TURKISH CHEMISTS' SOCIETY

11. INTERNATIONAL DRUG CHEMISTRY CONFERENCE

MARCH 09-12, 2023 KEMER / ANTALYA

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GEBZE TECHNICAL UNIVERSITY

CONFERENCE PROGRAMME

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Dear Colleague,

The Drug Chemistry Congress, which was initiated by the Turkish Chemists Association in 2013 and has been held annually without any break, even during the pandemic, has been remarkable because it brings together pharmaceutical-related officials from academia, industry, and public institutions. Since 2019, the proportion of attendees from industrial groups at our "international" convention has surpassed 50 percent. We are working with vigor and commitment to promoting our organization, which is a marquee event among scientific conferences hosted in our country, to the worldwide community. Our organization, which we arranged as the 10th Drug Chemistry Congress in 2022, will be placed in Antalya between 9-12 March 2023 as part of the "11. Drug Chemistry Congress" alongside our country and all of our international collaborators.

The scientific program consists of invited lectures, oral presentations, short oral presentations, poster presentations, and workshops. Short oral presentations will also take place and create a platform for more people to exchange knowledge. Poster presentations are scheduled to take place for four hours in two days during the congress, and successful posters will be awarded based on the Poster Evaluation Jury's evaluation. Oral presentations may be included as "Full Text" or "Abstract Text" in the Electronic Congress Booklet, provided they have been assessed by the Scientific Committee.

The primary objective of the congress is to guarantee that scientists involved in all drug-related activities, from design to usage, actively participate and share their knowledge and experiences during the duration of the event. To conduct research and development activities more efficiently, effectively, and successfully during the congress, it is planned to host a meeting with the involvement of industrial organizations, pharmaceutical-related public institutions, and academicians. To strengthen university-industry interactions, it is also intended to build a "Project Collaboration Platform" which was begun at past congresses and will be carefully investigated at this congress.

Our Organization; Aware of the significance of the supply chain in R&D and manufacturing, the sector welcomes providers of consumables, devices, and equipment services. In this context, supplier groups will be able to sponsor our congress and provide interactive seminars to educate attendees on new technologies and approaches.

We hope to see you at the 11th International Drug Chemistry Congress, which will be held at the Antalya-Kemer Mirage Park Resort Hotel from March 9-12, 2023, and that the Congress will be helpful for all participants in pharmaceutical R&D and production, as well as our country and the international pharmaceutical industry.

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Prof. Elif Damla **ARISAN**, Gebze Technical University

Prof. Mehmet **AY**, Çanakkale Onsekiz Mart University, Türkiye

Dr. Eda **DEMİREL**, University of Heidelberg, Germany

Jesper Schufri **MEYER**, NNE, Denmark

Prof. Mehmet **İNAN**, Akdeniz University & İzmir Biomedicine and Genome Center, Türkiye

Prof. Aigars **JIRGENSONS**, Latvian Institute of Organic Synthesis, Latvia

Dr. Ali **ÖZÜER**, Vice President, ABDİBİO, Abdi İbrahim

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Assoc. Prof. Nurettin **MENGEŞ**, Necmettin Erbakan University, Türkiye

Prof. Serdar **DURDAĞI**, Bahçeşehir University, Türkiye

Anders Bo **ANDERSEN**, NNE

Dr. Raimund **MAIER**, Iris Biotech GmbH, Germany Dr. Lance **SMALLSHAW**, UCB Pharma S.A., Belgium

