

CONTROLLED RELEASE SOCIETY

CRS 2024

#CRS2024

Annual Meeting AND Exposition

JULY 8-12, 2024 • BOLOGNA, ITALY

BOLOGNA CONGRESSI

INTEGRATING
Delivery Science
ACROSS DISCIPLINES

ABSTRACT GUIDE



Navigate LG polymers complexities with **confidence, certainty, and ease**

Are you interested in analytical methods and materials to characterize Lactide (Lactic Acid) and Glycolide (Glycolic Acid) (LG) polymers in finished drug products?
Work with USP to get robust quality testing and evaluation solutions that help with the profiling and adoption of LG polymer excipients.

With the regulatory landscape evolving, we understand the critical need for standards and solutions to support the selection of the right LG polymer, its characterization, and to ensure uniformity in quality.

Working on complex generics (CGx)?

See USP's CGx excipient offerings:
General Chapters, Monographs and USP RS for Polysorbate 80, Sorbitol, Benzyl Alcohol, Sodium Chloride, Propylene Glycol, Benzalkonium Chloride, Mannitol, and many more.

Explore USP's suite of LG polymer solutions to ensure quality without compromise



NEW! Explore USP's LG polymer reference materials, application notes, General Chapters, monographs, and more



Get updates on USP's work on novel excipients and tell us your top challenges



Welcome to CRS 2024

On behalf of the CRS Annual Meeting Program Committee (AMPC) and the CRS Board of Directors, I am excited and truly honored to invite all of you to the CRS 2024 Annual Meeting and Exposition in Bologna (Italy) at the Bologna Congressi, July 8-12, 2024.

This year, our conference theme is ***"Integrating Delivery Science Across Disciplines"***, building on the notion that our daily activities rely on the continuous integration of multiple knowledge domains and expertise, from pharmaceutical sciences to engineering, from biotechnology to materials science and chemistry, from molecular imaging to clinical translation, with the ultimate objective of benefiting patients and their families.

For the first time ever, this year our conference will be in Italy, in the splendid city of Bologna, known as ***"la dotta"*** (*the erudite*) for its University, the oldest in the Western world founded in 1088; ***"la grassa"*** (*the fat*) for its opulent culinary tradition, and ***"la rossa"*** (*the red*) for the characteristic color of its Medieval buildings.

The AMPC is developing an exciting program with the right balance between learning from luminaries in the fields of delivery sciences, nanomedicine, imaging, artificial intelligence, and more to exploring Bologna's rich history and culture by walking down the 38 kilometers of porticos, from attending industry-led workshops and scientific forums to engaging in scientific discussions while savoring the oldest local traditions in a trattoria.

We are working on creating a memorable event to celebrate science, friendship, and life.

"Ci vediamo a Bologna" – see you all in Bologna!



Paolo Decuzzi, Ph.D.

CRS 2024 Annual Meeting Program Chair

Italian Institute of Technology

Director, Laboratory of Nanotechnology for Precision Medicine
Genova, Italy

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CRS Headquarters Team is Ready to Serve You!

CRS headquarters team members value current members, future members, partners and programs & meetings attendees. Our goal is to consistently provide you with outstanding service, products, and programs. Use the following quick reference list to reach the appropriate persons in areas in which you may need assistance. Please call the general number for assistance Monday through Friday during the office hours of 08:30 AM - 5:00 pm Eastern Time (13:30 to 22:00 GMT/UTC). You can leave a voice mail or e-mail message at any time. We look forward to hearing from you!

GENERAL INFORMATION:

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General Information

ALL EVENTS WILL TAKE PLACE AT THE BOLOGNA CONGRESSI IN BOLOGNA, ITALY, JULY 8-12, 2024.

**All times listed in Central European Time*

REGISTRATION HOURS

The registration desk will be open daily from 7:00 am – 7:00 PM

USE OF CRS SCIENTIFIC PROGRAM CONTENT

Information presented during the 2024 CRS Annual Meeting & Exposition is the property of CRS and the presenter. Information may not be recorded, photographed, copied, photocopied, transferred to electronic format, reproduced, or distributed without the written permission of CRS and the presenter. Any use of the program content, which includes, but is not limited to oral presentations, audiovisual materials used by speakers, and program handouts, without the written consent of CRS is prohibited.

SPEAKER READY ROOM HOURS:

Monday, July 8: 7:00 am – 7:00 pm
Tuesday, July 9: 7:00 am – 7:00 pm
Wednesday, July 10: 7:00 am – 7:00 pm
Thursday, July 11: 7:00 am – 7:00 pm

The Speaker Ready Room is located in the **Speaker Ready**. All speakers are requested to check in at least 2 hours prior to their presentation (schedule permitting). Verification of proper performance in the Speakers' Ready Room is essential, particularly if video and animation is included in the presentation.

ACCESS THE ABSTRACTS

CRS annual meeting abstracts can easily be accessed on the CRS Meeting Mobile App or through this abstract book. Within the app, click on the Posters icon to begin viewing poster abstracts, and view podium abstracts directly from the schedule. The abstracts will be available on the CRS website after the meeting.

ELECTRONIC DEVICES

As a courtesy to other meeting attendees, please turn off or silence all electronic devices during all workshops, sessions, and presentations.

PHOTOGRAPHY

Photography is not permitted in the session rooms, exhibit hall, or poster sessions.

PHOTO RELEASE

By virtue of your attendance, you agree to the Controlled Release Society's use of your likeness in promotional media.

CHILDREN AND THE CRS ANNUAL MEETING & EXPOSITION

The CRS Annual Meeting & Exposition is a professional, scientific meeting. CRS does not permit anyone under the age of 18 to attend the scientific sessions, poster sessions, exposition, and social events. For safety reasons, only registered exhibitors and poster presenters are permitted in the exposition/poster hall during set-up and take-down hours. Anyone 18+ must register and buy applicable individual tickets if not attending/registering as a student. For childcare services please contact the meetings team at meetings@controlledreleasesociety.org or stop by the Registration desk during designated hours.

CRS ANTITRUST POLICY

It is the undeviating policy of the Controlled Release Society (CRS) to comply strictly with the letter and spirit of all U.S.A. federal laws, as well as state, and applicable international trade regulations and antitrust laws. Any activities of CRS or related actions of its staff, officers, trustees, or members that violate these laws and regulations are detrimental to the interests of CRS and are unequivocally contrary to CRS' policy. The implementation of the antitrust compliance policy of CRS shall include, but not be limited to the following:

- All the association activities or discussions shall be avoided that might be construed as tending to: (1) raise, lower, or stabilize prices; (2) allocate markets; (3) encourage boycotts, (4) foster unfair trade practices; or (5) in any way violate U.S.A. federal, state, or applicable international trade regulations and antitrust laws.
- No officer, director, or member of CRS shall make any representation in public or in private, orally or in writing, that states, or appears to state, an official policy or position of CRS without specific authorization to do so.
- CRS members, officers, or directors who participate in conduct that the Board of Directors, by a two-thirds majority vote, determine to be contrary to the CRS. Antitrust Policy shall be subject to disciplinary measures up to, and including, termination.

EXHIBITS

The exhibits are an integral part of the complete education experience and will feature the latest research products in the field of controlled release. The Exhibit Hall will be open Daily at 9:30 am and will close after the last event each day. The main times to expect activity in the Exhibit Hall are below. Please make time during the meeting to visit the exhibits during their open hours.

Installation: **MONDAY, JULY 8:** 2:00 pm – 4:30 pm
TUESDAY, JULY 9: 8:00 am – 4:00 pm

Exhibit Hours **TUESDAY, JULY 9**
6:00 pm – 8:00 pm (*coffee & lite bites provided*)

Welcome Reception / Exhibit Hall & Posters
7:30 pm – 9:30 pm

WEDNESDAY, JULY 10
9:30 am to 8:00 pm

Coffee Break / Exhibit Hall & Posters
11:00 am – 12:00 pm (*coffee & lite bites provided*)

Lunch Break / Exhibit Hall & Posters
1:30 pm – 2:30 pm (*box lunch*)

Networking Break – Exhibit Hall & Posters
6:00 pm – 8:00 pm (*coffee & lite bites provided*)

General Information (CONTINUED)

Exhibit Hours (continued)

THURSDAY, JULY 11

9:30 am – 8:00 pm

Coffee Break /Exhibit Hall & Posters

11:00 am – 12:00 pm (coffee & lite bites provided)

Lunch Break /Exhibit Hall & Posters

1:30 pm – 2:30 pm (box lunch)

Networking Break – Exhibit Hall & Posters

6:30 pm – 8:00 pm (food & beverages provided)

Closing Party all Exhibitors Welcome

8:00 pm – 10:00 pm (onsite – food & beverage provided)

Dismantle:

THURSDAY, JULY 11:

8:00 pm – 10:00 pm

FRIDAY, JULY 12:

8:00 am – 12:30 pm

Poster Installation:

TUESDAY, JULY 9

4:00 pm – 6:00 pm (installation must be complete by 6:00 pm)

Presentation Times:

WELCOME RECEPTION

Tuesday, July 9

7:30 pm – 9:30 pm

EXHIBIT HALL & POSTERS

Wednesday, July 10

11:00 am – 12:00 pm

1:30 pm – 2:30 pm

6:00 pm – 8:00 pm

Thursday, July 11

11:00 am – 12:00 pm

1:30 pm – 2:30 pm

6:30 pm – 8:00 pm

Dismantle:

Thursday, July 11

8:00 pm – 9:00 pm

Friday, July 12

10:00 am – 12:00 pm

POSTER SESSIONS

Posters are located in the Exhibit Hall. All posters must be removed during Poster Breakdown or they will be discarded. The poster viewing area will be secured overnight. Photographing posters is not permitted.

The Posters Sessions are an important educational event of this meeting. We hope you support and attend these scientific presentations.

(IF YOUR POSTER IS NOT COLLECTED BY 10:00 AM ON FRIDAY, JULY 12, IT WILL BE DISCARDED)

2024 CRS Awards & Recognition

Congratulations to the 2024 Award Winners! CRS proudly announces the recipients of Awards that honor those who have contributed to the CRS society and science. Awards will be presented during the CRS 2024 Annual Meeting & Exposition.

