

Editorial

N°16 – October 2020

By RALF JOCKERS, director of GDR 3545 CNRS « RCPG-Physio-Med »

Dear GDR members,



I am very happy to read the latest edition of our GDR NEWSLETTER, as usual, prepared by the members of our Young Scientist Committee. Well done!

These times are special and our world has changed since the last NEWSLETTER because of the COVID-19

pandemic as you can see by the content of the NEWSLETTER.

The publication date of the NEWSLETTER coincides with our annual WORKSHOP and GDR meeting. Both will go virtual this year and I would like to thank the organizers for having accepted the challenge of the transformation of what was meant to be a traditional meeting into a virtual one. The number of registrations from people all over the world show that the organizers made an excellent job!

The end of the year will be also the official end of the GDR-3545, now that people finally understood what 'GDR' stands for... After 9 years we reached a state of maturity that pushes us to the next level and to go international by creating an IRN, another term to explain to our new German and British partners. Thanks for your trust and enthusiasm over the last 9 years. Vive le GDR, vive l'IRN !!

This is the 16th issue of the GDR 3545 Newsletter.

This newsletter will provide you with the latest information of the GDR (next important meetings, last important publications on GPCR...). In this newsletter, we have also decided to propose views on the COVID pandemic.

We would like to remind you that we are willing to take into account any comments or suggestions regarding the newsletter sections, to accept contributions from everybody and to hear any criticisms you might have to improve the quality of the newsletter. Furthermore, anyone from each of the participating teams of the GDR is more than welcome to contribute by using the address newsletter@gdr3545.com.

Sandra, Véronique, Lucie, Erika, Clémentine, Franck, Xavier, Bernard, Iuliia.

“Doing Science during COVID-19 pandemics”

Special-Issue Interview with the GDR3545 director Ralf JOCKERS

How did the Covid-19 pandemics affect your research activities?

"Like for everybody I think it affected a lot - first of all everybody had to stay at home – this is a major change. Then, as a team leader, you have to remotely re-organize your team. There was a moment of disorientation for everybody, so we had to find a new rhythm, new schedule - this was the first task. In our case, there was a full lockdown, we had 2 people to take care only of the facilities, fridges, -80°C freezer, and they needed a special permission to go to the lab, etc. After the lockdown, we could gradually go back to the lab, starting at 30% of the people only, and thus we had to define priorities (who needs to come back first) so it was quite an organizational challenge for everybody."

In a scale from 0 (no impact) to 10 (big impact), how do you evaluate the degree of impact of Covid-19 on:

a) your research activities (negative or positive impacts?)

"7. Overall it was a negative impact, but there were also some good changes that will stay".

b) team management (negative or positive impacts?)

"10. Negative impact. It was unforeseen".

c) team meetings and interaction



“Another 10. I would say 50/50 (negative/positive impact), because we’ve found new ways of communication and a new equilibrium”.

d) your personal way to work (management and lab work)

“8. Although I’m almost not working at the bench anymore, so not really dependent on going to the lab, but it also changed my way to work. I had to stay at home, and for this you have to be very self-disciplined, there is a lot of distractions and always a lot of things to do... But once I understood this, then I appreciated the advantages of not being disturbed, of being able to focus better on specific tasks (which also have to be very well defined in advance) at home – if the conditions at home are good, of course. In the beginning the impact was negative, but some positive changes implemented in my personal way to work will remain.”

e) your personal way to interact with your collaborators in your group

“0. In the lab we have found a new equilibrium. We all have discovered zoom, teams, skype for videoconferences, this was the way to interact. We have implemented different kind of meetings: general lab meetings, more thematic meetings, or individual “face-to-face” meetings... Nevertheless, the personal contact is better; by distance it is more difficult if you want to pass a personal message. Apart from this, we also have learned how to have meetings in more determined time frames, some discipline was installed.”

f) the work of your co-workers in your team

“It depends. Obviously, the higher impact was for those who had to do only experimental work, so technicians mainly, but then also students and post-docs that were at the end of their contracts, this was another source of stress... For everybody there was an impact at some point, for sure.

We could keep the intellectual tasks in our group discussions, I think this was positive. Retrospectively, many of these activities were useful to keep people busy, not lost. Some of these activities had also an impact in the long term, but not all of them, so it was a mixed outcome - it could have been more impactful if all activities we started had continued post-lockdown.”

Was it ok to manage the situation in terms of psychological stress of the team members?

