



Partnership between the CHU of Toulouse and Mechnikov Hospital in Dnipro under the auspices of Expertise France.

Vincent Bounes, CHU de Toulouse.

Contexte et objectif

- Study trip to Ukraine by a hospital delegation on May 21-22, 2024, and participation of the French delegation in an international conference on European health partnerships, chaired by the First Lady and the Ukrainian Minister of Health.
- The French delegation is organized at the initiative of the Ministries of Social Affairs, AFD, and Expertise France. The aim of national public institutions is to position France as a key player in inter-hospital cooperation with Ukraine.
- 10 partnerships were signed in 2023, with 8 more in 2024 during the international conference. During this event, a France-Ukraine agreement was signed to establish a €200 million support fund for critical infrastructure, including €30 million for health and hospital reconstruction.
- **Objective:** To assist Ukraine in its efforts to modernize and rebuild its health infrastructure in line with European standards.



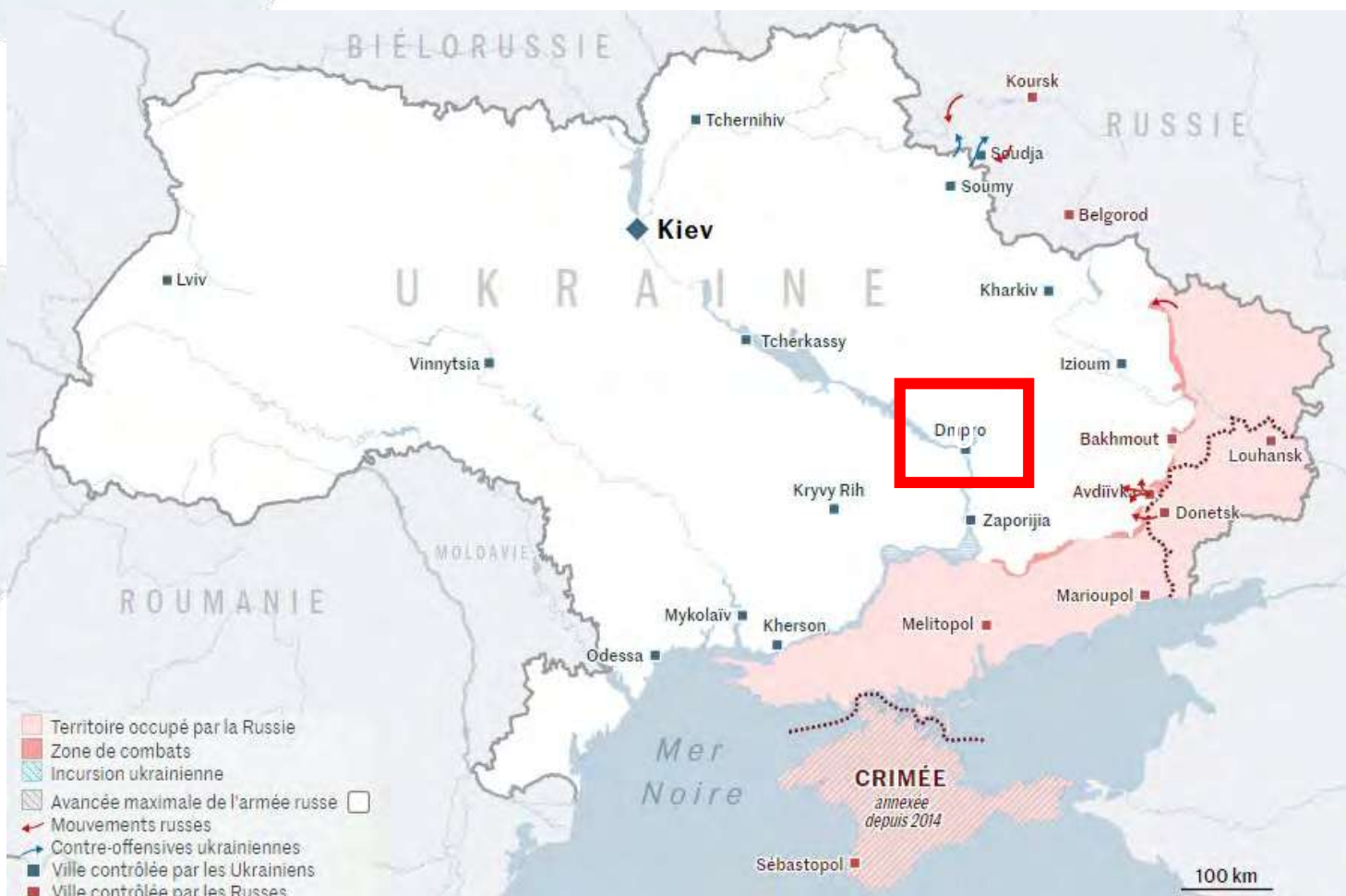


Signature of a Memorandum of Understanding between the Toulouse University Hospital and the Mechnykov Hospital in Dnipro for a partnership focused on surgical cooperation («Dnipro cooperation»)

