



FEDERAL UNIVERSITY OF RIO GRANDE DO SUL
SCHOOL OF PHARMACY
GRADUATE PROGRAM IN PHARMACEUTICAL SCIENCES

**MASTER'S DEGREE SELECTION PROCESS NOTICE
YEAR 2021
(THREE ADMISSION SESSIONS)**

The Coordination Office of the Graduate Program of Pharmaceutical Sciences (PPGCF) at the Federal University of Rio Grande do Sul (UFRGS), in due accordance with its Internal Regulations and following a resolution taken by the Graduate Programs Committee, hereby announces the beginning of the Selection Process for a Master's Degree in Pharmaceutical Sciences, with admissions scheduled to take place in April 2021 (Session 1), July 2021 (session 2) and October 2021 (Session 3), which shall be governed by the following regulations:

I - Places available

Article 1 -The places available mentioned in this Selection Process Notice, which total 44 (forty-four), shall be distributed among the academic advisors of the Program, according to the table found in **ATTACHMENT 1**.

Article 2 -The process to fill up the places available for each advisor shall obey the ranking list of the candidates, according to the criteria established for the Selection Process.

II - Application

Article 3 -The applications referred to in this Selection Process Notice shall be made from January 18-21, 2021 for Admission Session 1, from May 10-13, 2021 for Admission Session 2, and from August 9-12, 2021 for Admission Session 3, **and students must send the documents to the PPGCF Office via email** within the time frame corresponding to each application stage. Under no circumstances will documents accepted after the last day of registration be accepted, even if these are sent for replacement or complementation purposes. Eventual appeals shall be received by the PPGCF Office until 5:00 PM on the business day following the publication of the approved applications via email to be sent to the PPGCF Office. Documents must be signed and scanned for submission.

Paragraph 1 - The application may be carried out by filling out the forms available at the PPGCF's website (www.ufrgs.br/ppgcf), and shall only be effective when the required documents are completely and correctly received.

Paragraph 2 - Documents required for application:

(a) **Application form** with prior indication of 02 (two) advisors at the most (**ATTACHMENT 2**)

(b) **Certificate of Completion** of an Undergraduate Program in Pharmacy or other related areas, or a Technology Degree Program in related areas (pursuant to CNE/CP Resolution No. 3, dated 12/18/2002), or an official statement attesting that the student is about to complete their undergraduate or technology degree program and stating a tentative graduation date (such graduation must take place before the student enrolls in the Graduate Program) (copy);

(c) **Academic Transcript** of an Undergraduate Program in Pharmacy or other related areas, or a Technology Degree Program in related areas (copy);

(d) **ID Card** (copy);

(e) **Individual Taxpayer Registration** (CPF) (copy);

(f) **Curriculum Vitae**: copy of the updated Lattes curriculum vitae, or other format for foreign candidates;

(g) a recent 3x4 **photo**;

(h) proof of payment (original) of the **Application Fee** in the amount of BRL 250,00 (two hundred and fifty Brazilian reais). Foreign candidates without a CPF number are exempt from paying the Application Fee.

(i) Foreign candidates must submit a copy of their passport and a Portuguese Language Proficiency (CELPE-BRAS) certificate, except when Portuguese is the official language of their country of origin, or in accordance to specific legislation.

Paragraph 3 - The application fee shall be paid via a FEDERAL PAYMENT SLIP, as specified below. Each candidate must pay the BRL 250,00 application fee, except in cases of exemption requests, as provided for in Paragraph 4.

Payment shall be made by following the steps below:

Candidates must access the UFRGS website (www.ufrgs.br), click on "SERVIÇOS" (Services) and then on "GUIA DE RECOLHIMENTO DA UNIÃO" (Federal Payment Slip). Please correctly enter the following information:

- Taxpayer's name:
- Taxpayer's CPF:
- Due date: payment date
- Document amount: BRL 250.00.
- Payment description: **Search for** – Taxa de Inscrição Concurso e Processos Seletivos (Admission and Selection Process Application Fee)
- Unidade gestora (Managing Unit): **Search for** – 153313 – Faculdade de Farmácia (School of Pharmacy)
- General notes: **Please write the following** – Taxa de inscrição, referente ao Edital de Seleção de Mestrado Acadêmico 2021 no PPGCF (Application fee referring to the PPGCF Master's Degree Selection Process Notice - Year 2021).

Paragraph 4 - Requests for application fee exemption shall be sent from January 11-13, 2021 for Admission Session 1, from May 3-5, 2021 for Admission Session 2, and from August 2-4, 2021 for Admission Session 3 by filling out the form found at the end of this Selection Process Notice (**ATTACHMENT 3**). The results shall be notified via email until January 15, 2021 for Admission Session 1, until May 7, 2021 for Admission Session 2, and until August 6, 2021 for Admission Session 3.

Article 4 - Afterwards, the applications shall be ratified by the Graduate Committee, after compliance with the requirements set forth herein has been attested, and the results shall be published on the PPGCF website (<http://www.ufrgs.br/ppgcf>) until January 25, 2021 for Admission Session 1, until May 17, 2021 for Admission Session 2, and until August 16, 2021 for Admission Session 3.

Eventual appeals shall be received by the PPGCF Office on January 26, 2021 for Admission Session 1, May 18, 2021 for Admission Session 2, and August 17, 2021 for Admission Session 3.

