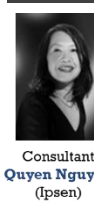


## Group of Metabolism and Pharmacokinetics

GMP is an organization gathering together scientists from the industry or the university involved in the practice of bioanalytic, pharmacokinetic and metabolism studies, whatever the areas of application (pharmacy, agro-chemistry, agro-veterinary, environment).

### EDITED BY GMP BOARD 2020

### NUMBER 6



## EDITORIAL

Dear colleagues, dear members,

despite the pandemic, life of GMP is going on. Hence, we had to bring ourselves to transform our traditional **annual face-to-face work meeting into a visioconference**, as you will see below: work was serious and efficient, but we fairly missed the relaxing times which are usually a pleasant part of it. You will also find out, in the form of a testimony, why Antoine Coquerel could not be among us on that day.

Some projects unfortunately needed to be cancelled, but we expect many of you for the **sessions of our first virtual symposium**, which will be spread out over all **fridays between September 18<sup>th</sup> and October 23<sup>rd</sup> 2020** (see program). On behalf of GMP and its board, I am glad to thank all the members of the scientific committee for their reactivity and their investment, which allowed us to adapt rapidly to the special circumstances of this 2020 year, and to offer you a **thrilling scientific program**, which you will find detailed in this newsletter. We also count on our members to take an active part in the life of our association by attending the **GMP general assembly on Friday, October 23rd 2020 from 11 to 12 am**. we will need to be numerous enough to vote the activity and financial reports, and the new board's composition. Moreover, this general assembly will be preceded by another flagship moment of the life of our association: the **GMP 2020 students awards ceremony**. For that matter, the deadline has been postponed and it is still possible to send your **abstracts** to us: new **deadline on August 8th, 2020**.

If you wish to get more involved in order to make our association live and evolve, you will find in the present newsletter a call for **application to become a member of GMP board**. GMP needs you!

Do not hesitate either to suggest scientific subjects to be addressed in our next newsletter, or in webinars. We will be happy to meet your expectations.

You will receive after the summer break all useful informations to get access to the various sessions of GMP 2020 virtual symposium. Before to have the pleasure to meet you again with a screen as interface, but also in the flesh in October 2021 (see below), GMP wishes you all a wonderful and relaxing summer.

**Florence Gattacceca, president of GMP**

Virtual 2020 GMP ... ask for the program!

## 2020 First GMP Virtual Symposium

# When DMPK is out of sight but not out of mind



From 18th of September to 23rd of October 2020

### DAY 1: 18<sup>th</sup> September 2020

#### 11:00-12:00 OPENING SPEAKER

**Impact of antibiotic therapy on the bacterial diversity of the intestinal microbiota**

Charles Burdet, IAME Inserm, Paris, France

Chairs: N Gregoire (Poitiers Univ.), J Henri (Anses)

### DAY 2: 25<sup>th</sup> September 2020

#### 10:30-12:00 SESSION 1

##### 10:30-11:15 1.1 IN VITRO TESTING

**An in vivo like 3D hepatic liver spheroid system for studies of aetiology and treatment of chronic drug hepatotoxicity and hepatic fibrosis**

Magnus Ingelman-Sundberg, Karolinska Institute, Stockholm, Sweden

Chairs: M Rachid (Genoscience Pharma), Y Courbebaisse (Adocia)

##### 11:15-12:00 1.2 ARTIFICIAL INTELLIGENCE

**Machine Learning Approach to Forecast Chemotherapy-Induced Haematological Toxicities in Patients with Rhabdomyosarcoma**

Vesna Cuplov, SmartC, Marseille, France

Chairs: C Serdjebi (Biocellvia), Y Parmentier (Servier), Q Nguyen (Ipsen)

### DAY 3: 2<sup>nd</sup> October 2020

#### 10:30-12:00 SESSION 2

##### 10:30-11:15 2.1 IN VITRO TESTING

**A fluid-dynamic Multi-In Vitro Organ-MIVO device as alternative approach for in vitro drug testing**

Silvia Scaglione, React4life, Genoa, Italy

Chairs: M Rachid (Genoscience Pharma), M Fonsi (Charles River)

##### 11:15-12:00 2.2 INNOVATIVE THERAPIES

**Car-T cell development and registration – Opportunities for the application of Pharmacometrics**

Rik De Greef, Certara, Oss, The Netherlands

Chairs: V Duval (Certara), F Gattacceca (Aix-Marseille Univ.)

