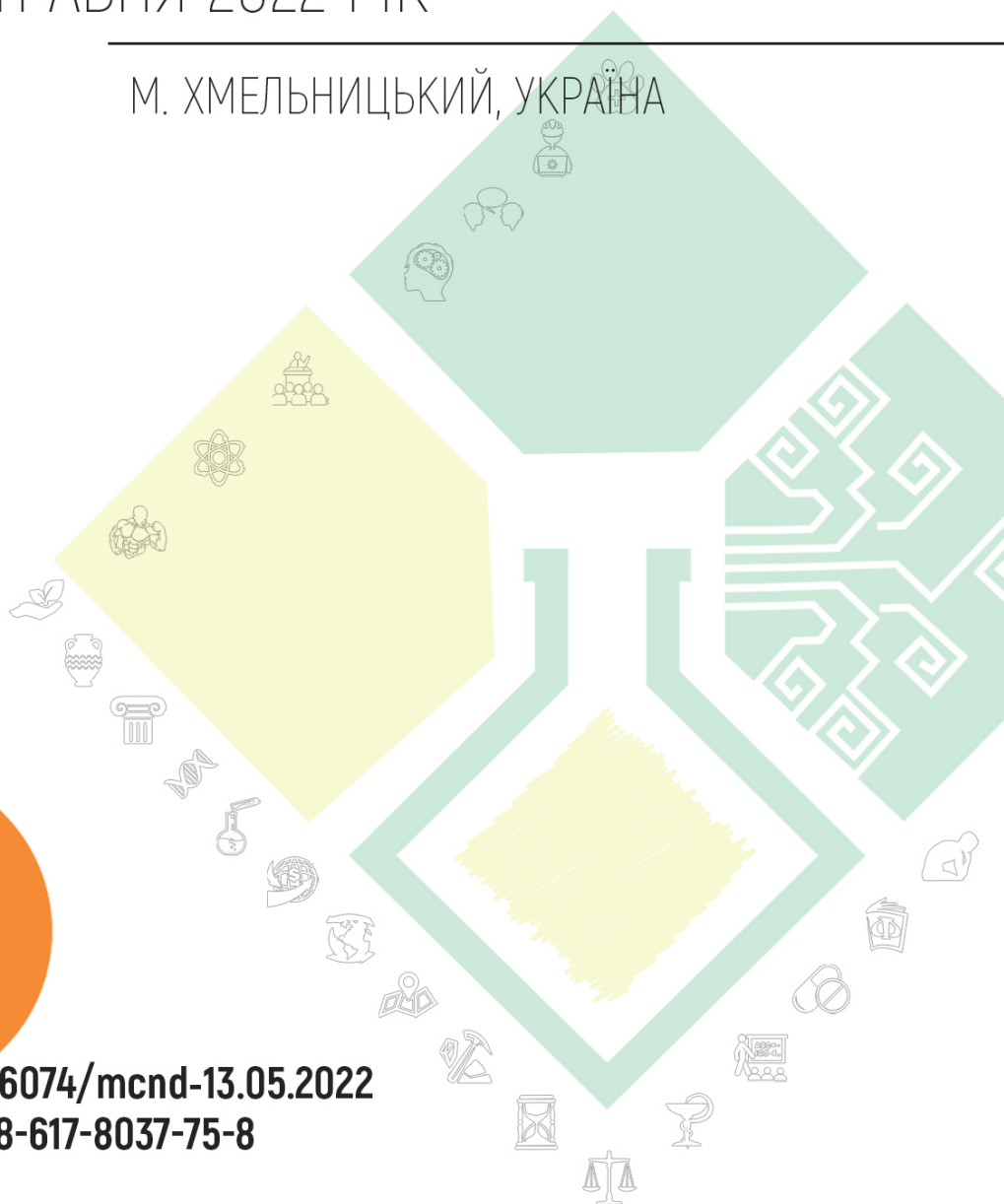
М. ХМЕЛЬНИЦЬКИЙ, УКРАЇНА



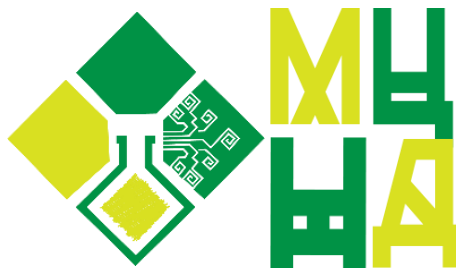
**OPEN
ACCESS**

DOI 10.36074/mcnd-13.05.2022

ISBN 978-617-8037-75-8



МАТЕРІАЛИ
ІІІ МІЖНАРОДНОЇ
НАУКОВОЇ КОНФЕРЕНЦІЇ



Міжнародний Центр Наукових Досліджень

НАУКОВИЙ ПРОСТІР: АКТУАЛЬНІ ПИТАННЯ, ДОСЯГНЕННЯ ТА ІННОВАЦІЇ

| 13 ТРАВНЯ 2022 РІК
м. Хмельницький, Україна

Вінниця, Україна
«Європейська наукова платформа»
2022

УДК 001 (08)
Н 34

<https://doi.org/10.36074/mcnd-13.05.2022>



Організація, від імені якої випущено видання:
ГО «Міжнародний центр наукових досліджень»

Голова оргкомітету: Рабей Н.Р.

Верстка: Білоус Т.В.

Дизайн: Бондаренко І.В.



Матеріали конференції знаходяться у відкритому доступі на умовах ліцензії CC BY-NC 4.0 International.

Н 34 **Науковий простір: актуальні питання, досягнення та інновації:**
матеріали III Міжнародної наукової конференції, м. Хмельницький,
13 травня, 2022 р. / Міжнародний центр наукових досліджень. —
Вінниця: Європейська наукова платформа, 2022. — 602 с.

