

3rd

Egyptian School of Neuromuscular Disorders & Third International Conference of the Neuromuscular Chapter of Egyptian Society of Neurology, Psychiatry and Neurosurgery (ESNPN)

In collaboration with

Pan Arab Union of Neurological societies (PAUNS)
& The Neuromuscular Unit, Neuropsychiatry Department, Faculty of Medicine, Ain Shams University



Advances in Neuromuscular Disorders

Prof. Mahmoud El Meteini

President of Ain Shams University

Prof. Osama Mansour

Dean of Faculty of medicine, Ain Shams University

Prof. Maha Mohamed

Chairman of Neuropsychiatry

Prof. Nagia Fahmy

Director of Neuromuscular Chapter ESNPN
& Conference President

Prof. Azza Abd El-Naser

Honorary president

Director of Neurology Unit, Ain Shams University

Dr. Radwa Solaiman

General Secretary of the Conference
Lecturer of Neurology, Ain Shams University

11th-16th September 2022

11th-13th Training and Development Center TDC,
Ain shams University.

14th-16th Intercontinental City Stars Hotel

ORGANIZED BY





Welcome message

On behalf of the Neuromuscular chapter, the Egyptian Society of Neurology, Psychiatry and Neurosurgery (ESNPN) and Pan Arab Union of Neurological Societies (PAUNS)

I have the pleasure to invite you to the 3rd international neuromuscular school and conference which will take place in Training and Development Center, Ain Shams University Hospital from 11th to 13th and in Intercontinental City stars Hotel from 14th to 16th of September 2022.

Our goal is to bring together, a multi-disciplinary group of scientists to present and exchange break-through ideas relating to neuromuscular disorders. It promotes top level research and discussions, focusing attention on the recent outstanding achievements in the field of neuromuscular disorders.

The topics of the Conference truly reflect the current trends, recent advances and new approaches in Neuromuscular disorders. The Conference will cover among others: Spinal muscular atrophy, Duchenne muscular dystrophy, Neuromuscular junction disorders, Amyotrophic lateral sclerosis, Metabolic myopathies, Inflammatory myopathies, Neuropathies, Neuromuscular Genetics and Genetic interventions. Hands-on NCS/ EMG workshop with eminent scientists in the field.

Looking forward to meet all of you with our national and international guest speakers.



Dr. Nagia Aly Fahmy, MD
Professor of Neurology, Director,
Neuromuscular Chapter, ESPNP
President of the school and conference



President of the Conference:

Prof. Nagia Aly Fahmy,

Director of the Neuromuscular Chapter, ESNPN and Director of Neuromuscular Unit, Ain Shams University.

General Secretary of the Conference:

Dr. Radwa Solaiman,

Lecturer of Neurology, Ain Shams University

Honorary president of the Conference:

Prof. Azza Abd El-Naser

Director of Neurology Unit, Ain Shams University

Honorary Presidents:

Prof. Samiha Abd Elmoneim

Prof. Anwar Etribi

Prof. Samia Ashour

Scientific committee:

Prof. Samia Ashour,

Ain Shams University

Prof. Ayatallah Farouk,

Cairo University

Prof. Tarek Rageh,

Assiut University

Prof. Sandra Ahmed,

Cairo University

Prof. Nermine Salah El-Din,

Ain Shams University

Prof. Azza Abbas,

Tanta University

Prof. Hazem Maarouf,

Alexandria University

Prof. Abeer Eltoony,

Aswan University

Organizing committee:

Dr. Hossam Afifi, Ain Shams University

Dr. Ahmed El Sadek, Ain Shams University

Dr. Amr Saeed, Ain Shams University

Dr. Rasha Mahmoud, Ain Shams University

Dr. Sara Ihab, Ain Shams University

Dr. Rana Zakaria, Ain Shams University

Dr. Yousra Fahmy, Ain Shams University

Dr. Riham Mahfouz, Ain Shams University

Dr. Menna Elgamal, Ain Shams University



International Guest Speakers



Prof. Albert Ludolph



Is Professor of Neurology and Chairman of the Department of Neurology at the University Hospital and Medical Faculty of Ulm. He is also acting Director of the Academic Neuroscience Centre of the University of Ulm. He has established and leads the ALS-Centre at the University Hospital of Ulm and directs a multidisciplinary team for ALS care, clinical and experimental research.