### DAY 4: 9<sup>th</sup> October 2020

#### 10:30-12:00 SESSION 3

**PK challenges in pediatric drug development**

Chairs: R Barcham (Oroxcell), L Del Frari (Pierre Fabre), F Hurbin (Sanofi), A Coquerel (Caen Univ.)

**10:30-11:00 3.1 Prediction of midazolam pediatric plasma profiles for multiple routes of administration using physiologically based pharmacokinetic model**

Maxime Le Merdy, Simulation Plus, Basel, Switzerland

**11:00-11:30 3.2 PopPK/PD scaling from adults to children using priors: A case example with Alirocumab**

Elisa Calvier, Sanofi, Montpellier, France

**10:30-11:00 3.3 Use of model informed extrapolation in regulatory submissions - Examples**

Flora Musuamba Tshinanu, EMA, Brussels, Belgium

### DAY 5: 16<sup>th</sup> October 2020

#### 15:00-16:30 SESSION 4

**DDI risk assessment and evaluation in pharmaceutical development**

Chairs: O Barberan (Elsevier), O Nicolas (Sanofi), Y Parmentier (Servier), A Sharma (Senzagen)

**15:00-15:30 4.1 PBBM application to support formulation changes, prediction of pH related DDI and impact of beverages on exposure to acalabrutinib**

Xavier Pepin, AstraZeneca, Macclesfield, UK

**15:30-16:00 4.2 Drug-drug interactions of therapeutic proteins**

Antoine Deslandes, Sanofi, Alfortville, France

**16:00-16:30 4.3 Ivabradine metabolite PBPK modelling: CYP3A4 mediated DDI risk evaluation in adults and children**

Jennifer Lang, Manchester Univ., Manchester, UK

### DAY 6: 23<sup>rd</sup> October 2020

**10:30 – 11:00 "Student Presentation Blitz" AWARDS**



**11:00 – 12:00 Assemblée générale du GMP**

Je vote!

## ANNUAL MEETING OF THE BOARD ... BY VISIOCONFERENCE ON JULY 3<sup>rd</sup>



*The board during its annual meeting*

All GMP board members committed themselves to maintain a high spirit of work and actions during this COVID-19 pandemic. Hence, GMP board organized its first "**virtual Face-to-Face**" meeting on July 3<sup>rd</sup> 2020 and made action plans for the upcoming virtual conference of GMP 2020, organization of the future face-to-face GMP 2021 symposium at the Institut Pasteur in Paris (see announcement below), but also started to prepare GMP 2022 symposium. A brief focus was made on the functionalities required for the **remote votes** during the 2020 general assembly. The board finally discussed the action plans for organizing **workshops** with industrial and academic members, **webinars** hosted by GMP and publication of the present **newsletter**!

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### GMP BOARD: CALL FOR APPLICATIONS!!!

As every year and according to our rules, GMP board will include **two new members** in October 2021. This year, the GMP president, **Florence Gattacceca**, and the president of the scientific committee, **Jérôme Henri**, will leave us after 4 years of participation and involvement in the life of GMP, particularly this last year to maintain the GMP 2020 symposium and invent the first virtual GMP symposium in the context of confinement and travel restrictions. However, taking into account the particular conditions of the GMP symposium this year, and without changing the principle of board renewal, we have made the wish, after discussion and consultation of our rules and regulations, that Florence and Jérôme could stay as active members of the board until the 2021 GMP symposium in Paris. We await their decision.

GMP is fed by our **diversity** and our **pluralism**. Its identity is constituted by the sum of yours. If you are willing to get more involved in our association to fuel it with your energy and your vision, and make it evolve through regular interactions with the other members of the board and the scientific committee, we call on you to apply for becoming a member of the GMP board.

Being a member of the board means:

- a **personal investment** in the life of the association: bimensual teleconferences, one face to face working day in spring, organization of the symposium and of webinars, edition of the newsletter, communication, administration
- a **teamwork** with wonderful moments of sharing, always in cheerfulness!
- being elected for **4 years**.

To apply, please send a short **summary** of your career path and professional interests, including your **motivation** to join the Board of GMP and a picture.

Applications should be sent by email to Yann Courbebaisse (y.courbebaisse@adocia.com) by **September 11<sup>th</sup>, 2020** at the latest. They will then be shared online, to proceed with the electronical **vote of the members** between September 18<sup>th</sup> and October 16<sup>th</sup>, 2020. The results of the election will be communicated to the members and the composition of the new board will be subjected to vote during the **annual general assembly of GMP on October 23<sup>rd</sup>, 2020**.