ISBN 978-617-8037-75-8

DOI 10.36074/mcnd-13.05.2022

Викладено матеріали учасників III Міжнародної спеціалізованої наукової конференції «Науковий простір: актуальні питання, досягнення та інновації», яка відбулася у місті Хмельницький 13 травня 2022 року.

УДК 001 (08)

ISBN 978-617-8037-75-8

© Колектив учасників конференції, 2022
© ГО «Європейська наукова платформа», 2022
© ГО «Міжнародний центр наукових досліджень», 2022

ЦІННІСНА ОСНОВА ПРОФЕСІОНАЛІЗМУ СУЧАСНОГО ПЕДАГОГА

Науково-дослідна група:

Мотуз Т.В., Дудник В.О., Кіреєва О.О., Цебро Ю.М. 481

СЕКЦІЯ ХХVII.

ПСИХОЛОГІЯ ТА ПСИХІАТРІЯ

КРИТЕРІАЛЬНІ ОЗНАКИ АТРИБУТИВНОЇ ПОВЕДІНКИ

Велитченко Л.К., Сюй Болунь 483

ОСОБЛИВОСТІ МОТИВАЦІЙНОЇ СФЕРИ СТУДЕНТІВ З РІЗНИМ РІВНЕМ
ПРОКРАСТИНАЦІЇ

Саранча В.В. 486

ПСИХІЧНО-ЕМОЦІЙНИЙ СТАН СТУДЕНТІВ, ЯКІ ПОЄДНУЮТЬ НАВЧАННЯ ТА
РОБОТУ

Мареніч Г.Г., Москалік А.Р., Платонова Д.О. 489

ПСИХОЛОГІЧНИЙ АНАЛІЗ ЗМІСТУ ТЕРМІНІВ «КОЛЕКТИВ» ТА «КОМАНДА» (НА
ПРИКЛАДІ ДІЯЛЬНОСТІ НАУКОВИХ БІБЛІОТЕК ЗАКЛАДІВ ВИЩОЇ ОСВІТИ)

Чорна Т.В. 491

СЕКЦІЯ ХХVIII.