Prof. Amro Stino, MD



is an Associate Professor in the Department of Neurology in the University of Michigan Medical School (United States), Division of Neuromuscular Medicine, and Director of the Peripheral Neuropathy Clinic. He has research interest in inflammatory, metabolic, and painful polyneuropathies, and is involved in numerous trials, including an investigator-initiated phase 1b trial on the novel use of Lenalidomide in anti-MAG peripheral neuropathy, as well as the International GBS Outcome Study.



Prof. Bjarne Udd,



head of the neuromuscular disease research group at the Folkhälsan Research Centre and of the Tampere Neuromuscular Centre, Finland. A highly specialized center for comprehensive clinical care and research of all types of genetic and acquired conditions of muscle, nerve and neuromuscular junction. Prof Udd received the German 'Duchenne-Erb-Preis' science award by the German muscular dystrophy association Deutsche for his leading efforts in neuromuscular diseases.



Prof. Eduardo Tizzano FERRARI MD.PhD



is a specialist in Pediatrics and Medical Genetics. He is devoted to diagnosis and research in SMA at the Hospital of Sant Pau of Barcelona, a reference Center for SMA diagnosis from all over Spain.



Dr. Giovanni Baranello, MD, PhD



is an Associate Professor in Paediatric Neurology/ Neuromuscular Disorders within the Developmental Neurosciences Teaching and Research Department, at the Dubowitz Neuromuscular Centre. He serves as honorary consultant in neuromuscular diseases at the Great Ormond Street Hospital, London. He has been involved as principal investigator in numerous neuromuscular clinical trials, predominantly in the areas of SMA and DMD. His main area of research relates to translational research in neuromuscular conditions, development of outcome measures and biomarkers, natural history studies and long-term studies in patients receiving novel treatments.



Prof. Richard S. Finkel, MD



is a pediatric neurologist and Chief, Division of Neurology at St. Jude Children's Research Hospital, Memphis, Tennessee, USA. His special interests include Neuromuscular Disorders, pediatric electromyography and metabolic disorders of the nervous system. His research interests are concerned with the development of outcome measures and with the design and execution of clinical trials in spinal muscular atrophy, Duchenne muscular dystrophy, Fabry and Pompe diseases.



Prof. Zaem A. Siddiqi, M.D., Ph.D.



professor of Medicine/Neurology Alberta University Canada. He is an eminent figure in neuromuscular diseases with special interests in Neuromuscular junction disorders and neurophysiology. He established among others a comprehensive Myasthenia Gravis Program in 2003, the first Adult Neuromuscular Multidisciplinary Clinic for Muscular Dystrophy that Care to hundreds of MD patients from Alberta and neighboring provinces. As well as Autonomic Testing Laboratory. Dr Zaem Received many clinical awards as well as teaching and mentorship ones. He has been involved as principal investigator in numerous neuromuscular clinical trials, predominantly in the areas of Neuromuscular junction disorders.