The whole future lies in uncertainty: live immediately (Seneca).

We count on you!

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## 2021 SYMPOSIUM OR "GETTING TOGETHER AGAIN"

Our next (hopefully) Face-to-Face Symposium will take place in the heart of Paris at **Institut Pasteur** from **20<sup>th</sup> to 22<sup>nd</sup> October 2021**. We will be happy to see many of you there! The program is in progress with the **scientific committee** ... which you will soon be invited to join for 2021! The Gala dinner which will allow us to celebrate our getting together again after 2 years far away is already organized and holds great promise ... but you will not know more for the time being!



To follow the news about this symposium, or to start exploring our sponsorship offers, consult GMP website: <https://gmp.asso.fr/en/annual-symposium/>





## TESTIMONY: Surviving in nursing homes during the COVID-19 pandemic

by Antoine Coquerel (Université de Caen)

The SARS-CoV-2 epidemic that has plagued the world since the beginning of the year 2020 has surprised by its magnitude, its duration and a significant mortality. Unlike the H1N1 flu of 2009, we hardly expected this new virus. When the general lock-down occurred on March 16<sup>th</sup>, **objective knowledge about this new pandemic** had already become clear: this virus does not kill children and young people (big difference with the Asian flu of 1957 and the Hong Kong flu of 1969). It mainly attacks the elderly and/or vulnerable (obese, hypertensive, diabetic, ...), and when the virus reaches the bronchopulmonary tree, there is severe and lasting damage to the pulmonary epithelium, resulting in hypoxia often fatal in the absence of assisted ventilation. **Respiratory resuscitation** for several weeks involved increasing the number of resuscitation beds tenfold, a key point in limiting acute mortality. At the other end of the health chain, it was necessary to take preventive measures to limit transmission: distance (law in  $1/d^2$ ), isolation-containment and waiting for the decrease in the number of infected people.

As a physician MD, I volunteered, like so many others, to be mobilized in the "national health reserve" - which was blocked and unable to respond! - then registered in the new COVID-19 reserve. I waited for a mobilization order by the ministry or an ARS (Health Regional Agency) ... in vain! It was by word of mouth that I learned that an EHPAD (Adapted Establishment for Dependent Elderly People) in the region of Rouen suffered from a cruel lack of doctor: one retiree had not found any successor and another was seriously injured following a bad fall ... The only survivor of the initial trio was on the verge of "burn-out" because he took care night and day of near 150 people and had to implement instructions - often changing - which represented in average **30 to 50 pages per day of reading** and which needed to be translated, explained and above all applied with rigor and efficiency, while respecting the rights of these elderly people, whose essential reason for living was to be able to share a few moments with their family and their loved ones ... Succeeding in reconciling confinement in bedroom and **humanity in the extreme old age** was, and still is, a squaring of the circle!

My **hiring in less than 24 hours** allowed me to rejuvenate by a few decades by becoming the medical student and resident in service again and to meet, in a multi-daily and lasting way, old disturbed but very endearing people and care teams showing a dedication that well deserved the **applause at 8 pm** every evening. We had **3 cases of COVID-19** out of 120 persons in total, all detected very quickly (fever and small behavioral disorders) and these 3 ladies, aged 80 and over, were immediately placed in absolute isolation and survived because they did not suffer from a pulmonary form. They agreed with being completely locked down for 14 days and being treated by "cosmonauts" whose eyes and voice they barely recognized. A hard episode they now evoke with smile and relief. Note that the rigorous management of these 3 cases was accompanied by **no contamination of the caregivers** (40 people) or of the 20 other people who ensured animation, reception and administration.

It was more difficult to keep the most disturbed people **without visits**. Little by little, they lost their points of reference: meals together, supervised activities, visits by their children and grandchildren. A few weekly 'videoconference' sessions were possible via "modern" smartphones, but it was so little: many of these residents spoke of **prison detention**. The deconfinement started in mid-May: a visit of one or two family members every 10 days in a dull glass airlock! Then 15 days later: authorization to meet in the gardens, with mask and distancing, which poses other problems for a number of very hearing impaired seniors. Life was nevertheless getting stronger again and smiles on faces also gradually returned.

We pray so that there is no second wave and we arm ourselves to face it! Thank you to all of these very engaging people and to all of these nurses and dedicated caregivers. I saw a few amphitheater lessons canceled and had to postpone some articles and conferences, but I learned a lot and found again **the best of medicine**: always listen, often relieve, sometimes heal!