DISTINGUISHED SERVICE AWARD



Andrew Lewis, PhD
Quotient Sciences



Marianne Ashford, PhD
AstraZeneca

FOUNDERS AWARD



Patrick Couvreur, PhD
University Paris-Saclay

MEMBER OF THE YEAR AWARD



Mariah Arral
Carnegie Mellon University

SAMYANG AWARD IN HONOR OF SUNG WAN KIM



Maria Vicent, PhD
F.C.V Centro Investigacion
Principe Felipe

WOMEN IN SCIENCE AWARD



Padma Devarajan, PhD
Institute of Chemical Technology

RISING WOMEN IN SCIENCE AWARD



Ana Beloqui, PhD
Université Catholique de Louvain

CRS EXCEPTIONAL LEADERSHIP AWARD – BY THE YOUNG SCIENTIST COMMITTEE



Sara Cordeiro, PhD
De Montfort University

YOUNG INVESTIGATOR AWARD



Michael Mitchell, PhD
University of Pennsylvania



Roy van der Meel, PhD
Eindhoven University of Technology

TRANSDERMAL DELIVERY KYDONIEUS FOUNDATION AWARD



Ryan Donnelly, PhD
Queen's University Belfast

PhD THESIS AWARD



Allen Jiang
Massachusetts Institute of
Technology
"Development and evaluation of
localized mRNA delivery systems
for vaccines and inhaled therapies"

JOURNAL OF CONTROLLED RELEASE BEST PAPER AWARD



Rein Verbeke, PhD
Ghent University
"Continuous freeze-drying of
messenger RNA lipid nanoparticles
enables storage at higher
temperatures"

DRUG DELIVERY AND TRANSLATIONAL RESEARCH JOURNAL BEST PAPER AWARD



Lalitkumar Vora, PhD
Queen's University Belfast
"Rapidly dissolving bilayer
microneedles enabling minimally
invasive and efficient protein
delivery to the posterior segment
of the eye"

CRS Committee Meetings

MONDAY, JULY 8

TIME

ROOM

ED&I Committee Meeting I

12:00 PM – 1:00 PM

Magenta B

TUESDAY, JULY 9

TIME

ROOM

DDTR Meeting

1:30 PM – 2:30 PM

Rossa A

ED&I Committee Meeting II

1:30 PM – 2:30 PM

Rossa B

IC Board Meeting

1:30 PM – 2:30 PM

Rossa C

WEDNESDAY, JULY 10

TIME

ROOM

ADDR Editorial Meeting

1:30 PM – 2:30 PM

Rossa A

FG Leadership Meeting

1:30 PM – 2:30 PM

Rossa B

THURSDAY, JULY 11

TIME

ROOM

JCR Board Meeting

1:30 PM – 2:30 PM

Rossa A

YSC & Industry Foresight Council Meeting

1:30 PM – 2:30 PM

Sala Italia

C&DP Board Meeting

2:30 PM – 3:30 PM

Rossa B

JCR Editorial Meeting

2:30 PM – 3:30 PM

Rossa A

Connect @ the EXPO

EXPOSITION HALL

The CRS Exposition is the place to CONNECT and discover the latest delivery science and technology trends! Meet face-to-face with leading companies from around the world—learn about new products, discuss industry challenges, and build your network. 2024 Exhibitors as of 6/14/24

Detailed description of current Exhibitors and the schedule of Exposition hours can be found in the CRS AM&E Mobile App.

EXHIBIT HALL HOURS

Tuesday, July 9

Welcome Reception / Exhibit Hall & Posters

7:30 pm – 9:30 pm

Wednesday, July 10

Coffee Break / Exhibit Hall & Posters

11:00 am – 12:00 pm (coffee & lite bites provided)

Lunch Break / Exhibit Hall & Posters

1:30 pm – 2:30 pm (box lunch)

Networking Break – Exhibit Hall & Posters

6:00 pm – 8:00 pm (food & beverages provided)

Thursday, July 11

Coffee Break / Exhibit Hall & Posters

11:00 am – 12:00 pm (coffee & lite bites provided)

Lunch Break / Exhibit Hall & Posters

1:30 pm – 2:30 pm (box lunch)

Networking Break – Exhibit Hall & Posters

6:30 pm – 8:00 pm (food & beverages provided)

Closing Party all Exhibitors Welcome / 8:00 pm – 12:00 am (onsite)

COMPANY NAME	BOOTH NUMBER	COMPANY NAME	BOOTH NUMBER
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ADARE PHARMA SOLUTIONS

Booth # 20

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www.AdarePharmaSolutions.com

Adare Pharma Solutions is a global technology-driven CDMO providing end-to-end integrated services, from product development through commercial manufacturing and packaging, with small molecule expertise focusing on oral dosage forms. Our specialized technology platforms provide taste masking, customized release, solubility enhancement, and patient-centric dosing solutions. We have developed and manufacture more than 65 products sold by customers worldwide.

ADHEXPHARMA

Booth # 32

www.adhexpharma.com

At AdhexPharma, we are a leading CDMO specializing in cutting-edge patch and oral film technologies. We offer expertise, facilities, and equipment for product development and manufacturing, along with out-licensing opportunities.

AGILENT TECHNOLOGIES

Booth # 48

www.agilent.com

Agilent Technologies Inc. (NYSE: A) is a global leader in life sciences, diagnostics, and applied chemical markets, delivering insight and innovation toward improving the quality of life. Agilent instruments, software, services, solutions, and people provide trusted answers to customers' most challenging questions. The company generated revenue of \$5.34 billion in fiscal 2021 and employs 16,400 people worldwide. Information about Agilent is available at www.agilent.com. To receive the latest Agilent news, subscribe to the Agilent Newsroom. Follow Agilent on LinkedIn, Twitter and Facebook.

ALFATEST

Booth #62

www.alfatest.it

At AdhexPharma, we are a leading CDMO specializing in cutting-edge patch and oral film technologies. We offer expertise, facilities, and equipment for product development and manufacturing, along with out-licensing opportunities.

ANELLEO

www.anelleo.com

AnelleO is harnessing the advancements in the speed and scale of 3D printing technology for novel solutions in Women's Health.

ARCTURUS THERAPEUTICS

www.arcturusrx.com

Arcturus Therapeutics is a global messenger RNA medicines and vaccines company focused on the discovery, development and commercialization of therapeutics for rare diseases and vaccines. We have proprietary technologies, validating partnerships, and an experienced team with deep expertise in delivery and RNA-based therapeutics

ASAHI KASEI CORPORATION

Booth #52

SILVER SPONSOR

https://www.ceolus.com/en/sonanos/hyaluronic_acid_nanogel/
Asahi Kasei Corporation (Headquarters: Tokyo, Japan) is the leading manufacturer and supplier of functional pharma excipients, such as microcrystalline cellulose. In order to further address the rising demands in formulation research, we are now developing a cutting-edge pharma excipient mainly for injections: hyaluronic acid nanogel, Sonanos™. The Sonanos™ can act as a DDS carrier, facilitating solubilization, sustained release, or lymph node delivery of APIs.

ASHLAND

Booth #26

SILVER SPONSOR

<http://www.ashland.com/pharma>

Ashland is a focused additives and specialty ingredients company serving customers in pharmaceuticals, nutraceuticals, food and beverage and other consumer and industrial markets. Approximately 3,800 passionate, tenacious solvers – from renowned scientists and research chemists to talented engineers and plant operators – thrive on developing practical, innovative and elegant solutions to complex problems for customers in more than 100 countries.

ASTRAZENECA

<http://www.astrazeneca.com>

AstraZeneca are a global, science-led, patient-focused pharmaceutical company. AstraZeneca are dedicated to transforming the future of healthcare by unlocking the power of what science can do for people, society and the planet.

BILL & MELINDA GATES FOUNDATION

BIOMATERIALS RESEARCH, A SCIENCE PARTNER JOURNAL

<https://spj.science.org/journal/bm>

The open access journal Biomaterials Research, published in association with the Korean Society for Biomaterials, covers the interdisciplinary fields of biomaterials research, including novel biomaterials, cutting-edge technologies of biomaterials synthesis and fabrication, and biomedical applications in clinics and industry.

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BIONEER A/S

<http://www.Bioneer.dk>

CALLA LILY

<https://www.callali.ly>

CATALENT

<http://www.catalent.com>

Catalent specializes in comprehensive development, analytical and bioavailability enhancement from candidate selection to fully integrated solutions, to help get your drug to market faster. Using a rigorous, data-driven scientific approach and innovative technologies within a global network, Catalent can help solve the most complex challenges to accelerate your development process.

CHIESI FARMACEUTICI S.p.A.

BRONZE SPONSOR

<http://www.chiesi.com>

Chiesi is research-oriented international biopharmaceutical group that develops and markets innovative therapeutic solutions in respiratory health, rare diseases, and specialty care. The company's mission is to improve people's quality of life and act responsibly towards both the community and the environment.

By changing its legal status to a Benefit Corporation in Italy, the US, and France, Chiesi's commitment to create shared value for society as a whole is legally binding and central to company-wide decision-making. As a certified B Corp since 2019, we're part of a global community of businesses that meet high standards of social and environmental impact. The company aims to reach Net-Zero greenhouse gases (GHG) emissions by 2035.

With over 85 years of experience, Chiesi is headquartered in Parma (Italy), with 31 affiliates worldwide, and counts more than 7,000 employees. The Group's research and development centre in Parma works alongside 6 other important R&D hubs in France, the US, Canada, China, the UK, and Sweden.

COLORCON

Booth #53

BRONZE SPONSOR

<http://www.colorcon.com>

Colorcon is a global leader in the healthcare industry, specializing in the development, supply, and technical support of film coating systems, modified release technologies, specialty excipients, and functional packaging. With a focus on delivering innovative products and technologies, we also provide value-added services to support solid dose design, development and manufacturing.

CORBION

<http://info@corbion.com/biomaterials.html>

Corbion Biomaterials is a leading supplier of GMP-grade bioresorbable polymers used in the creation of long-acting injectables (LAIs). Our versatile PURASORB® portfolio provides enabling functionality used by our partners in the design and formulation of innovative therapies, releasing APIs over specific time periods, from weeks to years. Our unique quality-by-design approach also allows our partners to de-risk and accelerate their product development.

CORDOUAN TECHNOLOGIES

Booth #31

<http://cordouan-tech.com>

CORDOUAN Technologies is a French SME based in Bordeaux. Our company is specialized in the design, manufacturing and commercialization of innovative & advanced solutions for the nanoparticle and colloidal media characterization. After many years of progress and innovation, many recognized academic research laboratories and famous industrial company, French and international, have trusted us and are now using our instruments in very wide range of applications, such as microbiology, life science, bio-pharma, cosmetics, nano-medicine, petroleum, energy production, transformation and storage, functionalized inks & printing, nano polymers, environment, etc. Innovation is at the heart of our development process. We propose to our customers advanced and innovative solutions to match their needs, including the customization of the instruments to match the application. We'll be proud to help you to make great developments and advanced science.

CURAPATH

Booth #61

<http://www.curapath.com>

CDMO oriented in the development and manufacturing of lipids and polymers (GMP), and LNP/PNP formulations and F&F (GMP)

DELSITCH

<http://www.delsitech.com>

DIGIM SOLUTION

Booth # 60

<http://www.digimsolution.com>

digIM is a technology leader providing CRO services in microstructure analysis and in silico modeling for the development of drug products.

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DOLOMITE MICROFLUIDICS

Booth #40

<https://www.dolomite-microfluidics.com/>

Dolomite Microfluidics (part of Unchained Labs) is dedicated to providing scientists state of the art microparticle synthesis systems, enabling its customers to optimise and scale up their drug, vaccine, medicine and therapy research and development.

DSM-FIRMENICH BIOMEDICAL

Booth #36

SILVER SPONSOR

<http://www.dsmbiomedical.com>

As the world's unrivaled biomaterials expert and committed partner in driving sustainable innovation in healthcare, DSM Biomedical, part of dsm-firmenich, is at the forefront of biomaterial science and process innovation. The company's technologies and support are recognized for their unmatched quality, reliability, and performance in multiple markets worldwide.