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**Egyptian School of Neuromuscular Disorders
& Third International Conference of the
Neuromuscular Chapter of Egyptian Society of
Neurology, Psychiatry and Neurosurgery
(ESNPN)**

**11th-13th of September, 2022
Training and Development Center,
Ain Shams University Hospital**

Room 401



Sunday
11th
Sep

First Day

09:00 - 16:00

- 09:00 - 09:15 Introduction of the school and Welcome of Trainees and Professors.
Prof. Nagia Fahmy, Professor of Neurology and Director, Neuromuscular Unit, Faculty of Medicine, Ain Shams University
- 09:15 - 10:00 Neuromuscular Sheet
Prof. Nagia Fahmy, Ain Shams University.
- 10:00 - 10:30 Discussion of the panel and attendees.
- 10:30 - 12:00 Case presentations
- 12:00 - 12:30 Metabolic Myopathies in children.
Dr. Maha Nada, Ain Shams University.
- 12:30 - 13:00 Coffee Break
- 13:30 - 16:00 Case presentations
- 16:00 Lunch



Monday
12th
Sep

Second Day

09:00 – 16:00

09:00-12:00

Case Presentations

12:00 – 12:30

Congenital Myasthenia

Dr. Ayman Nasef, Ain Shams University

12:30 – 13:00

Coffee Break

13:00 – 13:30

Muscles MRI as a diagnostic tool of Neuromuscular Disorders.

Prof. Bjarne Udd, Tampere University

13:30 – 13:45

MRI muscles in the diagnosis of muscular Dystrophy, Ain Shams Experience.

Dr. Sara Ihab, Ain Shams University.

13:45 – 16:00

Case presentations

16:00

Lunch



Tuesday
13th
Sep

Third Day
Neurophysiology workshop

09:00 – 16:00

- 09:00 – 09:30 **Basics of nerve conduction.**
Dr. Ahmed Sadek, Ain Shams University
- 09:30 – 10:30 **Hands on**
- 10:30 – 11:00 **Common errors & Pitfalls in NCS. How to avoid them?**
Prof. Zaem Siddiqi, Alberta University, Canada
- 11:00 – 12:00 **Hands on more advanced (late responses, RNS)**
- 12:00 – 13:00 Coffee Break**
- 13:00 – 13:30 **Basics of EMG.**
Dr. Hossam Afifi, Ain Shams University
- 13:30 – 14:30 **Hands on**
- 14:30 – 15:00 **Common abnormalities in needle EMG.**
Prof. Zaem Seddiqi, Alberta, University
- 15:00 – 16:00 **Approach to wrist and foot drops. Tips & tricks.**
Prof. Zaem Siddiqi, Alberta University, Canada
- 16:00 Lunch**



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**Egyptian School of Neuromuscular Disorders
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Neuromuscular Chapter of Egyptian Society of
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(ESNPN)**

“Advances in Neuromuscular Disorders”

14th-16th of September, 2022

Intercontinental City Stars Hotel

Al Hambra Hall - Floor -2



08:00

REGISTRATION



Fourth Day
Duchenne Symposium

09:00 – 10:00

Chairpersons:

Prof. Maha Saad, National Research Center.

Prof. Nagia Fahmy, Ain Shams University.

Dr. Nermin Salah, Ain Shams University.

09:00 – 09:15

Diagnostic Approach of Duchenne Muscular Dystrophy.

Dr. Mahmoud Yousry, National Research Center

09:15 – 09:45

Updates of therapy of Duchenne Muscular Dystrophy.

Prof. Nagia Fahmy, Ain Shams University.



09:45 – 10:00

Dystrophinopathy in Females.

Dr. Nermin Salah, Clinical Genetics, Ain Shams University



Wednesday
14th
Sep

Fourth Day
LGMD And ALS Session

10:00 – 11:00

Chairpersons:

Prof. Osama Abdulghani, **Ain Shams University**

Prof. Magdy Aidarous, **Zagazig University**

Prof. Eman Elmarakby, **Ain Shams University**

Prof. Mohamed Hamdy, **Ain Shams University**

10:00 – 10:30

Diagnostic approach of muscular dystrophy.

Prof. Bjarne Udd, Tampere University

10:30 – 11:00

Diagnostic approach of Amyotrophic Lateral Sclerosis.

Prof. Albert Ludolph, Ulm University.