Kiev, May 2024

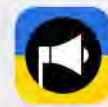
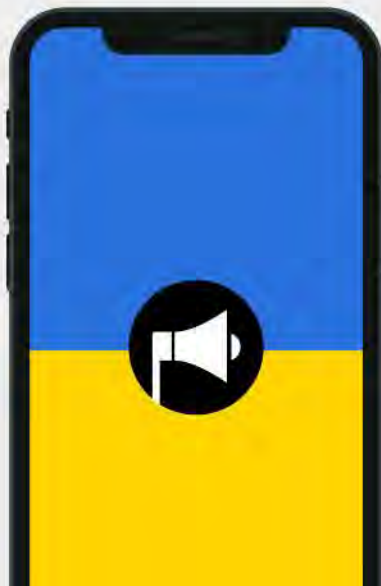


► Mission à l'hôpital Mechnikov de *Dnipro*



- Mechnikov Hospital is the reception center for wounded individuals from the frontlines.
- Technical and operational support from the CHU of Toulouse.
- Identification of areas for work and improvement to be defined during the mission.
- A delegation of four doctors organized by EF:
 - Neurosurgeon
 - Anesthetist
 - Head of Emergency Medicine Department
 - Emergency Physician

Air alert...



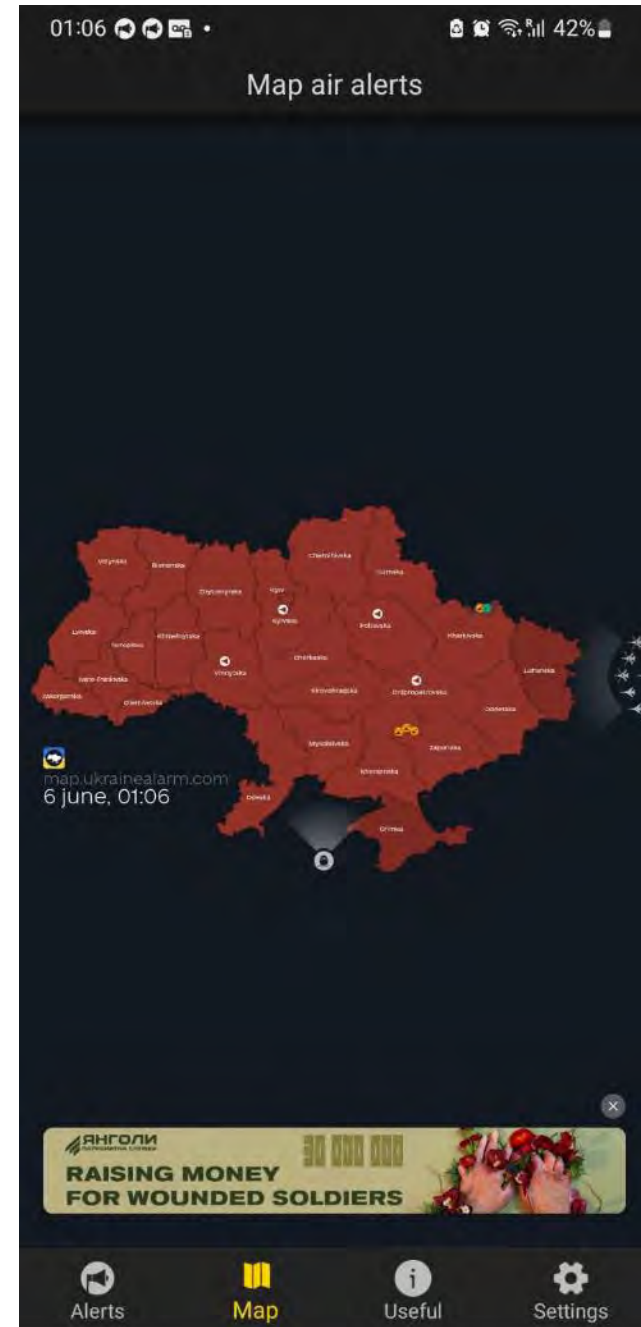
Повітряна тривога



Міністерство
цифрової трансформації
України

AJAX

stfalcon



First study and partnership trip November 11-15, 2024



**Pr Vincent
Bounes**



Emergency

**Pr Franck-
Emmanuel
ROUX**



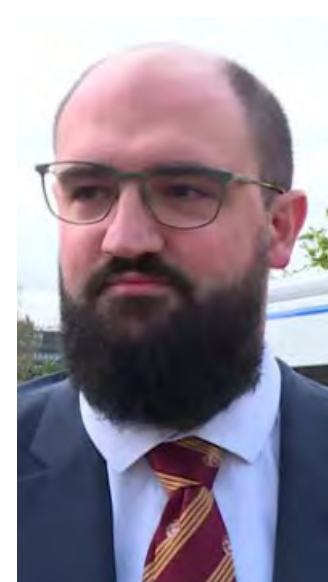
Neurosurgery

**Dr Géraldine
FAURE**

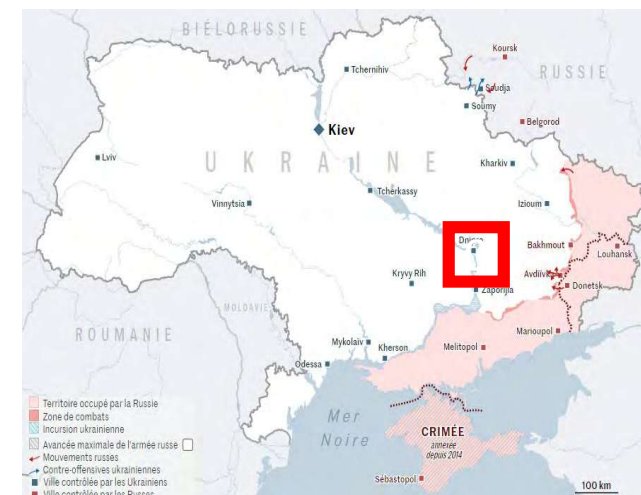


**Intensive-
care and
anaesthesia**

**Dr Benoit
VIAULT**



Emergency



**4-day mission: travel of
CHU professionals**

**Technical and
operational support for
Toulouse University
Hospital**

**Identification of areas of
work during the mission**

**МЕЧНИКОВ HOSPITAL
EMERGENCY DEPARTMENT**

**ЛІКАРНЯ МЕЧНИКОВА
ПРИЙМАЛЬНЕ ВІДДІЛЕННЯ**