ELSEVIER

Table Top 5

<https://www.elsevier.com/>

As a global leader in scientific information and analytics, Elsevier helps researchers and healthcare professionals advance science and improve health outcomes for the benefit of society. We do this by facilitating insights and critical decision-making with innovative solutions based on trusted, evidence-based content and advanced AI-enabled digital technologies.

ENCAPSOLUTIONS

<http://www.encapsolutions.com.au>

EncapSolutions is a drug delivery company based in Sydney Australia. We design and manufacture dissolvable transdermal patches for pain relief using our proprietary encapsulation technology.

EVONIK

Booth #65

GOLD SPONSOR

www.evonik.com

Evonik is one of the world's leading specialty chemical companies.

F. HOFFMAN LA ROCHE

<http://www.roche.com>

Founded in 1896 in Basel, Switzerland, as one of the first industrial manufacturers of branded medicines, Roche has grown into the world's largest biotechnology company and the global leader in in-vitro diagnostics. The company pursues scientific excellence to discover and develop medicines and diagnostics for improving and saving the lives of people around the world. We are a pioneer in personalised healthcare and want to further transform how healthcare is delivered to have an even greater impact. To provide the best care for each person we partner with many stakeholders and combine our strengths in Diagnostics and Pharma with data insights from the clinical practice. In recognising our endeavour to pursue a long-term perspective in all we do, Roche has been named one of the most sustainable companies in the pharmaceuticals industry by the Dow Jones Sustainability Indices for the fifteenth consecutive year. This distinction also reflects our efforts to improve access to healthcare together with local partners in every country we work. Genentech, in the United States, is a wholly owned member of the Roche Group. Roche is the majority shareholder in Chugai Pharmaceutical, Japan

FUJIFILM PHARMACEUTICALS

Booth #55

SILVER SPONSOR

<https://www.fujifilmpharma.com/>

FUJIFILM Corporation is transforming itself into a healthcare company by utilizing fine chemical technologies such as organic chemistry and nanotechnology. We have established a one-stop CDMO service from formulation design to GMP manufacturing for LNPs and liposome. A series of proprietary ionizable lipids in our library are open for out-licensing.

GATTEFOSSE

Booth #41

<http://www.gattefosse.com>

Gattefossé develops and manufactures pharmaceutical excipients and cosmetic ingredients for the health and beauty industries. Gattefossé offers to the pharmaceutical industry innovative lipid excipients for oral solubilization, bioavailability enhancement, sustained release, lubrication, and taste-masking. We provide penetration enhancers and emulsifiers for improved topical formulations. As part of Gattefossé offer, technical support is provided by fully trained experts to accelerate customers' development programs thanks to our 4 Technical Centers of Excellence in France, China, India and the USA. Environmental and social issues have always been part of our culture. Today, Gattefossé relies on a purposeful CSR approach to build its innovation strategy.

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GILEAD SCIENCES, INC

<http://www.gilead.com>

At Gilead, we set – and achieve – bold ambitions to create a healthier world for all people. From our pioneering virology medicines to our growing impact in oncology, we're delivering innovations once thought impossible in medicine.

Our focus goes beyond medicines, and we also strive to remedy health inequities and break down barriers to care. We empower our people to tackle these challenges, and we're all united in our commitment to help millions of people live healthier lives.

GSK

<http://www.gsk.com>

HALOZYME

Booth #43

BRONZE SPONSOR

<http://halozyme.com>

Innovative drug delivery solutions

HELIX BIOTECH

Booth # 23

<http://www.helix-biotech.com>

Helix Biotech is a Customer and Quality focused CDMO specializing in LNPs, Liposomes, and Hybrid Nanoparticles. Browse our selection of innovative nanoparticle manufacturing systems and products, or reach out to us for assistance with your pre-clinical or clinical stage development, manufacturing, and analytical project.

IAMFLUIDICS B.V

<https://iamfluidics.com/>

IamFluidics, an award-winning high-tech company from The Netherlands, advances scalable, precision-controlled microparticle production with its patented IN-AIR MICROFLUIDICS™ technology. This mild process encapsulates complex materials like live biotherapeutics, (stem) cells, and biologics, enhancing drug delivery and cell & gene therapy. We offer CDMO services, improving formulation performance from prototyping to industrial production.

INNOCORE PHARMACEUTICALS

Booth # 18

<http://www.innocorepharma.com>

InnoCore Pharmaceuticals is a biopharmaceutical drug delivery company specialized in the development of long acting and minimally invasive drug delivery products for the treatment of several (chronic) diseases e.g. oncology, pain, atherosclerosis, macular degeneration, CV, osteoarthritis.

INNOCI TECHNOLOGIES

Booth # 27

<http://www.innogitechnologies.com>

InnoGI Technologies, formerly The TIM Company, headquartered in Delft, Netherlands, is an innovative CRO and technology provider for the pharmaceutical and food industries. Its SurroGUT™ platform uses advanced in vitro models such as TIM, mimicking the dynamics of the human gut. TIM replicates dynamic pH profiles, peristalsis enzyme secretions and digestive fluid volumes at true-to-life rates. The TIM Technology has been used to evaluate more than 250 active pharmaceutical ingredients in commercial drug products and has guided clients worldwide with decision-making at different stages of oral drug development. This reduces the number of formulation iterations, de-risks clinical trials, and shortens the time to market, as evidenced in more than 260 scientific publications.

INSIDE THERAPEUTICS

Booth # 19

<https://insidetx.com>

At InsideTX, we are revolutionizing nanoparticle manufacturing, to unlock the full potential of RNA-LNP therapeutics and nanomedicines by providing easy to use systems, as well as scalable microfluidic-based nanoparticle synthesis platforms.

IPEC AMERICAS

<http://www.ipecamericas.org>

IPEC-Americas is the industry association that develops, implements, and promotes global use of appropriate quality, safety, and functionality standards for pharmaceutical excipients and excipient delivery systems. IPEC-Americas, along with our counterparts around the world, serves as the primary international resource on excipients for its members, governments and public audiences.

LIPOID

Booth # 47

BRONZE SPONSOR

<http://www.lipoid.com>

Lipoid – We Invest in Quality

The Ludwigshafen-based Lipoid Group is the world's leading supplier for the whole range of cGMP natural, hydrogenated, and synthetic phospholipids for pharmaceutical applications at industrial scale.

Naturally derived raw materials and environmentally friendly processes ensure a sustainable supply from renewable sources under highest environmental standards.

MANA.BIO

<http://www.mana.bio/>

SPONSORS & EXHIBITORS

MARAMA LABS

Booth # 49

www.maramalabs.com

Marama Labs' CloudSpec instrument characterises nanoparticles using its novel scatter-corrected absorption (SCA) spectroscopy technology. CloudSpec removes the optical scatter caused by nanoparticles that normally prevents UV/Vis quantitation of payloads such as RNA or DNA; CloudSpec does this "at source", not by mathematical approximation, enabling simple and fast RNA quantification in LNPs with no *a priori* information about the formulation or particle properties. SCA takes around 10 seconds, has high precision (typically ca. 1% measurement variability), requires only dilution, uses no dyes or other additives and leaves the LNPs intact. SCA is a simple and practical alternative to fluorescence or HPLC assays for drug load from formulation to batch testing.

MDPI AG

Booth # 29

https://www.mdpi.com/journal/pharmaceutics?ci=26619&si=23439&_utm_from=bd08059898

A pioneer in scholarly, open access publishing, MDPI has supported academic communities since 1996. Based in Basel, Switzerland, MDPI has the mission to foster open scientific exchange in all forms, across all disciplines. Our 441 diverse and open access journals, including 432 peer-reviewed journals and 9 conference journals, are supported by more than 295,000 academic experts who share our mission, values, and commitment to providing high-quality service for our authors.

MELTPREP

Booth # 25

BRONZE SPONSOR

<http://www.meltprep.com>

MeltPrep specializes in laboratory equipment for fast and lossless prototyping of new dosage forms, allowing for homogeneous sample preparation directly from powders without air inclusions. Our revolutionary Vacuum Compression Molding (VCM) technology accelerates formulation screening, offering mg-to-gram-scale sample molding. We provide solutions for various applications, including Hot Melt Extrusion (HME), Amorphous Solid Dispersion (ASD), and implant formulation screening.

MERCK

Booth # 68

BRONZE SPONSOR

www.SigmaAldrich.com/MilliporeCTDMOServices

Merck provides solutions to help you overcome your mRNA manufacturing and LNP formulation challenges. Our integrated CTDMO capabilities include the development and manufacturing of custom mRNAs, synthetic lipids, lipid nanoparticle formulation and fill and finish. Discover how our capabilities, technical expertise and regulatory know-how can help you deliver and scale up your mRNA-based therapeutics, accelerate time to market and mitigate risks.

METIS

<http://metistx.com>

METIS is a therapeutics company focused on applying AI and ML to design organ-targeting LNPs.

MICROFLUIDICS INTERNATIONAL CORPORATION

Booth # 64

<http://www.microfluidics-mpt.com>

Microfluidics International Corporation is the leader in high-shear fluid processors.

MYBIOTECH

Booth # 59

<http://www.mybiotech.de>

MyBiotech is an innovative SME with long years of R&D&I track as CDMO offering end to end development, manufacturing services and innovative products for biotech and pharma with proprietary production and processing technologies. MyBiotech's mission is bringing biotechnology and pharmaceutical products into the market in a fast and efficient way.

NaDeNo NANOSCIENCE AS

<https://nadenos.com/>

NaDeNo is developing drug delivery products for improved clinical outcomes for cancer patients. We focus on unleashing the potential of hard-to-deliver hydrophobic small molecule drugs using our patent-protected nanotechnology. Our lead product is in advanced preclinical testing with a target of clinical state in H2 2025.

SPONSORS & EXHIBITORS

NANOFCM

Booth #38

<http://www.nanofcm.com>

NanoFCM provides a versatile and powerful platform – Flow NanoAnalyzer for the multiparameter analysis of functional nanoparticles (7–500 nm) at single-particle level which has the capacity to measure the size, concentration, and biological properties of nanoparticles. To our knowledge, Flow NanoAnalyzer is the only flow cytometry instrument that covers the size range of exosomes (30–120 nm). Flow NanoAnalyzer is expected to become a powerful tool for life science, nanoscience and nanotechnology studies.

NANOSCALE METRIX

Booth # 35

<http://nanoscale-metrix.com>

Nanoscale Metrix is a french company which provides a new strategy to determine size distribution by Taylor Dispersion Analysis

NANOVAATION THERAPEUTICS (NTX)

<https://nanovationtx.com>

NanoVation Therapeutics™ (NTx) develops customized nucleic acid and lipid nanoparticle technologies to empower its partners' genetic medicines. By enabling the safe and efficacious delivery of nucleic acids to a variety of tissues, NTx's unique toolbox can rapidly advance therapeutic concepts into clinical reality.

NTx is delivering tomorrow's genetic medicines, today.