Fernanda **WAECHTER**, Lhasa Limited, England

Thursday March 09, 2023	
10:00 – 14:00	Registration
Opening Ceremony	
15:00 – 15:40	Prof. Dr. Ramazan **ALTUNDAŞ**, Chair
	İkram **CENGİZ**, Chair of The Turkish Chemists` Society
	Prof. Dr. Hacı Ali **MANTAR**, Rector, Gebze Technical University
	Prof. Dr. İsmail **YÜKSEK**, Rector, Antalya Bilim University
15:40 – 16:00	Ömer Faruk **FIRAT**, Polifarma
16:00 – 16:20	Doğan **TAŞKENT**, Atabay
16:20 – 16:40	Altuğ **OĞUZ**, İKMİB
16:40 – 17:00	Dr. Asım **HOCAOĞLU**, President, TİTCK, Sağlık Bakanlığı
17:00 – 18:00	**Crystal Mortar Awards Ceremony**
Session 1	Session Chair: Dr. Mutlu TOPAL
18:00 – 18:40	Dr. Ali **ÖZÜER**, Vice President, ABDİBİO, Abdi İbrahim Future Health Technologies- Biotechnology
18:40 – 20:30	Dinner

Friday March 10, 2023	
Session 2	Session Chair: Prof. Dr. Engin ULUKAYA
09:00 – 09:40	Prof. Dr. G. J. (Frits) **PETERS**, Amsterdam University Medical Centers The European NCI initiative for drug development; role of pharmacology
09:40 – 10:10	Assoc. Prof. Nurettin **MENGEŞ**, Necmettin Erbakan University Research of a new lead compounds for Glioblastoma: Pharmacodynamic and pharmacokinetic studies on heterobicyclic compounds
10:10 – 10:30	Assoc. Prof. Raid J. **ABDEL-JALİL**, Sultan Qaboos University Benzazoles with Fluorine Appendages
10:30 – 11:10	**Coffee Break**
Session 3	Session Chair: Assoc. Prof. Esen BELLUR ATİCİ
11:00 – 11:30	Prof. Dr. Engin **ULUKAYA**, İstinye University Critical considerations on preclinical evaluation of newly synthesized compounds
11:30 – 12:00	Prof. Dr. İbrahim Halil **KAVAKLI**, Koç University Cryptochrome-mediated regulation of fasting blood glucose in diabetic mice
12:00 – 12:15	Mumin EMİNOV**, Terra Analiz** Importance of microbial identification with MALDI-TOF technology in pharma industry
12:15 – 12:30	Koray **BULUT**, FarmaPatent Importance of patent protection in Turkey

12:30 – 14:00	**Lunch**
Session 4	Session Chair: Assoc. Prof. Raid J. **ABDEL-JALİL**
14:00 – 14:40	Dr. Raimund **MAIER**, Iris Biotech GmbH Challenges and solutions in solid phase peptide API synthesis (SPPS)
14:40 – 15:10	Dr. Eda **DEMİREL**, University of Heidelberg Current methods in basic protein biochemistry research
15:10 – 15:30	Assoc. Prof. Azim Ziyaei **HALİMEHJANİ**, Sharif University of Technology Recent Advances in the Synthesis and Application of Dithiocarbamates
15:30 – 16:00	**Coffee Break**
Session 5	Session Chair: Assoc. Prof. Salih ÖZÇUBUKÇU
16:00 – 16:30	Prof. Dr. Mehmet **AY**, Çanakkale Onsekiz Mart University Prodrugs for nitroreductase based cancer therapy
16:30 – 16:45	Dr. Richard LADD, SEM The power of vacuum UV detection in gas chromatography in the pharmaceutical industry
16:45 – 17:00	Assoc. Prof. Serpil **DEMİRCİ**, Giresun University Synthesis of propofol derivative new generation Schiff bases and analyzation of their in silico anesthetic properties
17:00 – 17:15	Bengisu **SARAÇLAR**, Gazi University Evaluation of cleaning validation of oral tablet formulation
17:15 – 17:30	Sündüs **ERBAŞ ÇAKMAK**, Necmettin Erbakan University Regulation of cell migration and hypoxia metabolism with a novel G-Quadruplex stabilizer
Session 6	Short Oral Presentations
18:30 – 19:30	Session Chair: Prof. Yunus **KARA**, (Mirage I-II) Session Chair: Prof. İrfan **KOCA**, (Odeon) Session Chair: Assist. Prof. İrem **KULU**, (Phoenix I) Session Chair: Dr. Emine **YURTOĞLU**, (Phoenix II)
19:00 – 20:30	**Dinner**
19:30 – 21:30	**Poster Presentations, Mirage I-II**