“It is always difficult to judge, specially by communicating only by electronic means. So people don't tell you, they don't want to bother you... but I suspect that we had some people in a psychologically difficult situation during the lockdown. Then I tried to talk to them, make them understand that they could talk to me, but one cannot push, it is them who have to come and this would be easier to manage in a more personal way with direct contact. By distance, people can always say they are doing really well but it is not that evident to know the real situation.”

Now that the lockdown is over, do you think those people are recovered?

“I think so...Although several members of the group are living alone, and we know that isolation is not good – just like the mice, we don't like to be alone – so those in a family were more protected in this sense... having no social direct interaction is a risk factor.”

Was there an impact on your interaction with your international collaborators?

“Yes of course. Although most people already prefer to interact by e-mail and this continued during the pandemic, it had an impact because many people had much more administration tasks (implementing the new rules, etc) so they were quite busy and the interactions slowed down. And of course, it had a huge impact on going to conferences / meetings. I had 2 meetings in the USA cancelled, so exchange with colleagues were highly impacted.”

Do you have any testimonials from researchers abroad if they have/had similar experience / challenges on their research?

“Yes. Overall the situation was quite similar, even though the actions were not exactly the same, and the timing was not exactly the same neither. Actually, it was not up to us to decide how to handle the situation, it was the general rules given by your employer and the governments so this depended on the country, but in Europe it was quite similar. In the US, the situation depended on the region – although the official way to handle the pandemic was different, some colleagues dealt in a similar way than us, at least in the research level.”

What were (are) the main challenges for you, as the team director, to work under these conditions?

“To survive the first 2 weeks. Collectively, the feeling was that everybody was disoriented: “how long will it last? What is my personal risk? What about my thesis, my experiments, contracts?” But we are human beings, so we can adapt. So after this first shock, I tried to accompany people towards adaptation and to give some regularity, to keep them on going and not being completely lost. This was the main challenge. At the personal level, the challenge of the lockdown was how to re-organize my day – being locked inside all day is not that funny (specially in Paris), so I tried to do some sport activities, and I re-discovered this is really essential for your equilibrium. I also tried to encourage my co-workers to have some physical activity in order to maintain physical but also psychological health. You only recognize the importance of this when you are stuck at home. And then, always the transitions are difficult. Another main challenge was to organize, in a fair way, the return to the lab, to define which projects or obligations were priorities, etc, without knowing how long this partial working time would last. So, it was a big administrative effort, from Julie and me, to organize this.”

How did the pandemic impact your personal life / routine / habits?

"I like riding my bicycle, but bike was not the best sport solution during the lockdown when we were allowed to be out only in a 1 km diameter distance from home, so I changed: I started doing jogging and I keep doing it. It was a good move. I was already going to the gym but now I pay even more attention to this and also to new activities, like pilates, to reinforce the muscles. I also learned how to be more disciplined when working at home, in terms of timing and focus."

Any changes in transportation means?

"Yes and no, since before I already preferred to take the bike, now for sure I prefer my bike! (I'm wondering what to do with my Navigo pass...). So this reinforced my habits. And several people in the lab changed their habits also, their working hours, for example, which was also a good move."

Do you think this pandemic changed the way you see your job?

"Like every scientist, especially in the first 2 weeks of lockdown, everyone was asking themselves "how can I be useful? Is what I'm doing really useful?". The final outcome of the first question was rather disappointing. For example, we all know how to do PCR so we could participate in the testing, so it was a big frustration. Ok, it is not that easy to organize it, to follow the official procedures, but to do nothing was a bit frustrating. For the second point, in our team, we had a discussion group on Covid-19 to imagine how we could be useful. We elaborated a project and started experiments, we got an ANR grant, and this is quite positive and satisfying. This is our short-term contribution to find ways to prevent the infection through the inhibition of the interaction between the virus and cells. We will see where this will go... On a more general point of view, it did not change my research objectives profoundly. After this covid hype, we all realized that all the other diseases persisted, so not everybody should shift to become a virologist."

Do you think this pandemic changed the way you see Science?

"There are several aspects. It was interesting to see what was advertised about what scientists are doing and what research is. The general media is rather very close to the patients, which I can understand, but this is not really the research we do. For the general public, research is focused on vaccine production and clinical trials. This is for clinicians and pharmaceutical companies but this is how research is advertised."

