



**UDNI**  
Undiagnosed  
Diseases Network  
INTERNATIONAL

# 12<sup>TH</sup> INTERNATIONAL CONFERENCE ON RARE AND UNDIAGNOSED DISEASES

**THE PROGRAM**

# UDNI 2023

**OCTOBER 22-23, 2023**  
TBILISI, GEORGIA

[www.udninternational.org](http://www.udninternational.org)

## **CONFERENCE CHAIRS**

**Oleg Kvlividze**

Georgian Foundation for Genetic and Rare Diseases (GeRaD), Georgia

**Tinatin Tkemaladze**

Tbilisi State Medical University (TSMU), Georgia

**William A. Gahl**

National Institute of Health (NIH), USA

## **INTERNATIONAL SCIENTIFIC COMMITTEE**

**William A. Gahl**

National Institute of Health (NIH), USA

## **LOCAL SCIENTIFIC COMMITTEE**

**Eka Kvaratskhelia**

Tbilisi State Medical University (TSMU), Georgia

**PROGRAM FOR SATURDAY OCTOBER 21, 2023**

<b>11.00-14.00</b>	<b>ST-01</b>	<b>TOWARDS INTERNATIONAL INTEGRATION</b>	<b>LIVING ROOM</b>
<b>15.00-18.00</b>	<b>ST-02</b>	<b>RARE AND UNDIAGNOSED DISEASES: BUILDING NEIGHBOR BRIDGES (ACIBADEM)</b>	<b>LIVING ROOM</b>

**PROGRAM FOR SUNDAY OCTOBER 22, 2023**

<b>10.00-12.20</b>	<b>SU-01</b>	<b>DIAGNOSIS OF RARE AND UNDIAGNOSED DISEASES - COMMON CHALLENGES</b>	<b>ADJARA HALL</b>
<b>12.30-13.30</b>	<b>LB-01</b>	<b>LUNCH BREAK</b>	<b>LAUNGE AREA</b>
<b>12.30-13.30</b>	<b>JN-01</b>	<b>RARE - NEW JOURNAL PRESENTATION</b>	<b>GLASS ROOM</b>
<b>13.30-14.30</b>	<b>ST-03</b>	<b>EVOLVING TREATMENT LANDSCAPE IN SMA (NOVARTIS)</b>	<b>LIVING ROOM</b>
<b>13.30-15.50</b>	<b>SU-02</b>	<b>NOVEL DIAGNOSTICS AND THERAPEUTICS FOR RARE DISEASES</b>	<b>ADJARA HALL</b>
<b>16.00-16.30</b>	<b>CB-01</b>	<b>COFFEE BREAK</b>	<b>LAUNGE AREA</b>
<b>16.30-17.30</b>	<b>ST-04</b>	<b>BRINGING CLINICAL VALUE THROUGH VALIDATED ANALYSIS (BLUEPRINT GENETICS)</b>	<b>LIVING ROOM</b>
<b>16.30-18.30</b>	<b>SU-03</b>	<b>RARE AND UNDIAGNOSED DISEASES WORLDWIDE</b>	<b>ADJARA HALL</b>
<b>18.40-19.30</b>	<b>PS-01</b>	<b>POSTER SESSION</b>	<b>GREEN ROOM</b>
<b>20.30-23.00</b>	<b>OC-01</b>	<b>OPENING CEREMONY, WELCOME RECEPTION</b>	<b>CITY COUNCIL</b>