NISSO CHEMICAL EUROPE GMBH

Booth # 28

<http://nisso-chem.de>

Nisso Chemical Europe offers NISSO HPC, a high-quality excipient for the pharmaceutical industry providing hydroxypropyl cellulose in a wide range of viscosities and particle sizes for diverse applications, offering solutions for direct compression, roller compaction, wet granulation, orodispersible tablets, extrusion, drug solubility enhancement, controlled release matrices, and film coating.

NOF CORPORATION

Booth # 46

<http://www.nofamerica.com>

NOF CORPORATION, the leading commercial supplier of drug delivery products through R&D to commercial scale, provides activated PEGs for protein modification, single molecular PEGs for ADCs, Polysorbate 80 for formulation of biological medicines, PEG lipids and ionizable lipids for lipid nanoparticle (LNP) formulations.

OAKWOOD LABS

Booth # 30

BRONZE SPONSOR

<http://www.oakwoodlabs.com>

Oakwood Labs is a world leading CDMO specializing in Sustained Release Drug Delivery with a focus on long acting injectables (LAI). What makes us unique is our patented Chroniject™ microsphere technology for sustained release injectable development from proof-of-concept feasibility studies through to clinical material and FDA-approved commercial supply. This is coupled with our capabilities for analytical development, formulation development, and process scale-up. Oakwood's continuous flow process enables lot-to-lot reproducibility, reliable scalability, and quick timelines.

PET FLAVORS

<http://petflavors.com>

Pet Flavors is a world leading developer and manufacturer of quality powdered flavor bases used in the pharmaceutical and nutraceutical companion animal health industry.

PHARMACIRCLE

Booth # 37

<http://www.pharmacircle.com>

PharmaCircle is a leading information provider to the pharmaceutical, biotechnology and device industries and scientific community – publishing the Drug Delivery & Formulation Newsletter, and providing through its subscription database pipeline and product intelligence on drugs and biologics, expert analysis of drug delivery technologies and devices, extensive coverage of medical diagnostics, and detailed reports on emerging stage and commercial life sciences companies and suppliers from around the world. To learn more, visit www.pharmacircle.com

PHOSPHOLIPID RESEARCH CENTER

BRONZE SPONSOR

<http://www.phospholipid-research-center.com>

The independent and non-profit Phospholipid Research Center connects scientists from academia and industry all over the world with the aim to discover and utilize the full potential of phospholipids. To build up the knowledge on phospholipids we foster the dialog and exchange between various areas of research by: 1) Organizing and sponsoring symposia, meetings and educational workshops; 2) Sponsoring PhD and Postdoc research projects at universities worldwide; and 3) Providing information and literature.

PION, INC

Booth # 67

<http://www.pion-inc.com>

Unique Instruments and Services that Help Scientists Make Informed Decisions About Food and Drug Formulation from R&D to Manufacturing.

SPONSORS & EXHIBITORS

PMC ISOCHEM

Booth # 56

<http://www.pmcisochem.fr>

POLYPLUS

Booth # 58

BRONZE SPONSOR

<https://www.polyplus-sartorius.com>

Polypure AS is producing high quality single-length or uniform polyethylene glycol (PEG) and PEG derivatives for advanced applications.

Monodisperse PEG linkers are used to improve solubility and pharmacokinetic properties of peptides, proteins, biopharmaceuticals and organic drug molecules.

Our PEGs are thoroughly fractionated by proprietary chromatography from polydisperse PEG to individual components. These ultrapure PEGs are no longer polymer mixtures. Our products contain less than 2% n-1 (polydispersity < 1.0002).

POLYPURE AS

Booth # 39

<http://www.polypure.com>

Polypure is a manufacturer of high purity, single length, PEG derivatives.

PRECIGENOME LLC

Booth # 21

<http://www.precigenome.com>

PROMED PHARMA

<http://www.promedmolding.com>

ProMed Pharma is a leading contract drug manufacturing organization specializing in complex dosage forms and drug-eluting components for medical devices.

REGENERON PHARMACEUTICALS INC

<http://www.regeneron.com>

Regeneron is a leading biotechnology company that invents, develops and commercializes life-transforming medicines for people with serious diseases. Founded and led for 35 years by physician-scientists, our unique ability to repeatedly and consistently translate science into medicine has led to numerous FDA-approved treatments and candidates in development, almost all of which were homegrown in our laboratories. Regeneron is accelerating and improving the traditional drug development process through our proprietary VelociSuite® technologies, and through ambitious research initiatives such as the Regeneron Genetics Center. Visit www.regeneron.com to learn more.

RSC PHARMACEUTICS

Table Top 4

<https://www.rsc.org/journals-books-databases/about-journals/rsc-pharmaceutics>

RSC Pharmaceutics, published by the Royal Society of Chemistry and led by Editor-in-Chief Professor Yvonne Perrie, is a new gold open access journal leading the way in the field of pharmaceuticals. This journal publishes research focused on formulating a drug into a medicine, with the intention of achieving controllable drug delivery with high efficacy.

SANOFI

<http://www.sanofi.com>

We are an innovative global healthcare company with one purpose: to chase the miracles of science to improve people's lives.

SCHRODINGER GMBH

Booth # 54

BRONZE SPONSOR

<http://schrodinger.com>

Schrödinger is transforming the way therapeutics and materials are discovered. Schrödinger has pioneered a physics-based computational platform that enables discovery of high-quality, novel molecules for drug development and materials applications more rapidly and at lower cost compared to traditional methods. The computational platform is licensed by biopharmaceutical and industrial companies, academic institutions, and government laboratories around the world. Schrödinger's multidisciplinary drug discovery team also leverages the software platform to advance a portfolio of collaborative and proprietary programs to address unmet medical needs. To learn more, visit www.schrodinger.com, follow us on LinkedIn, or visit our blog, Extrapolations.com.

SEQENS

<https://www.seqens.com/fr/>

SEQENS is a worldwide leader in the development and production of active ingredients, pharmaceutical intermediates, specialty ingredients and personal care leveraging 16 manufacturing sites, 9 R&D centers and 3,300 employees in 9 countries.

SEQENS provides key expertise and capabilities in Drug Delivery Solutions ingredients:

- API vectorization for RNA/DNA vaccines, oncology, etc.
- GMP Materials for medical devices
- Bioavailability improvement (controlled-release particles, hydrogels, liposomes...)

SPONSORS & EXHIBITORS

SEVER PHARMA SOLUTIONS

Booth # 42

<http://www.severpharmasolutions.com>

Sever Pharma Solutions is a CDMO focused on development and GMP commercial supply of polymer oral and long acting implant dosage forms, including HPAPI. We also have prefilled syringe and cartridge filling capability. We are located in Putnam CT and Malmo Sweden.

SHIN-ETSU CHEMICAL COMPANY

Booth # 33

BRONZE SPONSOR

<http://www.sinetsupharmausa.com>

Shin-Etsu is a leading manufacturer of pharmaceutical excipients based on cellulose chemistry. In addition to our portfolio of HPMC and Methylcellulose, Shin-Etsu is the originator of HPMCAS and HPMCP for solid dispersion and enteric coating. Our innovative L-HPC has been recognized as a problem-solving binder and disintegrant. We are committed to stimulating innovation and advancing cellulose polymer sciences through our technical expertise in a range of applications including modified release matrix systems and enhancement of solubility and bioavailability.

SIMULATIONS PLUS

Booth # 34

<http://www.simulations-plus.com>

Serving clients worldwide for more than 25 years, Simulations Plus is a leading provider in the biosimulation market providing software and consulting services supporting drug discovery, development, research, and regulatory submissions. We offer solutions that bridge artificial intelligence (AI)/machine learning, physiologically based pharmacokinetics, quantitative systems pharmacology/toxicology, and population PK/PD modeling approaches. Our technology is licensed and applied by major pharmaceutical, biotechnology, and regulatory agencies worldwide.

SOTAX AG

Booth # 51

<http://sotax.com>

The SOTAX Group, founded in 1973 in Switzerland, is a fast-growing leader in providing high-quality dissolution testing systems, automated sample preparation workstations for composite assay and content uniformity testing, and physical tablet testing instruments for the pharmaceutical industry throughout the world. Part of the product and service portfolio are also SOTAX Pharma Services (CRO), which are set in a US FDA-inspected facility with a cGMP-compliant environment with strict quality management processes and help pharmaceutical companies worldwide in overcoming the various challenges associated with dissolution and release testing from pharmaceutical dosage forms. SOTAX' scientific expertise paired with state-of-the-art instrumentation ensures best-in-class services and ease of regulatory compliance for all customers.

SOUTHWEST RESEARCH INSTITUTE

Booth # 63

<http://www.microencapsulation.swri.org>

SwRI® provides extensive contract R&D capabilities, including the development of custom encapsulation and controlled release formulations for applications ranging from pharmaceuticals to consumer and diversified products. Capsules and particles can be prepared in sizes from nanometers to several millimeters. Biomaterials, materials development, synthesis, and modeling capabilities are also available

STABLE MICRO SYSTEMS

Booth # 57

<http://stablemicrosystems.com>

Stable Micro Systems will be exhibiting the TA.XTplus connect which can be used for many controlled release applications. It is ideal at measuring the fracture force of Micro Spheres, tablet swelling properties and disintegration rates. Special devices are used for simulating and measuring Muco and Bio-adhesion together with tablet fracture properties.

TELEDYNE LABS

Booth # 66

<http://www.teledynelabs.com>

Teledyne LABS consolidates CETAC, Hanson, ISCO chromatography and pumps, Leeman Labs and Tekmar for Chromatography, GC Sample Prep, Elemental Analysis, Automated Liquid Handling, Pumping and Dissolution, Diffusion, Physical Tablet Testing. These complementary brands support our commitment to delivering innovative laboratory instruments that improve our environmental sustainability and quality of life.

TRIASTEK

<http://www.triastek.com>

Triastek is a global healthcare company, specializing in developing medicines using our proprietary 3D printing technology. Our commitment is to transform the landscape of pharmaceutical formulation development and production, ushering in a new era of medicines with the innovative potential of 3D printing.

UNITED STATES PHARMACOPEIA (USP)

<http://usp.org>

USP is an independent scientific organization that collaborates with the world's top experts in health and science to develop quality resources and standards for medicines, active ingredients and excipients, dietary supplements and food ingredients. Through our resources, standards, advocacy and education, USP helps ensure the availability of quality medicines, excipients, supplements and foods for billions of people worldwide. Learn more at usp.org.

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WATERS | WYATT TECHNOLOGY

Booth # 44

SILVER SPONSOR

<http://www.wyatt.com>

Waters | Wyatt Technology is the recognized leader in light scattering instrumentation for characterizing macromolecules, nanoparticles and gene vectors in solution. Wyatt's products determine absolute molar mass, size, charge, interactions, conformation, conjugation and payload. Wyatt offers a complete suite of multi-angle light scattering (MALS) instruments, field-flow fractionation (FFF) systems, dynamic light scattering (DLS) and zeta potential instruments, refractive index and intrinsic viscosity detectors.