Something also new: an unbelievable number of publications. That is another way to see science. As researchers, we can define our job by your ability to produce publications. And there was an incredible number of publications on this topic, at an unbelievable speed, which raises the question on how serious and double-checked can it be. An urgency was created not only by the

media but also from the journals and editors, and everybody wanted to be the first and publications played this "now" game. But research is not "now".

The impact was rather negative then?

"Yes, a lot of pollution. But of course, we have discovered new ways to make public our research, with bioRxiv. It is an interesting way to say "this is what I have, this is my claim" and to take the date. Even though this system will not replace the traditional system of peer reviewing, which is key for science, it has some value by speeding up things (a lot of information we found there first) - and then it is up to us to judge."

Do you think this pandemic changed the way you think people (society) see Science?

"If you believe in the announcements yes. Apparently, the budget for research in France will increase. The word "Research" was at the forefront, which is good. As I told you, maybe it is not the research we are doing, but anyway, to talk about it and to be seen as something useful by the general public, and that it is worth spending money on, it is rather positive."

A negative point of this pandemic is that a lot of unverified information can spread rapidly, obscured opinions that are completely unscientific. Scientists are in a position where they need to defend their way of thinking and of solving problems - the scientific way".

So you think there are lessons to be learned from this experience by all researchers?

"Transparency and to defend your point of view in a scientific way is important. This urgent situation also revealed that we are very much dependent on the pharma industries and there is a lot of money (billions of public money) going there, not only for the vaccine race. This huge amount of money is supported by the public opinion but I just hope it won't be labelled as research money. We are more aware of this than ever that public research is not the only one to benefit from the society money."

What is your opinion about the current race for a vaccine?

"I'm not an expert on vaccine. Generally speaking, from what I hear from specialists and not from the media, this urgency is not realistic. Unless it means that before, the vaccine research was far too slow (so there was a problem) and now we can do it the right way, or it is rather that before, the vaccine research was doing it the right way and it needs time, without knowing the outcome. So maybe there will be no vaccine. We also have to communicate with people, including politicians, that it could just fail. There is no guarantee. We might also have several vaccines developed, but if we take it seriously, it looks like a very long process. And with this race between different countries to get a vaccine and to test it in humans too rapidly, the degree of confidence of the general public to participate in the testing has decreased."

In your opinion, what will be the main legacy of this pandemic to the way scientists are doing science?

"I think there will be some changes, the main one is on the way to interact with each other. We have learned a lot in our way to interact: home-office, not travelling so much... Not everything can be replaced. It is still very important to have meetings, to meet people, but several things can be done in a different way, we don't need to take the plane so often."

If this situation happens again (lockdown), is there anything you would change?

"Retrospectively, I'm satisfied with the way we have handled this situation. If it happens again, for sure we will be less surprised, so the transition will be less harsh, and we will evolve... So far, we do things with the perspective of coming back to a normal situation, with the idea of a transition. But then, we have to see if the transition becomes the new normal situation - this will be another question to handle. But for our research, we have to be in the lab. In France or in Europe, the decision will be different. We already see it. The second wave is handled in a different way than the first. We do not have this full lockdown. We will adapt better."

Was there an impact of the pandemic on the GDR?

"Yes. Although GDR is a virtual network assembly, there was an impact - the first of course is related to our annual meeting. At the beginning, the GDR was supposed to be a physical meeting hold in Tours in November. But then we took the decision to have the meeting virtually and this decision was taken quite early, in March, without knowing how the situation would be. Retrospectively, it was the good decision.

Organizers did a great job in taking the opportunity to invite people also from outside of Europe, so we have a very attractive program with high-level speakers and we hope this will help people to attend actively - that's the challenge.

I was always proud that the GDR meeting have in average 200-250 people attending with 80-90 posters every time. So it is very interactive at this level. I hope we will find a way this year to compensate for this change to virtual, at least partially. We have flash-talks, we will have more poster prizes, so we are trying to adapt. I think we will come back to real congress in the future but several elements can be kept.

The second major impact is that GDR relies on sponsors, and they were also profoundly affected by the pandemic. Luckily enough, the costs of a virtual meeting are reduced. But beyond the financial aspect, we want to keep contact and keep the relationships with our industrial partners. They are part of the GDR and we have to find new ways to make them feel part of the GDR.

This year is also a big opportunity for the GDR to be more internationally known, to advertise the GDR, which is now 9 years-old, so we can say we are an established network. We started as French but science is international so if we

can get as much people as possible engaged in this, this will be very nice.

This pandemic somehow helped us making this transition towards an international network."