**PROGRAM FOR MONDAY OCTOBER 23, 2023**

<b>09.00-09.55</b>	<b>MO-01</b>	<b>NOVEL DIAGNOSTICS AND THERAPEUTICS FOR RARE DISEASES</b>	<b>ADJARA HALL</b>
<b>10.00-10.54</b>	<b>MO-02</b>	<b>NEW DISEASES; SOLVED AND UNSOLVED CASES</b>	<b>ADJARA HALL</b>
<b>11.00-12.20</b>	<b>MO-03</b>	<b>INTERNATIONAL INITIATIVES ON RARE AND UNDIAGNOSED DISEASES</b>	<b>ADJARA HALL</b>
<b>12.20-13.20</b>	<b>LB-02</b>	<b>LUNCH BREAK</b>	<b>LAUNGE AREA</b>
<b>13.20-15.00</b>	<b>ST-05</b>	<b>WHAT RARE DISEASES ARE HIDING BEHIND CHOLESTASIS IN CHILDREN? (BIOMEDICA)</b>	<b>TERRACE ROOM</b>
<b>13.20-16.15</b>	<b>RP-01</b>	<b>UDNI COMMITTEE &amp; WORKING GROUP REPORT</b>	<b>ADJARA HALL</b>
<b>16.30-17.00</b>	<b>CB-02</b>	<b>COFFEE BREAK</b>	<b>LAUNGE AREA</b>
<b>17.00-19.15</b>	<b>GE-01</b>	<b>GEORGIAN SESSION</b>	<b>ADJARA HALL</b>
<b>17.00-18.00</b>	<b>BM-01</b>	<b>UDNI BUSINESS MEETING</b>	<b>LIVING ROOM</b>
<b>20.00-23.30</b>	<b>GD-01</b>	<b>GALA DINNER</b>	

OCT. 21  
2023

## PRE-CONGRESS DAY

ST-01

TOWARDS INTERNATIONAL INTEGRATION (PATIENTS MEETING SUPPORTED BY WILHELM FOUNDATION, EURORDIS AND NORD)

11.00-14.00

ST-02

RARE AND UNDIAGNOSED DISEASES: BUILDING NEIGHBOR BRIDGES / TR-AZ-GEO (SUPPORTED BY ACIBADEM)

15.00-18.00

SUNDAY

OCT. 22  
2023

## SCIENTIFIC PROGRAM, DAY 1

08.30

REGISTRATION

09.30-10.00

CONFERENCE OPENING &amp; WELCOME

SU-01

DIAGNOSIS OF RARE AND UNDIAGNOSED DISEASES - COMMON CHALLENGES  
Moderators: Siddharth Banka (UK), Tinatin Tkemaladze (Georgia)

10.00-10.20

Sofia Douzgou Houge  
Haukeland University Hospital, Norway

THE POST-EXOME CLINIC: IMPROVING THE IMPACT OF EXOME SEQUENCING FOR DEVELOPMENTAL DISORDERS

10.20-10.40

Lama Al-Abdi  
King Faisal Specialist Hospital & Research Centre, Saudi Arabia

THE DIAGNOSTIC IMPLICATIONS OF PITFALLS IN CAUSAL VARIANT IDENTIFICATION BASED ON 4,577 MOLECULARLY CHARACTERIZED FAMILIES

10.40-11.00

Steven Laurie  
The Barcelona Institute of Science and Technology, Spain

HOW CAN WE REACH A DIAGNOSIS FOR MORE INDIVIDUALS WITH A RARE CONDITION, THE SOLVE-RD PERSPECTIVE

11.00-11.20

Wendy van Zelst-Stams  
Radboudumc, The Netherlands

DNA FIRST STRATEGIES TO REDUCE THE DIAGNOSTIC ODYSSEY IN RARE DISEASE PATIENTS

11.20-11.40

Gunnar Douzgos Houge  
Haukeland University Hospital, Bergen, Norway

INTERPRETATION AND CLASSIFICATION OF GENETIC VARIANTS

11.40-12.00

Michael Brudno  
University of Toronto, Canada

CAPTURING AND SHARING DATA ON RARE DISEASES PATIENTS IN THE CANADIAN CARE4RARE PROJECT

**12.00-12.20**

**Yasemin Alanay**  
Acibadem University, Turkey

RARE DISEASES IN DIVERSE POPULATIONS: CLINICAL WGS EXPERIENCE FROM ISTANBUL, AN EMA HUB

**LB-01****LUNCH BREAK****12.30-13.30****JN-01****RARE: OPEN RESEARCH IN RARE DISEASES - NEW JOURNAL PRESENTATION****12.30-13.30****ST-03****EVOLVING TREATMENT LANDSCAPE IN SMA (SATELLITE SPONSORED BY NOVARTIS)****13.30-14.30****SU-02****NOVEL DIAGNOSTICS AND THERAPEUTICS FOR RARE DISEASES****Moderators: Domenica Taruscio (Italy), Eka Kvaratskhelia (Georgia)****13.30-13.50**