2024 CRS/ESMI Joint Session

X-ray-responsive nanoliposomes that contain high-Z element nanoclusters for chemo-radiation dose-enhancement

Mans Broekgaarden, *INSERM*

E-selectin-targeted polymer-drug conjugate is highly effective in regressing colorectal cancer liver metastases and preventing tumor recurrence in mice

Ayelet David, *Ben-Gurion University of the Negev*

Model System Characterizing Subcutaneous Long-Acting Injectable Depots

Robert Gresham, *Gilead Sciences*

PDGFR- β Targeted Fibrobody™ for Molecular Imaging of Kidney Fibrosis

Vedangi Kulkarni, *Uniklinik RWTH Aachen*

Imaging Heterogenous Tumor Accumulation and Intratumoral Distribution of Nanoparticles

Xiuling Lu, *University of Connecticut*

Engineering Stimuli-Responsive Nanocarriers for Cancer Diagnosis and Immunotherapy

Peng Mi, *Sichuan University*

Alternative Methods to Animal Testing

Application of Polypeptide-based Combination Therapeutics in Advanced Cell Culture Models for the Development of Luminal A Breast Cancer Treatments

Ana Armiñán, *Príncipe Felipe Research Center, IISCI*

Primary small intestinal epithelium as a physiological alternative to the Caco-2 lymphatic transport model

Rebecca Carrier, *Northeastern University*

Advanced in vitro tumoroids for investigating fibroblast phenotypic plasticity

Rasika Daware, *Institut for Experimental Molecular Imaging (ExMI), RWTH Aachen University Hospital*

In – vitro enzymatic drug degradation in Fed state intestinal fluids

Hristina Mircheva, *Sofia university*

A multi-organ-on-chip platform for exploring gut-skin axis and microbiota dysbiosis effects in skin disorders

Elisabetta Palama, *React4life*

Optimization of in vitro release setup for in situ forming depot technology

Charlotte Peloso, *MedinCell S.A.*

Artificial Intelligence and Predictive Models in Pharmaceutical Technologies

A novel in vivo/in silico approach for predicting bioavailability of subcutaneously administered antibody drugs

Thomas Birngruber, *Joanneum Research*

A closed-loop system for personalized chemotherapeutic dosing

Louis DeRidder, *MIT, Harvard Medical School*

Validation and application of a Caco-2 microfluidic Gut-on-a-Chip model for assessing intestinal absorption: Small molecules, peptides and intestinal permeation enhancers

John Gleeson, *Merck & Co.*

Computational simulation for structural stability and formation of DOPC and DPPC lipid vesicle using coarse-grained simulation with Martini Force Field

Pardeep Gupta, *Saint Joseph's University*

Machine Learning for the Functionalization of Drug-Excipient Nanoparticles

Daniel Reker, *Duke University*

FormulationDT: an artificial intelligence formulation strategy decision system for small molecule drug development— Learning from approved drugs with partially supervised learning

Nannan Wang, *State Key Laboratory of Quality Research in Chinese Medicine, Institute of Chinese Medical Sciences (ICMS), University of Macau, Macau, China*

Bioengineering (FG)

Dual-crosslinked antibacterial antioxidant self-healable hydrogel with hemostatic property synergized with photothermal therapy for accelerated wound healing

Samin Abbaszadeh, *Zanjan University of Medical Sciences, Urmia University of Medical Sciences*

Combining robotics and AI to generate therapeutic synthetic cells

Shanny Ackerman, *Technion*

Hybrid carbon nanohorns-lipid platforms for the targeted cancer therapy

Hoda Alavizadeh, *School of Pharmacy, Mashhad University of Medical Sciences*

Advancing mRNA Vaccine Delivery: Evaluating the Stability, Safety, and Efficacy of PEG-Free Branched Amphiphilic Peptide Capsules (BAPCs)

Adriana Avila Flores, *Auburn University*

Targeting cells through their unique metabolomic profile

Iris L. Batalha, *Institute for Bioengineering of Catalonia (IBEC)*

Synthetic high-density lipoprotein nanotherapeutics for managing bone inflammation

Marco Bottino, *University of Michigan*

Enhancing nano-immunotherapy efficacy in mouse sarcoma models through tumor microenvironment reprogramming

Antonia Charalambous, *University of Cyprus*

In Situ Immune Cell Recruitment Platform For Targeted Immunomodulation

Corrine Ying Xuan Chua, *Houston Methodist Research Institute*

Human Tendon Stem Cell-inspired NanoVesicles (TSC-iNVs): an innovative therapeutic tool for Tenomodulin protein delivery in tendinopathy

Maria Camilla Ciardulli, *Translational Nanomedicine Laboratory, University of Salerno*

Targeted autophagy activation in tumor-draining lymph nodes via albumin-hitchhiking strategy for enhanced antitumor immunotherapy

Qin He, *West China School of Pharmacy, Sichuan University*

A novel immune stimulating antibody conjugate (ISAC) against CD47 for cancer immunotherapy

Byoungjae Kong, *University of Maryland School of Medicine*

Ultrasound as a noninvasive selective skin cancer therapy

Joseph Kost, *Ben-Gurion University*

Age-associated disparity in phagocytic clearance affects the efficacy of cancer nanotherapeutics

Wen Jiang, *University of Texas MD Anderson Cancer Center*

Modulation of Nanoparticles' Interaction with Human Placenta

Hagar Labouta, *University of Toronto, University of Toronto*

Enabling Intramuscular Injections for Nerve Regeneration In Vivo

Jessica Larsen, *Clemson University*

Catalyzing Therapeutic Breakthroughs: Engineering Targeted Extracellular Vesicles for Liver Fibrosis Treatment

Revadee Liam-Or, *King's College London, University of Hong Kong*

Smart Wound Dressing for Infected Wound Healing and Monitoring Applications

Zong-Hong Lin, *National Taiwan University*

Development of the Conjugated-Antibody Specificity Assay for Mechanistic Determination of Antibody-Drug Conjugates and Real-Time Drug Release Visualization

Molly Major, *University of Utah*

Advanced multilayer islet encapsulation incorporating CTLA-4 and ZnO nanoparticles for localized immunomodulation

Ahlem Meziadi, *McGill University*

Enzyme-catalyzed depots for biological therapeutics

Lorenz Meinel, *Institute of Pharmacy and Food Chemistry, Helmholtz Institute for RNA-based Infection research*

Aliphatic Polycarbonate Block Copolymers as Biodegradable Nanocarriers for (Immuno-)Drug Delivery

Lutz Nuhn, *Julius-Maximilians-Universität Würzburg*

Synergistic Strength: Chitosan-conjugated Antimicrobial Peptides Reshaping the Battle against ESKAPE Pathogens

Viorica Patrulea, *University of Geneva, University of Oxford*

Comparison of protein corona on mRNA lipid nanoparticles

Elizabeth Voke, *UC Berkeley*

Orally cascade targeting delivery systems alleviate colitis by protecting mitochondria and regulating gut microbiota

Liyun Xing, *Key laboratory of Drug Targeting and Drug Delivery System (Ministry of Education), West China School of Pharmacy, Sichuan University.*

Delivery Technologies for Diversified Products

High yield production of ferromagnetic and biodegradable microrobots

Gulsen Aybar Tural, *Ege University, Max Planck Institute for Intelligent Systems*

Nasal breath intake of antiviral powder against airborne infections

Sabrina Banella, *University Of Ferrara*

Novel microplastic-free microcapsules using interfacial self-assembly of bis-urea molecules

Siddhant Bhutkar, *University of Birmingham*

Multi-method approach to study the impact of major stressors on hair health: development of targeted hair cosmetic products

Camilla Elena Di Bella, *University "G.d'Annunzio" Chieti-Pescara, Recusol srl*

Integrated microfluidic manufacturing platform for lipid-based DDS: micro-mixer, rapid flow dialysis and lipid synthesizer

Kim Dong-Pyo, *postech*

Impact of Lipid Composition on Maintaining Bioactivity of mRNA-LNPs in Thermostable mRNA-Vaccines

Behnaz Eshaghi, *MIT*

Water-Insoluble α -Glucan Polysaccharide Nanoparticles for Controlled Release of Compounds

Kervin Evans, *USDA*

Electrospun Yarns with Controlled Release of Ciprofloxacin for Surgical Suture Applications

José Lagaron, *CSIC*

Ultra-long-acting Injectable, Biodegradable, and Removable In-situ Forming Implant with Cabotegravir for HIV Prevention

Thy Le, *North Carolina State University and The University of North Carolina at Chapel Hill*

Development of drug-loaded orodispersible films with controlled release by direct powder extrusion 3D printing

Giuseppe Racaniello, *University of Bari*

Lipid submicron particles designed to deliver peptide to epidermis

Renata Raffin, *Croda*

Two-dimensional inhibition of SARS-CoV-2 by inhaling ACE2-targeting peptide-modified remdesivir nanoemulsions

Xun Sun, *Sichuan University*

Delivery to the Nervous System

Improving Drug Delivery to Brain Tumors Using Nonspherical Microbubbles, Ultrasound and Multidrug Micelles

Anshuman Dasgupta, *RWTH Aachen*

Biomass-derived polymers in the development of nose to brain delivery platforms.

Michele Guida, *National Research Council*

Development of protein nanocage-based immunomodulatory strategy to enhance the immunotherapy of malignant brain tumors

Daiheon Lee, *University of Maryland, School of Medicine*

GD2-PEG Bispecific Antibodies Influence Delivery and Efficacy of siRNA Lipid Nanoparticles in Neuroblastoma

Amy Logan, *Children's Cancer Institute, University of New South Wales*

Donepezil nanoemulsion induces a torpor-like state in non-hibernating tadpoles

Maria Plaza Oliver, *Wyss Institute at Harvard University, Vascular Biology Program & Department of Surgery, Boston Children's Hospital and Harvard Medical School.*

Anti-inflammatory Microparticles to tackle Neurodevelopmental Disorders

Corinne Portoli, *Italian Institute of Technology*

Gene Delivery and Gene Editing (GDGE – FG)

Advancements in mRNA Delivery Strategies: pioneering the future of therapeutics by ionizable lipid and biodegradable polymer-based Stability Enhanced Nano Shell (SENSTM) platform technology

Helen Cho, *Samyang Holdings*

Bioorthogonal conjugate platform development for in vivo gene editing and therapy

Hyun Jung Chung, *KAIST*

Lipid Nanoparticle Formulation Characterization: Bridging the Gap from R&D to GMP

Sergio Esteban Pérez, *Curaphath*

Investigating The Role of Hypoxia on the Efficacy and Mechanism of mRNA Lipid Nanoparticles

Owen Fenton, *University of North Carolina at Chapel Hill*

Extracellular Vesicle based in vivo Delivery for Targeted Gene Therapy

Mei He, *University of Florida*

Tardigrade-based mRNA therapy for radioprotection

Ameya Kirtane, *Brigham and Women's Hospital*

Genetic engineering of megakaryocytes from blood progenitor cells using mRNA lipid nanoparticles

Jerry Leung, *University of British Columbia*

Construction of novel EPC derived exosomes for efficient drug delivery and its targeted therapy for rheumatic heart disease

Ni Li, *Ningbo Medical Centre Lihuli Hospital, Zhejiang University*

Harnessing RNA Technology To Advance Therapeutic Vaccine Antigens Against Chagas Disease.