GDR information

Annual meeting and workshop 2020



The **9th Annual meeting of the GDR3545-GPCR** was supposed to be held in Tours, but due to the COVID19 will run virtually this year, November 6th to 9th 2020 (2-7 pm Paris time)!! The amazing program is available <https://www.gdr3545.com/index.php/news/events/266-9th-gdr-meeting-november-6th-9th-2020>.

Keynote lectures will be done by Michel Bouvier, Bryan L. Roth, Valery Grinevich and Brian Kobilka.

Register here: <https://www.gdr3545.com/index.php/news/events/266-9th-gdr-meeting-november-6th-9th-2020?start=1>.

New this year, the virtual meeting and abstract submission is open to academic GDR and non-GDR members. All flash-posters (3-minutes pre-recorded video) will be available for consultation during the entire congress duration (only be registered attendees). Young researchers and engineers will have the possibility to be selected to have their pre-recorded flash-poster displayed in the main program in the flash-presentations. Like in previous meetings, the local scientific committee will select the flash-posters according to the sessions of the program: Session 1: Signaling networks, session 2: Compartmentalized signaling, sessions 3 and 4: Drug discovery, Session 5: Metabolism, Microbiome, Session 6: Neurobiology, sensory biology, Session 7: Structural biology and Session 8: Computational approaches. 5 prizes of 500 € each will be awarded to the best posters and flash presentation speakers.



The **8th GDR3545 workshop** for Engineer, PhD students and Post-Docs will be virtual as well and just before the annual GDR meeting, on November 5th, 2020 (1.30-5.30 pm Paris time). Title: 'bioinformatics and biomathematical approaches to integrate the GPCR signal'. Check the program and register

<https://www.gdr3545.com/index.php/news/events/265-virtual-workshop-on-november-5th-2020-from-1-30-5-30-pm>! This year 20 GDR and 20 ERNEST-GPCR members will be able to attend. Computational and mathematical approaches are nowadays compulsory in order to decipher the complexity of GPCR signalling networks. Sponsored by Promega and the CNRS, the workshop will focus on recent modelling and computational approaches and how they can be used to tackle GPCR complexity. NEW this year, you can ask all the questions you have about this topic in the 'Ask the experts' before the Workshop and discuss with them in a dedicated session and also in parallel chat rooms in the "Meet the speakers" sessions!

PhD defenses

Francesco de Pascali has defended his PhD Thesis entitled: "Allosteric modulation of follicle stimulating hormone receptor and GPR54: new tools to study signalling", on December 12th 2019. Thesis director: Eric Reiter.

Sara Lopez has defended her PhD Thesis entitled: "Destruction of the tumour microenvironment by application of mechanical forces exerted by magnetic nanoparticles", on December 4th 2019, University Paul Sabatier, Toulouse, under the direction of Véronique Gigoux.

De Sa Nogueira David has defended his PhD thesis entitled "Voluntary cocaine or sugar intake induce neuroadaptations of the endocannabinoid system in reward-related brain regions", on November 22th 2019, in Strasbourg. Director: Katia Befort.

Wenwen Gao has defended her PhD thesis entitled "Functional profiling of rare GLP-1R variants, an important drug target gene of type 2 diabetes", on September 28th 2020, in Paris. Director: Ralf Jockers

Abdulkarim Tutakhail has defended his PhD thesis entitled "Potential muscular doping effects of anti-depressants", on November 29th 2019, at the University Paris-Sud.

Hugo Payan has defended his PhD thesis entitled "Réseaux de protéines associés aux récepteurs de la sérotonine : Rôle et options thérapeutiques pour la maladie d'Alzheimer", on September 4th 2020, at the Institute of Functional Genomics in Montpellier. Thesis director : Sylvie Claeysen.

Mathias Vetillard has defended his PhD thesis entitled "Régulation de la migration des cellules dendritiques : étude des mécanismes dépendant du récepteur de chimiokine CXCR4 et de la protéine Glucocorticoid-Induced Leucine Zipper", on September 18th 2020, at Clamart.

HDR defenses

Lucie Pellissier has defended her HDR, on April 9th 2019, at the University of Tours.

Jean-Philippe Guilloux has defended his HDR, on December 16th 2019, at the University Paris-Sud.