Wednesday
14th
Sep

Fourth Day

11:00-12:00

Spinal Muscular Atrophy Session



Chairpersons:

Prof. Marian Yosry, **Cairo University**

Prof. Nagia Fahmy, **Ain Shams University**

Prof. Eman Seif, **Azhar University**

11:00 – 11:30

Clinical approach of spinal muscular atrophy.

Dr. Marian Yosry, Cairo University

11:30 – 11:45

Molecular Diagnosis of Spinal muscular Atrophy.

Dr. Heba Hosny, National Institute of Neuromotor System

11:45 – 12:00

Emerging therapies of Spinal muscular Atrophy.

Dr. Nagia Fahmy, Ain Shams University

12:00- 13:00

Coffee Break



Wednesday
14th
Sep

Fourth Day

13:00 – 14:30

Multidisciplinary team session part 1



Chairpersons:

Prof. Hala Abd El-Hady, Ain Shams University

Prof. Mona Rayan, Ain Shams University

Dr. Aliaa Osman, Ain Shams University

Dr. Nagwa Eldakhkhny, Ministry of Health

13:00 – 13:30

Rehabilitation of SMA: shifting paradigm in an evolving era.

Dr. Hala Abdelhady, Physical Medicine,
Ain Shams University.

13:30- 14:00

Is there a place for the cardiologist in the integrated care of patients with NMD?

Mahmoud shehta, Cardiology, Ain Shams University.

14:00 – 14:15

Early onset scoliosis evaluation and management.

Dr. Mohamed khattab, orthopedic surgery,
Ain Shams University

14:15- 14:30

Role of Clinical Pharmacy in the Era of genetic Interventions.

Dr. Aliaa Osman, Clinical Pharmacy,
Ain Shams University



Wednesday
14th
Sep

Fourth Day

14:30 - 16:00

Multidisciplinary team session part 2



Chairpersons:

Prof. Heba Elsnehawy, Ain Shams University

Dr. Mai Houssain, National Institute of Neuromotor System

Dr. Ahmed Abd El-Lateef, Physical medicine, Ain Shams University

Prof. Mona Mohsen, Pediatric pulmonology, Cairo University.

- | | |
|---------------|--|
| 14:30 - 15:00 | Psychiatric Management of patients with NMD.
Dr. Heba El-Shehawy, Ain Shams University. |
| 15:00 - 15:30 | orthopedic management of NMD patients.
Dr. Ahmed Saeed , Orthopedic surgery,
Ain Shams University |
| 15:30 - 15:45 | Pulmonary Rehabilitation as a crucial part of NMD.
Dr. Reham Hazem, Pulmonology, Ain Shams University. |
| 15:45 - 16:00 | Nutritional Management of patients with NMD.
Dr. Sara Alaa Osman, Clinical Nutrition,
Ain Shams University. |
| 17:15 | Dinner. |



Thursday
15th
Sep

Session 1: 09:00 – 10:00
Research of Neuromuscular Disorders

Chairpersons:

Prof. Fathy Afifi, **Azhar University**

Prof. Ahmed Gaber, **Ain Shams University**

Prof. Ibrahim Elmenhawy, **Mansoura University**

Prof. Amr Abdelmonem, **Ain Shams University**

Prof. Mahmoud Abdelseed, **Azhar University**

- 09:00 - 09:15 **Assessment of diaphragmatic thickness in GBS and myasthenia gravis using ultrasonography.**
Dr. Aya Zahran, Mansoura University
- 09:15 – 09:30 **Metabolic Myopathies.**
Dr. Mennat-Allah Magdy ElGamal, Ain Shams University.
- 09:30 – 09:45 **Toxic and Endocrinal myopathies**
Dr. Ossama Yacoub, Cairo University
- 09:45 -10:00 **Dystrophic and non-dystrophic myotonias**
Dr. Doaa Atef Mekkawy, Cairo University .