МЕДИЧНІ НАУКИ ТА ГРОМАДСЬКЕ ЗДОРОВ'Я

CLINICAL AND DIAGNOSTIC ASPECTS OF MILD TRAUMATIC BRAIN INJURY

Makarov D.E. 496

DONATORS OF NITRIC OXIDE IN OBSTETRIC PRACTICE

Research group:

Deinichenko O., Hayday N., Serhiyenko M., Kolokot N., Shevchenko A., Zemlyana N. 497

NEONATAL MORBIDITIES OF FETAL GROWTH RESTRICTION

Research group:

Deinichenko O., Krut' Yu., Syusyuka V., Pavlyuchenko M., Puchkov V., Bohomolova O. 500

RETINAL ANGIOPATHY AND CHRONIC ARTERIAL HYPERTENSION DURING
PREGNANCY

Research group:

Deinichenko O., Mladonov V., Mladonova V., Turchynenko Yu., Moskovka V., Bilan I. . 503

ЕФЕКТИВНІ ЛІКАРСЬКІ ЗАСОБИ ЛІКУВАННЯ ХВОРИХ ІЗ ЧЕРЕПНО-МОЗКОВОЮ
ТРАВМОЮ

Чічагова Е.О. 505

КОЛИВАННЯ ПОКАЗНИКІВ ОКИСНОГО БАЛАНСУ У ПІДЛІТКІВ З
ГІПОАНДРОГЕНІЄЮ В ЗАЛЕЖНОСТІ ВІД КОМОРБІДНОЇ ПАТОЛОГІЇ

Науково-дослідна група:

Волкова Ю.В., Шарун К.В., Сухова Л.Л., Косовцова Г.В., Турчина С.І. 508

DONATORS OF NITRIC OXIDE IN OBSTETRIC PRACTICE

RESEARCH GROUP:

Olena Deinichenko

Ph.D., Assistant of the Department of Obstetrics and Gynecology
Zaporizhzhia State Medical University, Ukraine

Nataliya Hayday

Ph.D., Associate Professor, Department of Obstetrics and Gynecology
Zaporizhzhia State Medical University, Ukraine

Maryna Serhiyenko

Ph.D., Assistant of the Department of Obstetrics and Gynecology
Zaporizhzhia State Medical University, Ukraine

Nataliya Kolokot

Postgraduate Student, Assistant of the Department of Obstetrics and Gynecology
Zaporizhzhia State Medical University, Ukraine

Anna Shevchenko

Ph.D., Assistant of the Department of Obstetrics and Gynecology
Zaporizhzhia State Medical University, Ukraine

Nataliya Zemlyana

Ph.D., Assistant of the Department of Obstetrics and Gynecology
Zaporizhzhia State Medical University, Ukraine

Donators of nitric oxide, in recent years are increasingly used in the clinical practice of various fields of medicine, among them the greatest interest is L-arginine (the main substance of the donor of nitric oxide) used in hypertensive disorders in pregnant women. Nitric oxide deficiency is a key element in endothelial dysfunction in critical conditions.

In recent years, a large number of studies have been devoted to studying the role of NO in the pathophysiology of obstetric conditions. The results of these studies laid the foundation for the clinical use of NO donors as a new pharmacological tool.

It is likely that this substance plays a fundamental role in the pathogenesis of preeclampsia and intrauterine growth restriction syndrome, where the ability of the molecule to cause smooth muscle relaxation has been found to be quite useful. The role of NO in maintaining vascular homeostasis is reduced to the regulation of vascular tone, proliferation and apoptosis, as well as the regulation of oxidative processes. In addition, angioprotective properties are inherent in NO [1,2].

Fetal Growth Restriction Syndrome (FGR) is the result of reduced blood supply, leading to limited access to oxygen and nutrients necessary for fetal growth. The pathogenesis of this condition to date also remains not fully understood, apparently, therefore, no effective treatment of this pathology has yet been developed. It is likely that NO should play an important role in the prevention and treatment of this condition, since it can contribute to the improvement of uteroplacental circulation, increase the blood supply

to the fetus [3]. As shown by some authors, in the second trimester of pregnant women who has FGR, the levels of NO in the amniotic fluid were lower than in the control group.

In recent studies on the effect of L-arginine (an NO donor) on the intrauterine condition of the fetus in patients with PE, it was found that it promotes intrauterine growth of the fetus by increasing NO production. Therapy with L-arginine contributed to an increase in the pulsation index of the middle cerebral artery and cerebro-placental ratio and a noticeable decrease in the systolic-diastolic ratio, pulse index, and resistance index [7].