Distinctions - Prizes

The Regional Council of Normandy and the European Commission (ERDF funds) have agreed to finance the **PleiAD programme** (PLEIotropic agents against Alzheimer's Disease) at the **CERMN** (Centre d'Etudes et de Recherche sur le Médicament de Normandie) directed by **Pr Patrick DALLEMAGNE**, to the tune of €3.5 million, which aims to carry out a regulatory pre-clinical study of a drug candidate targeting both acetylcholinesterase and the 5-HT₄ receptor. If all goes well, the start of phase 1 clinical trials is scheduled to begin at the end of 2021.

Lucie Pellissier, researcher of the BIOS team, is the winner of the **ERC Starting 2019** for her research project **THERAUTISM**.

Erika Cecon has been recruited as **CNRS researcher** (section 28).

The **Elsevier-Institute Cochin Innovation Award 2019** attributed to **Mark Scott** for his work on the development of chemical modulators of the tumor suppressor PTEN.

Indira Mendez-David received the **American College of Neuropsychopharmacology Travel Award**.

Publications

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Local contacts

Important information? New publications? Recruitment of new people? ... Local contacts are here to gather your information. We would like to welcome our new local correspondents.

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Job offers

A **assistant engineer (AI) and a IE engineer positions** are available in the Institute of Structural Biology, Grenoble. Contact: Christophe Moreau, (christophe.moreau@ibs.fr).

A **post-doctoral position** is available in the ABLISS ANR Program, at Tours.

<https://www.gdr3545.com/index.php/news/job-opportunities/272-two-year-post-doctoral-position-at-inrae-tours>

Contact: Anne Poupon (anne.poupon@inrae.fr).

Postdoctoral position in Immunology is available Laboratory of chemistry, biology, modelling and immunology for therapy (CBMIT), at Paris Descartes University.

<https://www.gdr3545.com/index.php/news/job-opportunities/269-postdoc-immunology-cbmit>

Domain Therapeutics opens several positions for talented PhDs interested to join us for 2 years MSCA Post Doc. Several topics are covered: Immunology, Antibodies, GPCRs, Technologies, Chemistry, animal models. I will be pleased if you would cascade/diffuse those offers to your network.

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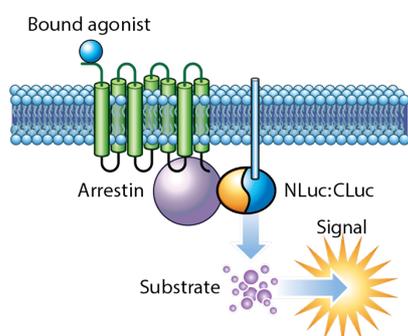
Permanent position of senior scientist in molecular pharmacology at Domain Therapeutics (<https://www.domaintherapeutics.com/>) is provided. <https://www.gdr3545.com/index.php/news/job-opportunities/268-senior-scientist-in-molecular-pharmacology-at-domain-therapeutics>.

Permanent position of a technicien in biologie at Domain Therapeutics (www.domaintherapeutics.com/) is provided. <https://www.gdr3545.com/index.php/news/job-opportunities/267-technicien-ne-de-recherche-en-biologie-cellulaire>

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The newly launched MultiScreen™ β -Arrestin Sensor technology is uniquely designed to examine β -arrestin activation via untagged, endogenous or orphan GPCRs. It overcomes receptor tagging drawbacks intrinsic to conventional technologies while meeting the requirements for high throughput screening. Upon receptor activation, β -Arrestin is recruited to the plasma membrane and two NanoLuc fragments complement to reconstitute functional luciferase. The signal is quantified by the resulting luminescence readout. This innovative assay promises a new generic method for measuring arrestin recruitment to diverse types of GPCRs in native cells.



Key benefits:

- Assess GPCRs in their native form for true pharmacology in vitro and in vivo
- Assay endogenously expressed GPCRs for more relevant data
- Characterize orphan GPCRs to expand your target pool
- Enable use of a single cell line for multiple GPCR assays for accelerated drug development
- 30-minute protocol for fast robust results

Learn more on how our MultiScreen™ β -Arrestin Sensor can uniquely empower your program: <https://multispaninc.com/articles/dont-let-gpcr-tagging-bias-your-results/>



G protein-coupled receptors (GPCRs) represent one of the most important classes of drug targets. Promega has developed numerous technologies to allow comprehensive studies of ligand-

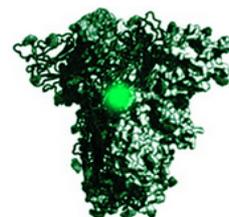
induced response along each step of the GPCR signaling cascade with easy-to-use, bioluminescence-based assays. To learn more, please visit our dedicated webpage: <https://france.promega.com/Products/Small-Molecule-Drug-Discovery/gpcr-research-drug-discovery/>.