Thursday
15th
Sep

Opening Ceremony

10:00 – 11:00

Prof. Ossama Mansour,
Acting Dean of Ainshams University

Prof. Maged Abd El-Naseer,
Professor of Neurology, President, PAUNS

Prof. Ali Solaiman,
President ESNPN

Prof. Hany Aref,
Secretary General ESNPN

Prof. Maha Said,
Chairman of Neuropsychiatry department, Ain Shams University.

Prof. Azza Abd Elnasser,
Director of Neurology Unit Ainshams University

Prof. Nagia Aly Fahmy,
Professor of Neurology, President of the conference



Thursday
15th
Sep

Plenary Session 1

11:00 – 12:00

Chairpersons:

Prof. Amira Zaki , **Ain Shams University**

Prof. Mahmoud Haroun, **Ain Shams University**

Prof. Hany Aref, **Ain Shams University**

Prof. Azza Abd Elnasser, **Ain Shams University**

11:00 – 11:30

Updates of Amyotrophic Lateral Sclerosis.

Prof. Albert Ludolph, Ulm University, Germany

11:30 – 12:00

Updates of myasthenia gravis.

Prof. Zaem Siddiqi, Alberta University, Canada



Thursday
15th
Sep

Novartis SMA Symposium 12:00 – 13:00



Chairpersons:

Prof. Morad El-Alfy, International Medical Center and Military Hospitals.
Dr. Hany Taher, Naser Institute Hospital

Moderator:

Prof. Nagia Fahmy, Ain Shams University

12:00 – 13:00

Transitioning from Reactive care to Proactive in the management Of spinal muscular atrophy
Prof. Richard Fenickel, St. Jude Children's Research Hospital, Memphis, Tennessee, USA

13:00 – 14:00

Coffee Break



Thursday
15th
Sep

Sanofi Pompe Symposium 14:00 – 15:00

sanofi

Chairpersons:

Prof. Mona Raaft, **Ain Shams University**
Prof. Hala Elkhawas, **Ain Shams University**
Prof. Shoura Mostafa, **Azhar University**
Prof. Hazem Maarouf, **Alexandria University**
Dr. Houssam Salem, **Military Hospitals.**

14:00 – 15:00

Late Onset Pompe Disease.

Prof. Nagia Fahmy, Ain Shams University

Thursday
15th
Sep

Plenary session 2

15:00 – 16:00

Chairpersons:

Prof. Samia Ashour, **Ain Shams University**
Prof. Taha Alloush, **Ain Shams University**
Prof. Laila Elmosly, **Azhar University**
Prof. Ahmed Hazzo, **Ain Shams University**

15:00 – 16:00

Updates on Atypical Neuropathies.

Dr. Amro Stino, Michigan University



Thursday
15th
Sep

Session 2: 16:00 – 17:00
Updates of Amyotrophic Lateral Sclerosis

Chairpersons:

Prof. Sameh Saeed, **Alexandria University**
Prof. Abdelnasser Morad, **Alexandria University**
Prof. Tamer Emara, **Ain Shams University**
Prof. Sherin Elmosly, **Fayoum University**

- 16:00 – 16:15 **Genetic aspects of Amyotrophic lateral Sclerosis in Egypt.**
Prof. Nabila Hamdi, GUC
- 16:15 – 16:30 **Juvenile onset Amyotrophic lateral Sclerosis.**
Dr. Radwa Soliman, Ain Shams University
- 16:30 – 16:45 **MicroRNA Signature of Egyptian Sporadic Amyotrophic Lateral Sclerosis Population.**
Dr. Mariem Barakat, GUC
- 16:45 – 17:00 **Ataxin-2, a powerful modulator and therapeutic target in ALS, A German-Egyptian study.**
Dr. Omina Okab, GUC



Thursday
15th
Sep

Session 3: 17:00 – 18:30
Updates of Neuroimaging of Neuromuscular Disorders

Chairpersons:

Prof. Amal Elmotaim, Zagazig University
Prof. Salma Hamed, Ain Shams University
Prof. Sandra Ahmed, Cairo University
Prof. Amira Elgohary, Cairo University

- 17:00 – 17:20 **Ultrasound Role in CIPD diagnosis and follow up.**
Dr. Sandra Ahmed, Cairo University
- 17:20 – 17:40 **Role of nerve ultrasound in diagnosis and management Cervical Root Pathologies.**
Dr. Ahmed Sadek, Ain Shams University
- 17:40 – 18:00 **Muscle Scanning for botox injection**
Dr. Eman Moens, Ain Shams University
- 18:00 – 18:15 **Role of Ultrasound in diagnosis of muscle diseases**
Dr. Mai Fathy, Ain Shams University
- 18:15 – 18:30 **Ultrasound guided interventions in Neuromuscular Disorders.**
Dr. Khaled Abu Shoeira. Assiut University
- 18:30** **Dinner**



Friday



Session 4:
Updates of Neuropathies

10:00 – 11:00

Chairpersons:

Prof. Naglaa El-Khayat, **Ain Shams University**

Prof. Yousry Aboelnaga, **Ain Shams University**

Prof. Tarek Rageh, **Assiut University**

Prof. Amir Tork, **Ain Shams University**

10:00 – 10:15

Hereditary Neuropathies: A practical approach to diagnosis and symptoms management.

Dr. Nourelhoda A. Haridy, Assiut University.

10:15 – 10:30

Molecular study of a cohort of patients with hereditary neuropathy.

Dr. Amal Hasan, Ain Shams University

10:30– 10:45

Immune Mediated Neuropathies.

Dr. Riham Mahfouz, Ain Shams University

10:45– 11:00

Anti MAG Neuropathies.

Prof. Tarek Rageh, Assiut University



Friday



Session 5: Updates of Myopathies

11:00 – 12:00

Chairpersons:

Prof. Azza Ghaly, **Tanta University**

Prof. Nahed Salah, **Ain Shams University**

Prof. Mamoun sarhan, **Zagazig University**

11:00 – 11:15

Approach to CPK elevation.

Dr. Nahed Salah, Ain Shams University

11:15 – 11:30

Updates of Idiopathic Inflammatory Myopathy.

Dr. Salma Ashraf, Ain Shams University.

11:30 – 11:45

**Diagnostic Algorithm of Inflammatory Myopathy,
Ain Shams Experience.**

Dr. Yosra Fahmy, Ain Shams University

11:45 – 12:00

**Cognition in Hereditary Myopathy: from Muscle
to Brain.**

Dr. Abeer Eltouny, Aswan University.

12:00 – 13:00

Friday Pray and Coffee Break



Friday

16th
Sep

Biologix SMA Symposium 13:00 – 14:00

Biologix

Moderators :

Prof. Ahmed Raouf, **Police Hospital**

Prof. Marian Yousry, **Cairo University**

13:00 – 13:30

Expected treatment outcomes on patient treated with Nusinersen: Lessons from real world evidence

Prof. Eduardo Tizzano, **Hospital Valle Hebron, Barcelona, Spain**

13:30 – 14:00

Egypt landscape in SMA treatment: Nusinersen in focus

Prof. Nagia Fahmy, **Ain Shams University.**



Friday
16th
Sep

Roche SMA Symposium 14:00 – 15:00



Chairpersons:

Prof. Marian Yosry, **Cairo University**
Dr. Hany Taher, **Naser Institute Hospital**

Moderator:

Prof. Maha Zaki, **National Research Center.**

14:00 – 15:00

Risdiplam from Clinical data to Real life practice.
Prof. Giovanni Baranello, University College London

Friday
16th
Sep

Plenary session 3: 15:00 – 16:00

Chairpersons:

Prof. Ahmed Othman, **Egypt-Japan University of Science & Technology**
Prof. khaled Sallam, **Benha University**
Prof Salma Hamed, **Ain Shams University**
Prof. Dina Abdelgawad, **Ainshams University**

15:00 – 15:30

Next generation sequencing in the diagnosis of Neuromuscular Disorders.
Prof. Mohamed Abd El-Hameed,
National Research Center

15:30 – 16:00

Updates of Therapy of Neuromuscular Disorders.
Prof. Ahmed Othman, Egypt-Japan University of Science & Technology



Friday
16th
Sep

Session 6: 16:00 – 17:00
Updates of Neurophysiology of Neuromuscular Disorders 1

Chairpersons:

Prof. Ann Abdelkader, **Cairo University**
Prof. Saly El-Kholy, **Cairo University**
Prof. Naglaa El-Khayat, **Ain Shams University**
Prof. Sawsan Abd El-Azeez, **Zagazig University**

- 16:00 – 16:15 **Approach to floppy infant**
Dr. Ann Abdelkader, Cairo University
- 16:15 – 16:30 **Neurophysiology of Myasthenic Disorders.**
Prof. Saly El-Kholy, Cairo University
- 16:30 – 16:45 **Sleep and Neuromuscular Disorders.**
Prof. Naglaa El-Khayat, Ain Shams University
- 16:45 – 17:00 **Challenges in using electrodiagnostic measures to predict outcome in peripheral nerve injury.**
Dr. Sawsan Abd El-Azeez, Zagazig University



Friday
16th
Sep

Session 7: 17:00 – 18:30
Updates of Neurophysiology of Neuromuscular Disorders 2

Chairpersons:

Prof. Amal Fouad, **Ain Shams University**

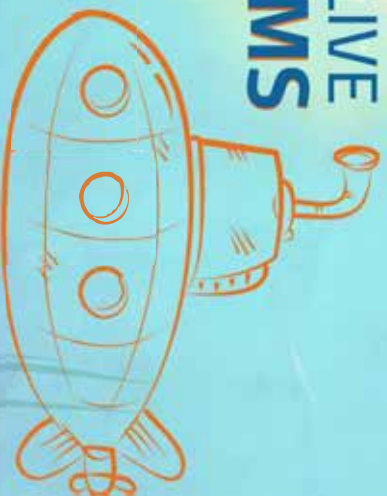
Prof. Aytallh Farouk, **Cairo University**

Prof. Ramez Reda, **Cairo University**

Prof. Hala Elhabashy, **Cairo University**

- | | |
|---------------|--|
| 17:00 – 17:30 | Advanced electrophysiological evaluation of inflammatory myopathies.
Dr. Aytallh farouk, Cairo University |
| 17:30 – 18:00 | Motor Unit Number Estimation In SMA children treated with Nusinersen.
Prof. Hala Elhabashy, Cairo University |
| 18:00 – 18:30 | Value of clinical neurophysiology in sports injuries.
Prof. Mye Ali Basheer, Cairo University |
| 18:30 – 18:45 | Closing Ceremony |
| 19:00 | Dinner |

THEY GET TO LIVE THEIR DREAMS




Reimagining medicine and
transforming the lives of
patients with SMA



Note: Not a real patient photo



 **NOVARTIS** | Reimagining Medicine

For further information, please contact
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www.novartis.com.eg



WHAT IS DUCHENNE MUSCULAR DYSTROPHY?

Duchenne muscular dystrophy is a rare genetic disease affecting mainly boys. Early signs or symptoms of Duchenne may appear before a child's second birthday.

Common early signs and symptoms include delays and difficulties in:



**Head control, sitting
and crawling**



**Rising or getting
up from the floor**



**Walking, running
or climbing**



Speech

EARLY DIAGNOSIS can help give these boys access to the care they deserve.

Teams of doctors and other professionals work together to help ensure boys with Duchenne receive the best possible care aiming to optimise their quality of life.

Organized by



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