Physiological vascular adaptation to pregnancy (an increase in blood volume, cardiac output and a decrease in vascular resistance) is accompanied by an increase in endogenous NO production and an increase in NO sensitivity to vascular smooth muscle cells. Experimental studies have shown the role of enhancing oxidative stress and reducing the bioavailability of vasodilators such as NO in the pathogenesis of cardiovascular dysfunction during pregnancy.

The effectiveness of the use of L-arginine in complicated pregnancy has been established in several studies. F. Facchinetti et al., examining hypertensive patients randomized to placebo or intravenous L-arginine groups, showed a significant decrease in SBP and DBP after treatment in the group receiving L-arginine [4]. There is also a tendency to prolong pregnancy.

L-arginine also contributes to intrauterine growth of the fetus by increasing NO production and improving blood circulation in the umbilical artery. In a randomized, placebo-controlled, double-blind, clinical study in pregnant women with preeclampsia, K. Rytlewski et al. (2006) found a significant decrease in the umbilical artery pulsation index in patients who received L-arginine in addition to standard therapy. Therapy with L-arginine contributed to a significant increase in the pulsation index of the middle cerebral artery and cerebro-placental coefficient. The duration of pregnancy and the Apgar score for newborns were also higher in the treatment group.

Some authors, when examining pregnant women with gestational hypertension and intrauterine growth retardation (FGR), who received L-arginine in addition to standard therapy, found a marked decrease in systolic diastolic ratio, pulse index, and resistance index [8]. The NO content in the blood of the mother and the fetus was significantly higher than in the group receiving only standard therapy. The body weight of newborns from mothers treated with L-arginine was at the level of the control group and significantly higher than in the standard therapy group [7, 8].

Therefore, the results of numerous studies of recent years indicate the possibility of effective and safe application of the properties of L-arginine as an active NO donor in clinical practice in obstetric pathology.

Thus, the possibility of using L-arginine as a donor of nitric oxide in the treatment and prophylaxis of critical conditions in obstetrics is obvious and requires further study.

References:

1. Gurevich MA, Sturov NV (2006) Nitric oxide deficiency and maintenance of vascular homeostasis: role of mononitrates and cytoprotection problems. *The Difficult Patient*, 3: 23–29.
2. Yelsky VN, Vatutin NT, Kalinkina NV, Salakhova AM (2008) The role of endothelial dysfunction in the genesis of cardiovascular disease. *Journal. Academy of Medical Sciences of Ukraine*, 14 (1): 51-62.
3. Ashurova NG, Ismatova MI. 2015. A modern look at the problem of fetal fetal developmental delay (Review article). *Science. Thought* 3: 13–18.
4. Facchinetti F., Saade G.R., Neri I. et al. (2007) L-arginine supplementation in patients with gestational hypertension: a pilot study. *Hypertens Pregnancy*, 26 (1): 121-130.

5. Rytlewski K., Olszanecki R., Korbut R., Zdebski Z. (2005) Effects of prolonged oral supplementation with l -arginine on blood pressure and nitric oxide synthesis in preeclampsia. *Eur. J. Clin. Invest.*, 35 (1): 32-37.
6. Rytlewski K., Olszanecki R., Lauterbach R. et al. (2006) Effects of oral L-arginine on the foal condition and neonatal outcome in preeclampsia: a preliminary report. *Basic Clin. Pharmacol. Toxicol.*, 99 (2): 146–152.
7. Sieroszewski P., Suzin J., Karowicz-Bilińska A. (2004) Ultrasound evaluation of intrauterine growth restriction therapy by a nitric oxide donor (L-arginine). *J. Matern. Fetal Neonatal Med.*, 15 (6): 363–366.
8. Zhang N., Xiong A.H., Xiao X., Li L.P. (2007) Effect and mechanism of L-arginine therapy for fetal growth retardation due to pregnancy-induced hypertension. *Nan. Fang Yi Ke Da Xue Xue Bao*, 27 (2): 198–200.