Saturday March 11, 2023	
Session 7	Session Chair: Prof. Ahmet Ceyhan GÖREN
09:00 – 09:20	Prof. Dr. Hamdullah **KILIÇ**, Atatürk University Extractables and leachables testing of drug products
09:20 – 09:50	Prof. Dr. Serdar **DURDAĞI**, Bahçeşehir University Speeding up translation from preclinical to clinical phases: Drug Repurposing Efforts
09:50 – 10:30	Prof. Dr. Aigars **JIRGENSONS**, Latvian Institute of Organic Synthesis

	Substrate derived inhibitors of plasmodium serine protease SUB1 as antimalarial leads
10:30 – 11:10	**Coffee Break**
Session 8	Session Chair: Dr. Hasan KOYUNCU
11:00 – 11:40	Dr. Lance **SMALLSHAW**, UCB Pharma S.A. The control of impurities – Nitrosamine impurities in medicinal products and the discovery of nitrosamines drug substance related impurities (NDSRIs)
11:40 – 12:10	Prof. Dr. Mehmet **İNAN**, Akdeniz University & İzmir Biomedicine and Genome Center Development of Recombinant Vaccine and Drug Candidates in Pichia pastoris
12:10 – 12:30	Udaya Kumar **DUDE**, Abdi İbrahim Bioequivalence Challenges in the Development of Value Added Generics
12:30 – 14:00	**Lunch**
Session 9	Session Chair: Prof. Mehmet AY
14:00 – 14:20	Konstantin **VOLCHO**, Novasibirsk Institue of Organic Chemistry Inhibition of TDP1 as a promising approach to new anticancer drugs
14:20 – 14:40	Nikolai **Li-ZHULANOV**, Novasibirsk Institue of Organic Chemistry Rational design of new monoterpene-containing azoles and their antifungal activity
14:40 – 15:00	Prof. Dr. Ahmet Ceyhan **GÖREN**, Gebze Technical University Biological activities of Origanum L. (Lamiaceae)
15:00 – 15:15	Assoc. Prof. Serkan **DAYAN**, Erciyes University Design and Fabrication of Organic / Inorganic Nanomaterials for Drug Delivery Systems
15:15 – 15:30	Asst. Prof. Melek **PARLAK KHALILY**, Yozgat Bozok University Cannabidiol-loaded peptide hydrogel dressings for wound healing
15:30 – 16:00	**Coffee Break**
Session 10	Session Chair: Assist. Prof. Sefacan KÖLEMEN
16:00 – 16:40	Anders Bo **ANDERSEN**, NNE Process design of 14 production suites in a multimodal facility
16:40 – 17:20	Jesper Schufri **MEYER**, NNE How high complicated projects benefit greatly from interdisciplinary project teams
17:20 – 17:40	Dr. Saiful Azmi **JOHARI**, Forest Research Institue Malaysia (FRIM) Novel plant-based gamma-lactam compound as potential anti-MRSA agents
17:40 – 18:00	Devrim **ÇELİK SAKIZCI**, Arven Challenges in Developing a Medical Device and a Dry Powder Inhaler

18:00 – 18:15	Asst. Prof. Deniz **SEZLEV BİLECEN**, Konya Food and Agriculture University Preparation of AON nanofibers and their in situ stability
18:15 – 18:30	Dr. Neşe **ULAR ÇAĞATAY**, SEM Development of a dynamic multiple reaction monitoring LC-APCI-MS/MS method for quantification of ten nitrosamines in Ranitidine API with simple extraction approach
18:30 – 19:30	**Dinner**
19:30 – 21:30	**Poster Presentations, Mirage I-II**