**Ari Zimran**  
Gaucher Clinic at Shaare Zedek Medical Center, Israel  
THERAPY IN GBA1 RELATED PARKINSON: THE NEVER-ENDING STORY

**13.50-14.10**

**Manuel Schiff**  
Hôpital Necker-Enfants Malades, France  
INHERITED (LIVER) METABOLIC DISEASES: IS THERE A THERAPEUTIC UNMET NEED? EXAMPLES OF PRECLINICAL DATA FOR GENE THERAPY IN MAPLE SYRUP URINE DISEASE (MSUD)

**14.10-14.30**

**Siddharth Banka**  
University of Manchester, UK  
DISSECTING CLINICAL, GENETIC, AND MECHANISTIC HETEROGENEITY OF NON-MUSCLE ACTINOPATHIES

**14.30-14.50**

**Arndt Rolfs**  
University of Rostock, Germany  
IMPORTANCE OF WHOLE GENOME SEQUENCING FOR THE EARLY IDENTIFICATION OF RARE GENETIC DISORDERS

**14.50-15.10**

**Yair Anikster**  
Sheba-Tel HaShomer Hospital, Israel  
NOVEL MITOCHONDRIAL AUGMENTATION THERAPY - FROM BENCH TO BEDSIDE

**15.10-15.30**

**Stephen Meyn**  
University of Wisconsin-Medison, USA  
BEYOND EXOMES: NEW OPPORTUNITIES FOR UNDIAGNOSED DISEASE PROGRAMS

**15.30-15.50**

**Alain Hovnanian**  
Hôpital Necker-Enfants Malades, France  
CURRENT AND EMERGING TREATMENTS FOR INHERITED EPIDERMOLYSIS BULLOSA

**CB-01****COFFEE BREAK****16.00-16.30****ST-04****BRINGING CLINICAL VALUE THROUGH VALIDATED ANALYSIS  
(SATELLITE SPONSORED BY BLUEPRINT GENETICS)****16.30-17.30****SU-03****RARE AND UNDIAGNOSED DISEASES WORLDWIDE****Moderators: William Gahl (USA), Oleg Kvlividze (Georgia)****16.30-16.50****Milan Macek**  
Charles University Hospital, Czech Republic**UNDIAGNOSED RARE DISEASES IN THE CZECH REPUBLIC: ACTIVITIES ON THE NATIONAL  
COORDINATION CENTRE FOR RARE DISEASES AND MULTIDISCIPLINARY NATIONWIDE  
COLLABORATION****16.50-17.10****Tinatn Tkemaladze** **Oleg Kvlividze**  
Tbilisi State Medical University, Georgia GeRaD, Georgia**RARE DISEASES IN GEORGIA: ACHIEVEMENTS AND CHALLENGES****17.10-17.30****Salman Kirmani**  
Aga Khan University, Pakistan**DIAGNOSING AND MANAGING RARE DISEASES IN LIMITED RESOURCE SETTINGS:  
PAKISTANI EXPERIENCE****17.30-17.50****Natalia Samonenko**  
Center of Orphan Disease and Gene Therapy; I NSCH "OKHMATDYT", Ukraine**DIAGNOSTICS AND TREATMENT OF ORPHAN DISEASES IN UKRAINE****17.50-18.10****Ratna Puri**  
Institute of Medical Genetics & Genomics, India**THE LANDSCAPE WITHIN THE INDIAN UNDIAGNOSED DISEASES PROGRAM: INSIGHTS &  
CHALLENGES****18.10-18.30****Ugur Özbek**  
Acibadem University, Turkey**RARE AND UNDIAGNOSED DISEASES: TURKISH PERSPECTIVES****PS-01****POSTER SESSION****18.40-19.30****OC-01****OPENING CEREMONY, WELCOME RECEPTION****20.30-23.00**

## SCIENTIFIC PROGRAM, DAY 2

## MO-01

## NOVEL DIAGNOSTICS AND THERAPEUTICS FOR RARE DISEASES

Moderator: David Adams (USA)