French participants

- Pr Vincent Bounes (VB), Emergency Medicine Pole
- Dr Géraldine Faure (GF), AR pole
- Pr Franck-Emmanuel Roux (FR), Neurosurgery Pole
- Dr Benoit Viault (BV), Emergency Medicine Pole
- Vincent Vial, Head of Health Program, Expertise France
- Kateryna Shepetiuk, Coordinator of Hospital Cooperation, Expertise France

First actions – intensive care unit



First actions Neurosurgery.











Global patients result, n=7758.

Year	2022	2023	2024 (till 11-13)
Number of patients	2116	3366	2276
Age (median-IQR)	38 (30-47)	37 (30-45)	39 (31-47)
Length of stay, days (median-IQR)	3 (2-5)	3 (2-4)	3 (2-5)
Death in the ICU, n (%)	144 (6,8)	215 (6,4)	124 (5,4)
Cause of injury, n (%)			
Explosion	1972 (93,2)	3154 (93,7)	2014 (88,5)
Gunshot	52 (2,5)	113 (3,4)	171 (7,5)
Other trauma	92 (4,3)	99 (2,9)	91 (4)

Detailed information on a sample of 41 wounded patients

Age (median-IQR)	36 (27-41)
Men, n(%)	40 (97,5)
Length of stay, days (median-IQR)	4 (3-5)
Cause of injury, n(%)	
Explosion	39 (95,1)
Gunshot	1 (2,4)
Other trauma	1 (2,4)
Severe injuries at admission, n(%)	
burns	1 (2,4)
head injury	24 (58,5)
spine injury	7 (17,1)
limb injury	36 (87,8)
thoracic injury	21 (51,2)
abdominal injury	11 (26,8)