More details on the latest technology developments can be found in the JBC publication: <https://www.jbc.org/content/early/2020/02/27/jbc.RA119.011952.full.pdf>.



SARS-CoV-2 Spike Mutant Proteins

Genomic mutations drive the evolution of all viruses. Mutations allow the virus to evade the immune response and gain a selective advantage in transmission. Thus the D614G mutation quickly became dominant in Europe, which suggests that this mutation could make the SARS-CoV-2 virus more transmissible. Understanding the biology of this variant is critical, especially in the context of vaccine and drug design.



In addition to the D614G mutation, Interchim offers a panel of mutated RBD proteins to facilitate the study of these variants.

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Contact: interbiotech@interchim.fr

Hot Line: +33 4 70 03 73 06

What's up in the GPCR world ?



Very Important Publications

Publications Special Covid-19

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Conferences

The International Conference on Innovative Solutions: Cancer, Aging and Genetic diseases will be held from 27th to 30th October 2020.

More information: <https://icis2020.ibbs-services.com/>



The Modern Cell-Based Assays Virtual Symposium will be held the 10th November 2020.

More information: <https://www.labroots.com/virtual-event/modern-cell-based-assays-virtual-symposium>



The symposium "From Protein Structures to Drug Discovery: Novel therapeutic opportunities" will be held the 19th November 2020. More information:

<https://www.labroots.com/webinar/protein-structures-drug-discovery-novel-therapeutic-opportunities>



The Online, Worldwide Pharmacology 2020 will be held from 14th to 18th November 2020. More information:

[https://meetings.bps.ac.uk/bpsevents/frontend/reg/thome.cs?p?pageID=11567&eventID=24&CSPCHD=003001000000t078a1Cmgwu\\$EGKrJiCo1zXAYSovBNvZ2Xhwwb](https://meetings.bps.ac.uk/bpsevents/frontend/reg/thome.cs?p?pageID=11567&eventID=24&CSPCHD=003001000000t078a1Cmgwu$EGKrJiCo1zXAYSovBNvZ2Xhwwb)



The Drug Discovery & Development 2021 virtual event will be held the 24th february 2021. More information:

<https://www.labroots.com/virtual-event/drug-discovery-development-2021>



The keystone symposia "Drug Development in the Digital Age" will be held from 5th to 8th April 2021, in Snowbird, UT, USA. More information:

<https://www.kestonesymposia.org/KS/Online/Events/2021Z1/Details.aspx?EventKey=2021Z1>



The Gordon conference "Molecular Pharmacology" will be held from 13th to 18th June 2021, in Les Diablerets, Switzerland. More information:

<https://www.grc.org/molecular-pharmacology-conference/2021/>



The ASPET 2021 annual meeting at experimental biology will be held the 27th April 2021. More information: <https://www.aspet.org/aspnet/meetings-awards/meetingsannual-meeting/aspnet-annual-meeting-at-experimental-biology-2021#:~:text=Tuesday%2C%20April%2027%20E%28%93%20Friday%2C%20April%2030%2C%202021&text=The%20ASPET%20Annual%20Meeting%20is,in%20pharmacology>



The 8th RSC/SCI symposium on GPCRs in medicinal chemistry will be held probably in May 2021, in Verona, Italy. More information:

https://www.maggichurchousevents.co.uk/bmcs/GPCRs_2020.htm

The RICT 2021: Interfacing chemical biology and drug discovery will be held from 7th to 9th July 2021.

More information: <https://www.rict2020.org/> and <https://www.asynt.com/events/rict-2021-interfacing-chemical-biology-and-drug-discovery/>

The 9th International Congress of Medicchem F1000 2021. Theme: Nirvana of Drug Inventors in New Era will be held from 15th to 18th July 2021, in Amsterdam.

More information: <https://www.bitcongress.com/icm2021-Europe/default.asp>

The 23rd EuroQSAR - 23rd European Symposium on Quantitative Structure-Activity Relationship, Integrative Data-Intensive Approaches to Drug Design will be held from 19th to 23th September 2021, in Barcelona. More information: <https://www.euroqsar.org/>



The 16th EFMC Short Course on Medicinal Chemistry, New Opportunities in GPCR Drug Discovery will be held at Autumn 2021, in Oegstgeest (near Leiden), The Netherlands.

More information: <https://www.efmcshortcourses.org/>