Chiara Mancino, *Houston Methodist Academic Institute*

Exploring mRNA vaccine using lipid nanoparticles: the involvement of muscle cells

Mathieu Repellin, LAGEPP_University of Lyon, PULSALYS

Genetic Engineering of Transfusable Platelets with mRNA-Lipid Nanoparticles is Compatible with Blood Banking Practices

Colton Strong, University of British Columbia

Global Health and Special Populations

Formation of a gastrointestinal biomolecular corona on drug particles

Ben Boyd, University of Copenhagen, Monash Institute of Pharmaceutical Sciences

Multi-drug compartment nanofibrous patch for treatment of Cutaneous Leishmaniasis

Rebecca Byler, Yale University, CIDEIM

Pharmacokinetic Assessment and Mucosal Toxicity Study of Vaginal Multipurpose Prevention Technology

Trinette Fernandes, SVKM's Dr Bhanuben Nanavati College of Pharmacy (Pharmaceutics)

Bioengineered colorimetric pH-sensing bandage for point-of-care wound diagnostics

Simon Matoori, Université de Montréal

An ultra-low-cost handheld electroporator for intradermal delivery of mRNA

Pankaj Rohilla, Georgia Institute of Technology

Inhalable siRNA-containing Dry Powder Formulation for Treating Severe Type 2 Asthma.

Benjamin Winkeljann, Ludwig-Maximilians-University Munich, RNhale GmbH

Mannosylated cationic glycopolymers as pDNA delivery systems for cancer immunotherapy

Marco Zanon, University of Padova

Immuno Delivery (ID - FG)

Tumor-targeted Nanocytokine Boosts Anticancer Immunity through pH-Triggered Inflammation

Horacio Cabral, The University of Tokyo, Innovation Center of Nanomedicine

Quality assessment of LNP-RNA therapeutics

Jocelyn Campa Carranza, Houston Methodist Research Institute, Tecnológico de Monterrey

Immunoprotection of pancreatic islet transplants through localized immunosuppressant delivery

Luigi Calzolari, European Commission, Joint Research Centre

Principles for Enhancing the Stability of Cytokines in Polymeric Nanoparticle Delivery Platforms

Nicole Day, University of Colorado Boulder

Refining the Immunomodulatory Properties of pBAE mRNA nano-vaccines through precise Sub-Particle Component Structuring and Interaction with Biologicals

Cristina Fornaguera I Puigvert, Institut Químic de Sarrià (IQS), Universitat Ramon Llull (URL)

Controlled delivery and activation of CAR T cells x2

Sarah Hook, University of Otago

Collagen binding interleukin-12 shows specific delivery to the tumours, showing decreased side effects and increased anti-tumour efficacy after intravenous injections

Jun Ishihara, Imperial College London

Engineering nanoparticle systems to target lymphatics and their underlying cellular mechanisms

Katharina Maisel, University of Maryland

Lyophilized lymph nodes for improved delivery of chimeric antigen receptor T cells

Jiaqi Shi, Zhejiang University

Programming Naïve Primary T Cells for Enhanced Immunotherapy

Ankur Singh, Georgia Institute of Technology

mRNA Lipid Nanoparticles for the Engineering of Immunosuppressive T cells for Autoimmunity Therapies

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Enhancing Personalized Cancer Vaccination: Effective Tumor Control with MHC Class I and Class II Neoepitopes formulated in Cationic Liposomes

Koen van der Maaden, LUMC

Targeted and efficient mitochondrial delivery using engineered stem cells: A novel strategy for pulmonary fibrosis intervention

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Hyukjin Lee, *Ewha Womans University*

Play it Nano: Assessing the power of music in enhancing brain nanoparticle uptake

Patricia Mora-Raimundo, *Technion Israel Institute of Technology*

Exploring the interface between pulmonary surfactant and RNA inhalation therapy

Koen Raemdonck, *Ghent University*

Lipid nanoparticle formulations of a triple adjuvant to enhance the immunogenicity of intranasally delivered subunit vaccines

Ellen Wasan, *University of Saskatchewan (College of Pharmacy and Nutrition)*

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Design and evaluation of insulin granule-loaded microPLates: a novel approach for type 1 diabetes management

Greta Avancini, *Fondazione Istituto Italiano di Tecnologia*

Next Generation 3D-Printed MPT Intravaginal Ring for Prevention of STIs and Unintended Pregnancy.

Rahima Benhabbour, *University of North Carolina at Chapel Hill, University of North Carolina*

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Kimberley Biggs, *Massachusetts Institute of Technology*

Injectable thermosensitive hydrogel for cardiac delivery of therapeutics

Cristina Casadidio, *University of Camerino, Utrecht University*

A combined nanomedicine exerts synergetic fibrinolysis for the targeted treatment of venous thromboembolism

Matilde Durán-Lobato, *Universidad de Sevilla*

3D-printed vaginal inserts for controlled progesterone release

Simone Eder, *RCPE GmbH*

5D3(CC-MLN8237)3.2 as a novel antibody-theranostic conjugate for PSMA(+) prostate cancer therapy.

Sudath Hapuarachchige, *The Johns Hopkins School of Medicine, The Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins Medicine*

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Nilesh Mahajan, *Dadasaheb Balpande College of Pharmacy*

EP-104, A NOVEL MICROPARTICLE FORMULATION ACHIEVING EXTENDED-RELEASE OF FLUTICASONE PROPIONATE

Amanda Malone, *Eupraxia Pharmaceuticals*

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Kevin McHugh, *Rice University*

Shape Memory Scaffolds loaded with antibiotic drug to prevent infection onset after implantation

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Viviane Doggwiler, *dsm-firmenich*

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Patrick Duffy, *Ashland*

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Human Leukocyte Antigen-free Biomimetic Proteolipid Vesicles as a donor-independent delivery platform for overcoming alloreactivity

Pasqualina Scala, *University of Salerno*

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A unique spleen-targeted antigen delivery system to obtain antigen-specific antibodies

Hidenori Ando, *Institute of Biomedical Sciences, Tokushima University, Innovative Research Center for Drug Delivery System, Institute of Biomedical Sciences, Tokushima University*

Enhanced antitumor efficacy of Liposomal Doxorubicin against melanoma with a tumor-homing peptide

Leila Arabi, *School of Pharmacy*

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Innovative Intranasal SARS-CoV-2 Vaccine: Exploiting TLR Agonist with Carbohydrate-Functionalized Chitosan Nanoparticles

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Exploiting the protein corona for plasma proteome profiling in diagnostics

Claudia Corbo, *University of Milano Bicocca*

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Richard d'Arcy, *Arizona State University, Vanderbilt University*

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Emmanuel Dauty, *Adocia*

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Nicole Day, *University of Colorado Boulder*

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Gabriele De Rubis, *University of Technology Sydney, University of Technology Sydney*

Resolving sepsis-induced immunoparalysis via trained immunity by targeting interleukin-4 to myeloid cells

Jeroen Deckers, *Radboud University Medical Center, Eindhoven University of Technology*

Combining retinoic acid and calcitriol delivery via the nose-to-brain pathways resulted in the recovery of mature oligodendrocyte population in a demyelination cuprizone model.

Anne des Rieux, *UCLouvain*

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Inês Domingues, *Université Catholique de Louvain*

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RAVIOLI: A Hyaluronic Acid-Based Platform for the Treatment of post-traumatic Osteoarthritis

Antonietta Greco, *University of Milano Bicocca, Istituto Italiano di Tecnologia*

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Irene Guerriero, *Fondazione Istituto Italiano di Tecnologia, University of Genoa*

Urease-Powered Nanomotor Containing STING Agonist for Bladder Cancer Immunotherapy

Sei Kwang Hahn, *POSTECH*

Co-delivery of TRAIL and paclitaxel by fibronectin-targeted nanodisk for effective treatment of lung melanoma metastasis

Shiqi Huang, *Sichuan University*

Lipid Vesicles Offer a Selective Splenic Targeting Strategy for Peripheral Immunomodulation Following Ischemic Stroke
Satinderdeep Kaur, Nottingham Trent University

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Long-Term Removable and Degradable Implants for Contraception in Resource-Limited Areas
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AMPK activator 991-loaded Nanoparticles for the treatment of Duchenne Muscular Dystrophy
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Engineered Extracellular Vesicles for Drug Delivery Platform
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Intermittent fasting enhances nanomedicine tumour targeting
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Combining two strategies to modulate the tumor microenvironment and optimize efficacy of nano-immunotherapy
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Polymeric micelles loaded with Pirfenidone enhance immunotherapy in murine tumor models
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Designing Platinum Prodrugs for Cancer Nanotherapy
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Nanomedicine-enabled Methylprednisolone Prodrug Promotes Neuroprotection and Functional Recovery and Mitigates Adverse Effects After Acute Spinal Cord Injury in Rats
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Forward genetic screening to identify receptors and proteins involved in nanoparticle uptake and intracellular trafficking
Anna Salvati, University of Groningen

Urease-powered nanobots for radionuclide bladder cancer therapy
Meritxell Serra-Casablanca, Institute for Bioengineering of Catalonia (IBEC)

Predicting Meta-Synergy and High Complexity Combinations in Cancer Nanomedicine with Artificial Intelligence
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Sequential cancer therapy and wound healing by a bismuth sulfide/allantoin loaded injectable hydrogel
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A pH-sensitive nanoparticle enables efficient delivery of Glucose oxidase and apoptosis-based anti-cancer agents for effective cancer therapy in Hepatocellular Carcinoma.
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Smart polymersomes: pH-responsive nanocarriers for improved intestinal delivery of immunosuppressants.
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Opportunities and challenges in nanofiber-based controlled drug delivery systems
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Antifibrotic drug delivery theramem prevents corneal scarring

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Bioinspired contact lenses that deliver antioxidant agents

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Lipid nanoparticles for non-immunogenic mRNA delivery to the retina

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Lipidic drug delivery systems: is the microbiome a cause for concern?

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Microneedle-assisted topical delivery of baricitinib for the treatment of alopecia areata

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357: A unique immunization method to induce antibodies: intravenous administration of PEGylated exosomes with splenic uptake

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358: Graphene oxide nanosheets as 2D transporters for cancer immunotherapeutics

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361: Antigen/adjuvant-free liposome induces adjuvant effects for enhancing cancer immunotherapy

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381: pH-Responsive Macromolecular Strategies for Enhancing Immunotherapy Responses

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484: Boron-loaded bio-vesicles for BNCT of glioblastoma

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493: Protein-bound cisplatin may increase therapeutic index for cisplatin by reducing its adverse effects

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851: Anticipating A New Wave of HPMA-based Copolymer-drug Conjugates: Recent Progress and Perspectives in Cancer Therapy
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857: o-Carborane-entrapped polymeric Micelles for Proton Boron Capture Therapy
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858: Lipid-mediated protein corona regulation with increased Apo A-I recruitment for glioma targeting
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859: The dual-target nanoparticles with ROS sensitivity inhibit the hedgehog signaling and decrease oxidative stress in activated hepatic stellate cells to alleviate liver fibrosis
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861: Intelligent carrier-free nanoparticles for enhancing cascade photothermal therapy and personalized immunotherapy against triple-negative breast cancer
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963v: Low viscosity HPCs in organic solvent-based spray-freeze-dried particles

Jan Kozak, *University of Bonn*

965: Optimization of Formulation Parameters and Chemical Interactions for Nutraceuticals Delivery: Nanocarriers Incorporating Anionic/Cationic Phospholipid and L-Arginine/ Vitamin C by Microfluidic Technology.