09.00-09.15

Vorasuk Shotelersuk  
Chulalongkorn University, Thailand

APPLICATIONS OF LONG-READ SEQUENCING FOR RARE DISEASES

09.15-09.25

Tahsin Stefan Barakat  
Erasmus MC University Medical Center, The Netherlands

SOLVING UNDIAGNOSED DISEASE BEYOND THE EXOME: FUNCTIONAL ENHANCERS WITH MEDICAL RELEVANCE IDENTIFIED BY COMPUTATIONAL ANALYSIS AND CHIP-STARR-SEQ IN NEURAL CELL MODELS ENABLE PRIORITIZING NON-CODING VARIANTS FROM PATIENT WHOLE GENOME SEQUENCING STUDIES

09.25-09.35

Shinya Yamamoto  
Baylor College of Medicine, USA

FUNCTIONAL STUDIES USING DROSOPHILA SUPPORT CLINICAL DIAGNOSIS AND PHENOTYPIC EXPANSION: BMPR2 IN NEURODEVELOPMENTAL DISORDERS

09.35-09.45

Sandro Surmava  
Tbilisi State Medical University, Georgia

EPIGENETICS IN RARE DISEASES: THE ROLE IN CYSTIC FIBROSIS

09.45-09.55

Rachel Rock  
Metabolic Diseases Clinic, Edmond and Lily Safra Children's Hospital, Sheba Medical Center, Israel

PHENYLALANINE TREATMENT IN 8-MONTH OLD GIRL WITH MITOCHONDRIAL FARS2 DEFICIENCY

## MO-02

## NEW DISEASES; SOLVED AND UNSOLVED CASES

Moderator: May Christine Malicdan (USA)

10.00-10.08

Vorasuk Shotelersuk  
Chulalongkorn University, Thailand

NEW DISEASE DISCOVERED VIA UDNI COLLABORATION: BENIGN ADULT FAMILIAL MYOCLONIC EPILEPSY TYPE 8 (BAFME8)

10.08-10.16

Ben Pode-Shakked  
Edmond and Lily Safra Children's Hospital, Sheba Medical Center, Israel

PERCC1-ASSOCIATED CONGENITAL ENTEROPATHY: DELINEATING THE NATURAL HISTORY OF A NEW DISORDER OF ENTEROENDOCRINE CELL FUNCTION

10.16-10.24

Guida Landoure  
Faculté de Médecine et d'Odontostomatologie, USTTB, Mali

UNRAVELING THE GENETIC BASIS OF RARE HEREDITARY NEUROLOGICAL DISEASES IN MALI

10.24-10.30

Anastasia Sukhiashvili  
Tbilisi State Medical University, Georgia

THE CASE OF RUBINSTEIN-TAYBI SYNDROME - HUNTING FOR HIDDEN MUTATION

**10.30-10.38****Yehoshua (Joshua) Manor**

Edmond and Lily Safra Children's Hospital, Sheba Medical Center, Israel

FAILURE TO THRIVE, ICHTHYOSIS, DEAFNESS, AND ENDOCRINOPATHIES IN AN INFANT WITH A NOVEL BIALLELIC AP1B1 MUTATION CAUSING ABNORMAL INTRACELLULAR ATP7A TRAFFICKING

**10.38-10.46****Shmuel Prints**

Clalit Health Services, Israel

THE UNDIAGNOSED DISEASE MASQUERADE: A FAMILY CASE OF SEVERE ASTHMA SUCCESSFULLY TREATED WITH MEPOLIZUMAB

**10.46-10.54****Roberto Giugliani**

Federal University, Rio Grande do Sul (UFRGS), Brazil

UNDIAGNOSED SYNDROMIC HYPERINSULINEMIC HYPOGLYCEMIA IN AN INFANT

**MO-03****INTERNATIONAL INITIATIVES ON RARE AND UNDIAGNOSED DISEASES****Moderators: Vorasuk Shotelersuk (Thailand)****11.00-11.15****David Pearce**