Detailed information on a sample of 41 wounded patients

Prehospital care, n(%)	
Intubation	34 (82,9)
Limb tourniquet	27 (65,9)
Thoracic drainage	19 (46,3)
Damage control surgery	29 (70,7)
Norepinephrin	28 (68,3)
Hospital care, n(%)	
Head or spine surgery	10 (24,4)
Thoracic surgery	8 (19,5)
Abdominal surgery	4 (9,8)
Limb surgery	30 (73,2)
Intubation	22 (53,7)
Norepinephrin	23 (56,1)
Blood transfusion (any type)	38 (92,7)
Dialysis	6 (14,6)



Conférence et séminaire à Lviv (11/12 et 28-29/12)



Focus sur le partenariat avec l'hôpital Mechnikov, Dnipro



11 déc 2024



28 -29 nov 2024



Un projet à 3 dimensions



Participer à la reconstruction du système de santé ukrainien sur la base de normes et standards européens et par le renforcement des capacités locales

1

Mise en place de deux centres franco-ukrainien de formation aux soins d'urgence et de catastrophe

2

Expertise sur la reconstruction de 2 services d'urgence

3

Soutien à l'hôpital Mechnikov de Dnipro

Création de deux centres Franco-Ukrainiens d'Enseignement et de Formation aux Gestes d'Urgence et à la médecine de Catastrophe

Education et formation

- Formation de haut niveau des soignants sur les soins d'urgence et de médecine de catastrophe
- Amélioration de la qualité des soins et réduction des délais de prise en charge

Standards européens

- Programme de formation conforme aux normes européennes (Directive 93/16/CEE du Conseil du 5/04/1993)
- DU mixte UT3/Université de Kiev

Renforcement des capacités locales

- Harmonisation des pratiques de soins d'urgence
- Développement de compétences durables par la formation de formateurs
- Renforcement de l'autonomie et de la résilience



Memorandum of Understanding



2 Expertise sur la reconstruction de 2 services d'urgence

Modernisation des services d'urgence

- Réhabilitation et équipement

Mise en place d'une organisation conforme aux standards internationaux

- Audit et formation sur l'organisation efficiente au regard des normes européennes actuelles

Renforcement des compétences des soignants

- Formation des PM et PNM aux bonnes pratiques selon les standards européens
- Résilience et efficacité face aux crises avec afflux massifs de patients

Amélioration des soins aux patients

- Garantie de soins de qualité, accessibles et rapides pour la population
- Attention particulière : femmes, enfants et personnes âgées

Durabilité des structures rénovées

- Accompagner à la mise en place de systèmes de gestion et de maintenance



Localisation des services d'urgence à définir par le ministère de la santé ukrainien

Identification of the future work axes:

- **Hygiene, Infection Prevention Control (IPC) and Antimicrobial Resistance (AMR) :**
 - identification of Toulouse University hospital personnel within the hospital hygiene department, microbiology laboratory for support mission, +/- sending paramedics on training mission.
- **Material: large donations of material at the beginning of the conflict, but sometimes unusable :**
 - identification of BMET engineers for the evaluation of equipment available on site, and possibilities to put into operation existing defective or incomplete equipment, training of engineers on site if necessary.
- **Intensive care-resuscitation:**
 - Help in the development of appropriate sedation and respiratory withdrawal protocol. Help with training and skills development of ICU nurses. Help in pain management (bandage care, among others. Problem of the implementation of dialysis in the ICU full-fledged audit (devices, medical protocols, training).
- **Extend of surgical cooperations (Abdominal surgery, trauma, etc).**

Identification of the future work axes:

- Neurosurgery project:
 - The neurosurgical team in Mechnikova comprises about 120 beds organized roughly into 3 units: Neuro-oncology/endovascular, Spinal, and Neurotraumatology.
 - The number of interventions since the beginning of the war has almost doubled (currently about 2,500 per year). The mental load of paramedics and medical personnel is very high of course and has been ongoing for 33 months of conflict. The work done in the current conditions is absolutely remarkable with strong skills but with a lack of some critical materials for the full exercise of neurosurgery
 - Allow short visits of neuro-intensive care and/or neurosurgeons to the University hospital for an exchange on optimal patient management.
 - Acquisition of materials with after sale service: a) Ultrasound Bistouri, b) spinal osteosynthesis equipment, c) intracranial pressure sensors, d) neuronavigation.
 - Re-evaluation of the actions carried out on site in Dnipro by continuing exchanges between teams.