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966: Development of sustained-release metformin hydrochloride gastroretentive drug delivery system through semisolid extrusion 3D printing

Eung Yeop Lee, *Kyungpook National University*

967: Discovery of ferroptosis inhibitor L190 as a drug candidate against ischemic stroke: Structural modification led to significant improvement in blood-brain barrier permeability

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969: Improving the solubility of tamoxifen, a grease ball molecule, using lipid-based formulation

Sonia Lombardo, *Seqens*

970: Amorphous solid dispersion of Palbociclib produced by HME to improve its solubility

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972: Tuning mucoadhesive properties of oral drug delivery systems using pectins

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973: In vitro and in vivo characterization of optimized SYLOID based solid dispersion of Neratinib maleate

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974: Development and characterization of solid amphotericin B granules to enhance oral bioavailability

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975: Silencing of TNF α in Inflammatory Bowel Disease Treatment through a dual-shielding strategy via bioadhesive beads

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976: Development of biodegradable foils for in vivo oral drug delivery

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977: Co-encapsulation of probiotics and mesalazine via spray-drying in colon-specific microparticles for ulcerative colitis treatment

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978: Novel fabrication method of biodegradable microcontainers for oral drug delivery

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979: Modification of mechanical properties of microcrystalline cellulose (MCC) by loading it with a plasticizer

Artūrs Paulausks, *Rīga Stradins University*

980: Taste-Masked Pellets of Sodium Warfarin: Formulation Toward the Dose Personalization

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981: Development and characterization of ternary solid dispersion of Ziprasidone hydrochloride for improving dissolution and key physicochemical properties.

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982: Development of Hydrophilic Matrix Polymers Using Polyvinyl Alcohol for Sustained Release Tablets

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983: Swellable and Microbially-Degradable HM Pectin Coatings for Oral Colon Drug Delivery

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984: Downstream Processing of HPMCAS-based Amorphous Solid Dispersion (ASD) of Fenofibrate: From Hot-Melt Extrudate to Tablet

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987: Enteric delivery of salmon calcitonin using lipomer based oral mixed micelles: Computational-assisted prediction and In vivo evaluation

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988: Application of Virtual Bioequivalence for Complex Formulation Optimization: Tofacitinib Case Study

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990: Restoring Efficacy: Antimicrobial Peptide-Modified N-acetylcysteine-Chitosan Nanoparticles Counter Clinical Isolates of Mycobacterium tuberculosis

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991: Understanding the composition and dry granulation process parameters to develop amorphous solid-dispersion based immediate release tablets

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994: Modified release of Bupropion from 3D printed tablets with Braille patterns for visually impaired patients

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995: Modified release of 3D-printed melatonin tablets with Braille patterns designed for individuals with visual impairments

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996: Transforming liquid nanosuspensions into solid products for oral administration: a preliminary feasibility study

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999: Summary of Learnings Arising from the 2023 CRS Virtual Symposium: Oral Delivery of Peptides, Proteins, and Oligonucleotides

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1000: Enhancing In Vitro Intestinal Models: Multi-Compartmental Organ-on-Chip Approach to Investigate Mucosal Pathogen Interactions

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1001: New High Molecular Weight HPC Enables Smaller Modified-Release Tablets for Improved Efficacy and Patient Compliance

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1002: Evaluating the Versatility of Klucel™ Xtend HPC in Dual Active Allergy Relief Extended-Release Dosages

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1003: Orally Administrable Solid Lipid Nanoparticles Loaded with Acalabrutinib (ACP) for Management of Hematological Malignancies.

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1005: 3D printing of swelling-restricted floating systems for gastric retention

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1006: Anionic liposome formulation for oral delivery of thuricin CD, a potential antimicrobial peptide therapeutic

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1007: Developing Self-nanoemulsifying Drug Delivery Systems (SNEDDSs) Comprising an Artemether-Lumefantrine Fixed-Dose Combination to Treat Malaria

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1024: Delivery of Viable Probiotic to the Respiratory Tract as Powder for Inhalation

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1027: Strategic development and evaluation of microneedles for the ex vivo transdermal delivery of tizanidine in the management of muscle spasm

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1029: Self-assembled brush-block copolymer-based nanoparticles enable tunable mucoadhesion/ mucopenetration

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1030: Innovative Transfersome-Microneedle System for Controlled Rose Bengal Delivery in Cancer Therapy.

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1031: Preparation and evaluation of Deferoxamine loaded alginate/ chitosan hydrogel on diabetic wound.

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1032: Phytocompound-loaded ethosome to counteract environmental stressor skin damage

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1033: Dimethyl fumarate loaded ethosomal gel to counteract HSV-1 infections

Elisabetta Esposito, University of Ferrara

1034: Skin anti-aging carrageenan gel containing SNEDDS loaded with Sichuan pepper extract.

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1035: Delivering psychedelic drugs transdermally using microarray patches

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1037: Evaluation of the anti-melanoma activity of thermoresponsive bioadhesive platform for topical quercetin release

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1045: Drug-free microneedles for abnormal scars

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1046: Transdermal delivery of ceftazidime via hydrogel-forming microneedles combined with drug loaded reservoirs for the treatment of nosocomial infections caused by *Pseudomonas aeruginosa*

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1047: Microneedles for rapid and sustained co-delivery of acetaminophen and caffeine for migraine

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1048: Assessment of Microneedle Array Insertion into Skin using Raman Spectroscopy

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1056: Mucoadhesive spray freeze dried microparticles: impact of stabilizers on product quality attributes

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1057: Design and development of novel non-propellant foam-based formulation for effective burn related wound healing

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1058: Investigating the Efficacy of Intradermal Immunization with VZV gE Vaccine Using Various Microneedle Types and Comparing Effectiveness with Intramuscular Injection

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1059: Design of a novel delivery efficiency feedback system for biphasic dissolving microarray patches based on poly(lactic acid) and moisture-indicating silica

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1060: Dissolving microneedle system containing Ag nanoparticle-decorated silk fibroin microspheres and antibiotics for synergistic therapy of bacterial biofilm infection.

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1061: A novel insight into transdermal delivery of anti-Parkinson's agents: Dissolving microarray patch with enhanced rotigotine delivery in comparison to the conventional Neupro® patch

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1062: Adipocyte-targeting Oligopeptoplex-loaded Self-locking Microneedles for Anti-obesity Gene Therapy

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1063: Microneedle Loaded with Cortex Dictamni Exosomes for Alleviating Atopic Dermatitis

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1064: Transdermal Delivery of Bacteria-derived Extracellular Vesicles incorporated into Plant-based Microneedles capable of foster Cardiac Tissue Regeneration through the augment of M2-type Macrophages.

Maria Lobita, *UMCG*

1065: Development of an antiviral hydrogel-forming microneedle delivery system for hepatitis B treatment

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Annalisa Martorana, *Fondazione Ri.MED*

1069: Is keratin spinnable with air?

Ana Matos, *Università degli studi di Urbino "Carlo Bo"*

1070: Cyanocobalamin-loaded Dissolving Microneedles for anti-inflammatory topical therapies: in vivo performance in delayed type hypersensitivity murine model

Ana Melero, *Universidad de Valencia*

1073: Low-cost generation of inhalable nitric oxide by controlled flow reduction of nitrite ions.

Hannah Naldrett, *University of Michigan*

1074: Fabrication of hydrogel-based microneedles for drug delivery

Line Hagner Nielsen, *Technical University of Denmark*

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Carla Nomura, *Tecnologico de Monterrey*

1076: Production and characterization of microparticles-based microneedles for melasma treatment

Daniela Orefice, *Italian Institute of Technology, University of Naples Federico II*

1077: Thermosensitive hydrogel containing Curcumin-loaded nanomicelles for skin cancer treatment

Valentina Paganini, *University of Pisa*

1078: A trilayer microneedle patch for transdermal delivery of the peptide salmon calcitonin for osteoporosis therapy

Anjali Pandya, *Queens University Belfast, Institute of Chemical Technology*

1079: Particle-mediated transport of dissolved active agents into hair follicles

Anna Lena Klein, *Philipps-Universität Marburg*

1080: Design of new-generation nanoparticles for topical atopic dermatitis therapy

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Sebastian Polak, *Certara UK, Jagiellonian University Medical College*

1083: Development and in-vitro evaluation of bupropion 3D-printed mucoadhesive buccal films

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1084: Rebalancing immune homeostasis through endogenous immune modulator prodrug-based nanomicelle microneedles for the alleviation of psoriatic inflammation

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1085: Influence of lemongrass oil on the dermal penetration efficacy of lipophilic active pharmaceutical ingredients

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1086: Utilizing Fluorescence Microscopy and Digital Image Processing to Predict Ocular Penetration of Active Compounds Ex Vivo: A Feasibility Study with Curcumin Formulations

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1088: Development and Formulation of crocetin containing nanogel for the treatment of skin cancer

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1089: Antibacterial electrospun wound dressing with flame-made Ag/SiO₂ nanoparticles

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1093: Microneedle Patch for Delivery of mRNA Vaccines and Therapeutics

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1099: Influence of dimethylsulfoxide on the size of artificial corneocytes over time

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1100: Controlled release of Quercetin from self-assembled chitosan films reinforced with Silver nanoparticles-stabilized Pickering emulsions for full-thickness skin wound tissue regeneration

Garima Sharma, *Kangwon National University*

1101: Polyvinyl acrylate/casein dressings for cancer related wounds

Diana Silva, *Centro de Química Estrutural (CQE), Institute of Molecular Sciences, Departamento de Engenharia Química, Instituto Superior Técnico (IST), Universidade de Lisboa, CIEM, Instituto Superior de Ciências da Saúde Egas Moniz, Campus Universitário, Quinta da Granja, Monte de Caparica*

1102: Associating poly(oxazoline)s with lipids to design nanoformulations for improved skin delivery

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1103: Development and Evaluation of Controlled Release Responsive Antibiotic Delivery Systems

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1104: Optimisation of design towards an oscillating hollow MN device for transdermal insulin delivery in Type 1 diabetes mellitus

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1105: High-throughput design and manufacture of microneedles for personalised intradermal drug delivery

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1106: Personalized Transdermal Treatment via Inkjet-Printed Temporary Tattoos

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1107: Investigating permeability characteristics of porcine esophageal mucosa: A viable ex vivo model for human buccal mucosa

Renugadevi Srinivasan, *Malmö University*

1108: B7-33 Loaded Electrospun Dressing for the Management of Hypertrophic Scars in Burn Injuries