Sanford School of Medicine, University of South Dakota, USA

THE INTERNATIONAL RARE DISEASE RESEARCH CONSORTIUM (IRDIRC): MAKING RARE DISEASE RESEARCH EFFORTS MORE EFFICIENT AND COLLABORATIVE, AROUND THE WORLD

**11.15-11.30****Yanis Mimouni**

EJP RD, France

CONSOLIDATING THE RARE DISEASES RESEARCH ECOSYSTEM: A MULTISTAKEHOLDER AND MULTIDIRECTIONAL APPROACH

**11.30-11.45****Tania Simoncelli**

Chan-Zuckerberg Initiative, USA

BEYOND ENGAGEMENT: PATIENT COMMUNITIES AS CRITICAL DRIVERS OF RARE DISEASES RESEARCH?

**11.45-12.00****Aung Min Saw**

Syndrome Without a Name (SWAN), Wales, UK

**Matthew Spencer**

NHS Wales, Swansea University, UK

CHALLENGES UNMASKED: NAVIGATING THE COMPLEXITIES OF ADULT RARE AND UNDIAGNOSED DISEASE CARE

**12.00-12.10****Jaeso Cho**

Seoul National University Hospital, Republic of Korea

CLINICAL UTILITY OF GENETIC DIAGNOSIS IN ADULTS WITH UNDIAGNOSED DISEASE: AN EXPERIENCE FROM KOREAN ADULT UNDIAGNOSED DISEASE PROGRAM

**12.10-12.20****Vincenzo Nigro**

Telethon Institute of Genetics and Medicine, Italy

A SYSTEMATIC APPROACH FOR THOUSAND SEVERE UNSOLVED PEDIATRIC CONDITIONS: RESULTS FROM THE TELETHON UNDIAGNOSED DISEASE PROGRAM

**LB-02****LUNCH BREAK****12.20-13.20**



**ST-05****WHAT RARE DISEASES ARE HIDING BEHIND CHOLESTASIS IN CHILDREN?  
(SATELLITE SPONSORED BY BIOMEDICA)****13.20-15.00****RP-01****UDNI COMMITTEE & WORKING GROUP REPORTS  
Moderator: William Gahl (USA)****13.20-13.30****William Gahl (USA)**  
REVIEW OF UDNI AND CURRENT LEADERSHIP**13.30-13.40****Eric Klee (USA)**  
MEMBERSHIP; TRAINEE CATEGORY/UPDATE**13.40-13.50****Janine Lewis (USA), Stephanie Broley (Australia)**  
GENETIC COUNSELING WORKING GROUP**13.50-14.00****Marco Salvatore (Italy), Gianluca Ferrari (Italy), Domenica Taruscio (Italy)**  
COMMUNICATIONS/WEBSITE**14.00-14.15****Domenica Taruscio (Italy), Manuel Posada (Spain), Samuel Wiafe (Ghana), Olaf Bodamer (USA)**  
DEVELOPING NATIONS WORKING GROUP**14.15-14.25****Bela Melegh (Hungary), Domenica Taruscio (Italy), Bruce Korf (USA)**  
EDUCATION WORKING GROUP/UEMS/MEDICAL COMPETENCE AND MEDICAL SPECIALTY**14.25-14.35****Gulcin Gumus (Spain), Helene Cederroth (Sweden), Debbie Drell (USA)**  
PATIENT ENGAGEMENT PLUS**14.35-14.45****Ann Nordgren (Sweden), Emma Palmer (Australia), Lorenzo Botto (USA)**  
DIAGNOSTICS WORKING GROUP: LINKING TO HACKATHONS AND EMERGING TECHNOLOGY**14.45-15.15****Mikk and Helene Cederroth (Sweden), Ann Nordgren (Sweden), Salman Kirmani (Pakistan), Samuel Wiafe (Ghana), Aime Lumaka (DR Congo), Wendy van Zelst-Stams (The Netherlands)**  
HACKATHON UPDATE AND FOLLOWUP; VIDEO SUMMARY OF STOCKHOLM HACKATHON IMPRESSIONS FROM CHAMPIONS  
**Wendy van Zelst-Stams (The Netherlands)**  
FUTURE HACKATHON (IN NIJMEGEN, THE NETHERLANDS)**15.25-15.45****David Adams (USA), Alistair Ward (USA)**  
DATA SHARING COMMITTEE: NEW ANALYTICAL TOOLS, LONG READS, ETC.  
CALYPSO AND IOBIO TOOLS IN THE UDN**15.45-16.15****William Gahl (USA), Helene and Mikk Cederroth (Sweden), UDNI DNWG: Samuel Wiafe (Ghana), Salman Kirmani (Pakistan), Aime Lumaka (DR Congo), Guida Landoure (Mali)**  
CHAMPIONS INITIATIVE: INTRODUCTION / GHANA, PAKISTAN, DR CONGO, MALI  
INTERCONTINENTAL EXCHANGE DISCUSSION**CB-02****COFFEE BREAK****16.30-17.00**