Sunday March 12, 2023	
Session 11	Session Chair: Prof. Nermin ŞİMŞEK KUŞ
09:00 – 09:40	Fernanda **WAECHTER**, Lhasa Limited Assessing the concern of complex nitrosamines
09:40 – 10:10	Prof. Dr. Elif Damla **ARISAN**, Gebze Technical University Personalized medicine: New generation therapeutics
10:10 – 10:30	Assoc. Prof. Muhammad Moazzam **NASEER**, Quaid-i-Azam University Synthesis of novel hydrazide conjugates of phenoxy pendant isatins as potent alpha-glucosidase inhibitors
10:30 – 10:45	Asst. Prof. Süleyman **AKOCAK**, Adıyaman University In silico molecular docking study of 1,3,5-triazine substituted sulfonamides for SARs-CoV-2 active main protease
10:45 – 11:00	Nilesh **SHAH**, Abdi İbrahim Recent Challenges in Global Patent Filing
11:00 – 11:15	Asst. Prof. S. Betül **SOPACI**, Kırşehir Ahi Evran University Monitoring the innate immune response upon internalization of a foreign nucleic acid in human keratinocytes cell lines
11:15 – 11:30	Dr. Hande **GÜNDÜZ**, Koç University Mitochondria targeted monoamine oxidase-A activatable chemiluminescent probe for in vivo and in vitro detection of cancer cells
11:30 – 13:00	**Closing Ceremony and Poster Awards**

A New Approach for Indolizine Alkaloids Having CN Functionality

Sergen Gül,[a] Burak Kuzu,[b] Karina Amudi,[a] Nurettin Menges[a]

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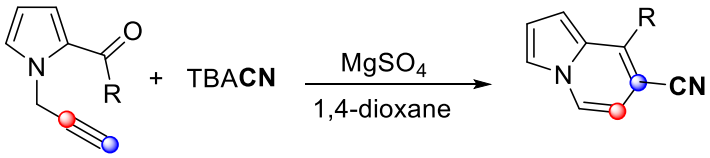
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The utilization of alkyne cyclization in different types of reactions has been a topic of interest since the use of rare metals in chemistry. The nitrile group, an alternative to carbonyl, carboxyl, amino, and hydroxymethyl groups, is widely considered as a crucial building block in many pharmaceuticals, bioactive compounds, and versatile derivatives such as nitrogen-containing heterocycles, amides, and amines. [1] Additionally, nitrile functionality is present in many clinically used drugs. One of the benefits of nitrile groups is that they can be easily transformed into various derivatives, including amides, amines, esters, carboxylic acids, ketones, aldehydes, and alcohols. Nitrile functional groups can be obtained through different named reactions, as well as with cyanide sources like DDQ, benzyl cyanide, TMSCN, acetonitrile, DMF, TBACN, and NCTS.

Our research group is particularly interested in the cyano-functionalization of alkyne followed by cyclization. We have published studies on the cyclization of N-propargyl-pyrrole with primary amines, resulting in the synthesis of indolizine skeletons with secondary amine moieties.[2] Inspired by that, we aimed to design new benzanulation reactions using different nucleophiles, including cyanide sources. Our current research focuses on exploring the scope and mechanism of our benzanulation reaction and synthesizing various cyano-functionalized bicyclic molecules.

In this study, we report a novel benzanulation reaction of the N-propargyl pyrrole molecule. The reaction results in the CN group remaining on the terminal atom of the alkyne group, making it the first example of its kind in the literature. As a result of the reaction, 19 different pyrrolopyridine derivatives with a CN group were synthesized (Scheme 1).



Scheme 1. Representation of our approach for indolizine

Acknowledgement: This study was funded by The Scientific and Technological Research Council of Türkiye (TÜBİTAK-120Z191)

References:

1) Ahmad, M. S.; Meguellati, K.; Wang, Q.. *J. Saudi Chem. Soc.*,**2022,** 101483.
2) Sari, O.; Seybek, A. F.; Kaya, S.; Menges, N.; Erdem, S. S.; Balci, M. *European JOC*, **2019,** (31-32), 5261-5274.