Martina Tamburriello, *University of Pavia*

1110: Inhaled administration of Poly(beta aminoester) nanoparticles: a comprehensive analysis of mucus – NPs interaction. A. Torres-Coll*, S. Borrós and C. Fornaguera Grup d'Enginyeria de Materials (Gemat), Institut Químic de Sarrià (IQS), Universitat Ramon Llull (URL); Barcelona, Spain
Antoni Torres Coll, *INSTITUT QUÍMIC DE SARRIÀ (IQS), UNIVERSITAT RAMÓN LLULL (URL)*

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1116: Transdermal administration of donepezil using microarray patches as a potential treatment for Alzheimer's disease

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1118: Walnut shells as novel carrier for improved dermal drug delivery of poorly soluble drugs

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1135: Vaginal administration of mucoadhesive 3D printed ovules for endometriosis treatment: drug repurposing and biorelevant assay development

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1137: A Call to Action: Diverse Cancer Models in a Globalized World

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1159: Self-Assembled Micelles of Disulfide Bond-containing N-alkylated PEG and β -Cyclodextrin Inclusion: A Reactive Oxygen Species-Responsive Nanocarrier for Atherosclerosis

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1163: Development and characterization of fixed-dose curcumin-hesperetin amorphous dispersions

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1164: Pulmonary administration of antibiotic nano-emulsion to treat gram-negative bacteria infections

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1182: A new option towards hair pigmentation through formulation development using 3D printed hollow microneedles

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1183: Matrix metalloproteinase-sensitive hybrid hydrogel synergistic with immunogenic cell death for post-operative combination immunotherapy

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1184: Innovative Solid Lipid Nanoparticles for Improved Breast Cancer Therapy via Targeted Co-Encapsulation of Docetaxel and Curcumin

Simrandeep Kaur, *University Institute of Pharmaceutical Sciences*

1185: Combining robotics and AI to generate therapeutic synthetic cells

Noga Sharf Pauker, *Technion*

1186: Impact of amphotericin B aggregation state in the loading and release kinetics in contact lenses

Dolores Serrano, *Universidad Complutense de Madrid*

1187: Localized baricitinib delivery via in-organic nanoparticles loaded dual-responsive hydrogel for rheumatoid arthritis therapy.

Marwa Sallam, *Brown University*

1188: Poly (vinyl alcohol) elution from commercial contact lenses

Manish Shukla, *University of Waterloo*

1191: Microparticle uptake patterns correlate with drug sensitivity in leukemia

Ora Cohen, *The Hebrew University of Jerusalem*

1192: Asthma-Derived Extracellular Vesicles Promote IgE-Independent Mast Cell Activation

Do-Kyun Kim, *Jeonbuk National University*

1193: Development of Indocyanine-green loaded PLGA microspheres for long-term fluorescence marking of target tissues

Hyoung-Jun Kim, *National Cancer Center*

1194: FUJIFILM CDMO Activities Dedicated to Liposome Formulation. From the Predicted Character of the Liposomal Drug through in silico Simulation to GMP-Compliant Manufacturing

Mikinaga Mori, *FUJIFILM Corporation*

1195: NanoPULSE: An Innovative Microfluidics-Based Active Mixer for Synthesizing Organic Nanoparticles, Providing Highly Controllable and Consistent Particle Characteristics across Scale-up Stages, from Low-Volume Screening to Large-Scale Production

Elio Gereige, *Inside Therapeutics, Université d'Angers*

1196: Utility of edible plant-derived exosome-like nanovesicles as a novel delivery platform for the vaccine development.

Young-Eun Cho, *Andong National University*

1197: Release and bioaccessibility of a BCS Class II compound formulated as immediate-release and extended-release oral dosage forms during transit through the TIM-1 dynamic gastrointestinal model.

Thamar Gerritse, *InnoGI Technologies*

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Yulian Zhang, *Triastek, Inc.*

1199: Integrating bioaccessibility data from the tiny-TIMsg advanced in vitro gastrointestinal model into a physiologically based biopharmaceutics model (PBBM) of a BCS class IV compound to predict pharmacokinetic (PK) performance

Vanessa Mancini, *InnoGI Technologies*

1201: Characterising the dynamics and organisation of claudin-5 following sonoporation induced by low-intensity focused ultrasound and microbubble combination treatment

Jonathan Lee, *University of Queensland*

1203: Optimization of Apigenin stabilized gold nanoparticle synthesis as Targeted drug delivery for cancer therapy

Wael Mahdi, *King Saud University*

1204: An environment-adaptive nanoparticles increases the differential response between normal and tumor tissue to radiation

Qiongwei Wang, *Zhengzhou University*

1205: Investigation of biorelevant dilution as a driving force for nanoemulsion drug release at the ocular surface

Jasmina Lovric, *University of Zagreb, Faculty of Pharmacy and Biochemistry*

1207: Albumin-Based Nanostructures as Carriers of Nucleic Acids and Drugs

Álvaro Somoza, *IMDEA Nanociencia*

1209: Branched polymer-based in situ forming depots with improved injectability and drug release kinetics

Maarten van Dijk, *InnoCore Pharmaceuticals*

1210: Bioinspired Polymer Platform for Biodegradable, Label-Free MRI Nanotheranostics

Timo Rheinberger, *University Twente, Phos4nova B.V.*

1211: Cellular Toxicity of Organic and Inorganic Nanoparticles: Exploring Beyond Cell Metabolic Activity

Collin Wall, *Auburn University*

1214: Development of Robust and Customizable Zero-Order Release Push-Pull Osmotic Tablets

Ali Rajabi-Siahboomi, *Colorcon, Inc.*

1215: Polyethylene glycol (PEG) as a broad applicability marker for LC-MS/MS-based biodistribution analysis of nanomedicines and advanced therapeutics

Sven Even Borgos, *SINTEF*

1217: Enzyme-powered anisotropic nanoparticles for mucosal drug delivery

José das Neves, *I3S – Instituto de Investigação e Inovação em Saúde, Universidade do Porto, IUCS – Instituto Universitário de Ciências da Saúde, CESPU*

1218: Oral Delivery of Protein Drugs via Nanocarriers Functionalized with ZOT-Derived Peptide and Chitosan

Jonghyun Lee, *Daewoong Pharmaceutical*

1219: 7-Nitroindazole Sustained Release for Autism Treatment

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Awanish Kumar, *Hebrew University of Jerusalem*

1221: Development of pH-Sensitive Liposomes Loaded with a Carbonic Anhydrase-Telomerase Dual-Hybrid Inhibitor as an Anticancer Agent

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1222: Development of thermosensitive hydrogel-based fluorescence tissue marker for long-term marking of target tissues

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1226: Tolerogenic Nanovaccine for Immunotherapy in Rheumatoid Arthritis

Yina Wu, *Seoul National University*

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1230: Development of P(DMAEMA-co-SMA) polyplexes through 3D-printed microfluidic device

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1233: Development of solid lipid nanoparticles containing budesonide for Crohn's disease based on the quality by design (QbD) approach

Mazen Al-Mohaya, *Institute of Health Sciences*

1234: Hybrid vesicles production using Bifidobacterium bifidum derived extracellular vesicles and milk exosomes

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Mariana de Oliveira, *State University of Maringa*

1237: Determination of mucoadhesive properties of emulsion systems containing copaiba oil-resin.

Mariana de Oliveira, *State University of Maringa*

1238: Exploiting a sphingosine kinase 1 inhibitor nanomedicine to treat acute myeloid leukemia

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1240: Establishing a retinal targeting nanoparticle delivery system in ex-vivo and in-vivo models

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Antonella Vitiello, *University of Naples Federico II*

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Mario Grassi, *University of Trieste*

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Mario Grassi, *University of Trieste*

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Robin Oliveres, *Inside Therapeutics*

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Farah El Mohtadi, *Portsmouth University*

1250: Efficient Generation of PLGA Particles Using the Dolomite Mitos System for Precision Drug Delivery Applications

Mei Wu, *Dolomite Microfluidics (Unchainedlabs)*

1251: Elucidating ligand-mediated lumen-to-tumor drug delivery mechanism for the precise local treatment of colorectal cancer

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1252: Formulation and In Vitro Evaluation of High-Density and Magnetic Gastro Retentive Drug Delivery System of Sulpiride

Jiyauddin Khan, *Management and Science University*

1254: Industrial perspective on deriving critical quality attributes of AAVs and LNPs and translation from research into development

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1257: Bioluminescent labeled EVs produced through a high-throughput isolation technique

Felicia Roffo, *University of Naples Federico II*

1258: 3D printed biopolymeric implantable devices for post-surgical pain control

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1259: Metabolic reprogramming of macrophages using 4-Octyl Itaconate Liposomes Resolves NASH

Tarun Ojha, *Institute for Experimental Molecular Imaging, Translational Liver Research*

1260: Facilitating Drug Delivery Across Biological Barriers: The Potential of CD300f-derived F7 Peptide

Fernanda Andrade, *Vall d'Hebron Research Institute*

1261: A Facile Loading Method for Amphotericin B Contact Lenses for Infectious Keratitis

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Andrew Clark, *DigiM Solution LLC*

1263: Bioadhesive antiinfective microparticles for prosthetic joint infections

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Aikaterini Lalatsa, *University of Strathclyde*

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Diana Rafael, *Vall D' Hebron Research Institute*

1266: Clinical Assessment of Periodontitis Therapy Utilizing the Curcumin Solid Lipid Nanoparticle Hydrogel System: A Pre-Clinical Design

Navjot Sharma, *Panjab University*

1267: Synergistic Nano Theranostics Approach Integrating Docetaxel and Curcumin loaded Lipidic NPs with RGD Peptide Quantum Dot for Breast Cancer

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Bakr Hameed, *Panjab University*

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Milad Jafari, *Varian Pharmed Pharmaceutical Co., Central Tehran Branch, Islamic Azad University*

1270: How PLGA-based in situ forming implants degrade in-vitro and in-vivo

Saeid Bazraei, *Varian Pharmed Pharmaceutical Co., Iran Polymer Institute*

1271: Accelerated Triptorelin acetate release from in-situ forming implants

Saeid Bazraei, *Varian Pharmed Pharmaceutical Co., Iran Polymer Institute*

1272: Synthesis and characterization of novel lipoplex loaded PLGA Microparticles (MPs) for posterior segment eye (PE) delivery.

Ayah Burhan, *Ocular Therapeutics Research Group, Pharmaceutical and Molecular Biotechnology Research Centre, SouthEast Technological University, X91 K0EK Waterford, Ireland, Waterford, Ireland*

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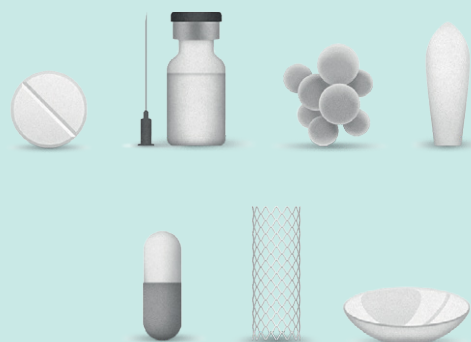
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