**GE-01****CURRENT ISSUES OF RARE AND UNDIAGNOSED DISEASES (GEO)****Moderators: Ivane Chkhaidze (Georgia), Maia Kherkheulidze (Georgia)****17.00-17.15****Nana Tatishvili**

D. Tvildiani Medical University; M. Iashvili Children's Central Hospital, Georgia

**SUCCESS AND CHALLENGES IN THE TREATMENT OF SMA: GEORGIAN EXPERIENCE****17.15-17.30****Mariam Ghughunishvili**

G. Zhvania Pediatric Academic clinic, Georgia

**HOPE ON THE HORIZON: ALAGILLE SYNDROME TREATMENT ADVANCEMENTS****17.30-17.45****Sophia Bakhtadze**

Tbilisi State Medical University; G. Zhvania Pediatric Academic clinic, Georgia

**NONPILEPTIC PAROXISMS IN CHILDREN****17.45-18.00****Lali Margvelashvili**

Center of Medical Genetics and Laboratory Diagnostics, Georgia

**RARE DISEASES OUTPATIENT MONITORING PROGRAM IN GEORGIA - ACHIEVEMENTS, CHALLENGES AND EXPECTATIONS****18.00-18.15****Teona Shatirishvili**

D. Tvildiani Medical University; M. Iashvili Children's Central Hospital, Georgia

**MODERN TREATMENT OF DUCHENNE MUSCULAR DYSTROPHY****18.15-18.30****Dodo Agladze**

P. Shotadze Tbilisi Medical Academy; Center of Medical Genetics and Laboratory Diagnostics, Georgia

**CF IN GEORGIA, CURRENT TREATMENT AND FUTURE PERSPECTIVE****18.30-18.45****Jenara Kristesashvili**

Faculty of Medicine, I. Javakhishvili State University; Reproductive Medical Center Universe, Georgia

**RARE FORMS OF CONGENITAL SEX DEVELOPMENT DISORDERS (DSD)****18.45-19.00****Maia Kherkheulidze**

Tbilisi State Medical University; G. Zhvania Pediatric Academic clinic, Georgia

**GALACTOSEMIA: TREATMENT RECOMMENDATIONS****19.00-19.15****Ekaterine Kvatatskhelia**

Ilia State University; Davit Metreveli Medical Center, Georgia

**TREATMENT ASPECTS OF CONGENITAL ADRENAL HYPERPLASIA****BM-01****UDNI BUSINESS MEETING****Moderator: William Gahl (USA)****17.00-18.00**

- |   |                                      |
|---|--------------------------------------|
| 1. BOARD TO APPROVE NEW MEMBERS;          | 5. BOD TURNOVER DISCUSSION; CHARTER; |
| 2. VOTES: 2024 MEETING; RARE AFFILIATION; | 6. RARE JOURNAL AFFILIATION;         |
| 3. 2024: SEOUL, SEPT. 5-7;                | 7. ISSUES ARISING;                   |
| 4. 2025: CALL FOR PROPOSALS;              | 8. PREVIOUS TOPICS FOR DISCUSSION.   |

**GD-01****GALA DINNER (KINDLY SPONSORED BY THE WILHELM FOUNDATION)****20.00-23.30**

## MAIN ORGANIZERS



## CO-ORGANIZERS



## SPONSORS

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**13.5**  
CME  
Credits