III – Selection

Article 5 - Candidates whose applications have been ratified shall participate in the Selection Process, which shall comprise the following stages, as described in **ATTACHMENT 1**:

Paragraph 1 - The curriculum vitae analysis, interview and written test (or article/research project analysis) stages shall occur from February 1-5, 2021 for Admission Session 1, from May 24-28, 2021 for Admission Session 2, and from August 23-27, 2021 for Admission Session 3 either via Mconf or other **remote** platform, the respective dates being published until January 29, 2021 for Admission Session 1, until May 21, 2021 for Admission Session 2, and until August 20, 2021 for Admission Session 3 on the PPGCF website (<http://www.ufrgs.br/ppgcf>).

1. The **Curriculum Vitae** shall be analyzed with regard to the candidate's academic background and professional experience, as well as to the quantity and quality of their scientific publications or to their involvement in research activities.
2. The assessment criteria for the **Interview** shall verify the candidate's depth and amount of knowledge on the research projects developed during their undergraduate studies, the use of scientific language, their ability to answer questions, the motivation and clarity of their goals regarding the master's degree program and the time available for studying in the program. All interviews shall be carried out by at least two professors who are full members of the PPGCF.
3. The assessment criteria for the **Written Test**, if any, shall include knowledge of the specific topics listed by the PPGCF advisor professors in **ATTACHMENT 1**, and may be characterized as a written dissertation on a given topic or specific structured questions, as instructed by the professor chosen by the candidate as their advisor.
4. For the evaluation of a **Scientific Article**, the assessment criteria shall include the general understanding of the article as well as of its scientific content. The article submitted shall address a topic belonging to the academic area indicated by the advisor professors and shall be written in Portuguese or English (an English-Portuguese dictionary may be used by the candidate). **Questions regarding the Scientific Article may be asked during the candidate's interview.**

5. The **Research Project**, if any, shall be assessed in terms of the relevance of the project according to the proposed topic, the concentration area and the line of research, as well as in terms of the theoretical relevance and consistency of the proposed research project and the adequacy of the project with regard to the duration of the program (maximum duration of 24 months). The project (10 pages maximum) must contain, at least, the following items: abstract, introduction with current bibliographic review on the topic in question, goals, materials and methods, main contributions of the scientific proposal, schedule and bibliographic references. **The project shall be sent via email to the PPGCF Office when candidates apply. Questions regarding the project may be asked during the candidate's interview.**

IV- Results

Article 6 - The preliminary results shall be published on the PPGCF website (www.ufrgs.br/ppgcf) until February 9, 2021 for Admission Session 1, until June 1, 2021 for Admission Session 2, and until August 31, 2021 for Admission Session 3.

Article 7 - Eventual appeals shall be received by the PPGCF Office until February 11, 2021 for Admission Session 1, until June 3, 2021 for Admission Session 2, and until September 2, 2021 for Admission Session 3.

Article 8 - The final results shall be published on the PPGCF website until Friday, February 12, 2021 for Admission Session 1, until June 4, 2021 for Admission Session 2, and until Friday, September 3, 2021 for Admission Session 3.

Paragraph 1 - This Selection Process Notice does not encompass the assignment of Scholarships, the criteria for which shall be defined and published in a specific Notice, to be released after the completion of the Selection Process governed by this Notice.

Paragraph 2 - Under no circumstances shall the Program be responsible for any kind of financial compensation for students who are willing to take the master's degree program without a scholarship.

Paragraph 3 - If the number of approved candidates for a given advisor exceeds the number of places available for such advisor, candidates shall be chosen according to decreasing order of their final grade and according to the number of places available for the advisor in question.

Paragraph 4 - The students approved in this selection process, but who were not chosen by the advisors they have indicated in their application form, may choose another advisor listed in **ATTACHMENT 1**, provided that such advisor belongs to the same group(s) for which the candidates have taken the test, that such advisor agrees to this and that there is a place available.

V – Admission

Article 9 - For admission to the Master's Degree Program of the Graduate Program in Pharmaceutical Sciences, candidates must meet the following conditions:

1) be approved in the Selection Process for which they have applied after the submitted documents have been analyzed, observing the provisions set forth in **ATTACHMENT 1**;

2) present, at the time of enrollment, the advisor's acceptance letter (**ATTACHMENT 4**); data form for registration with the Graduate System (POSGRAD) (**ATTACHMENT 5**) and the Acknowledgment of Understanding of the Regulations of the Program and Ethical Aspects (**ATTACHMENT 6**).

Article 10 - The selected candidates must enroll in the period ranging from March 8-11, 2021 for Admission Session 1, from June 14-17, for Admission Session 2, and from September 13-16, 2021 for Admission Session 3, according to the scheduled approved by the Graduate Committee and the Program Office.

VI – Cases not provided for

Article 11 – Omissions or cases not provided for in this notice will be resolved by the Graduate Committee of this Graduate Program.

Please find below the summary table with important dates regarding this selection process:

Activities	Periods/Terms		
	Admission Session 1	Admission Session 2	Admission Session 3
Publication of the Selection Process Notice	Until November 10, 2021		
Application fee exemption request	January 11-13, 2021	May 5-7, 2021	August 2-4, 2021
Announcement of the results of application fee exemption requests	Until January 15, 2021	Until May 7, 2021	Until August 6, 2021
Selection process application	January 18-21, 2021	May 10-13, 2021	August 9-12, 2021
Application ratifications	Until January 25, 2021	Until May 17, 2021	Until August 16, 2021
Appeals	Until January 27, 2021	Until May 19, 2021	Until August 18, 2021
Announcement of the dates of each selection process by advisor or group of advisors	January 29, 2021	May 21, 2021	August 20, 2021
Master's degree selection period	February 1-5, 2021	May 24-28, 2021	August 23-27, 2021
Publication of the preliminary results of the Selection Process	Until February 9, 2021	Until June 1, 2021	Until August 31, 2021
Appeal requests regarding the preliminary results of the Selection Process	Until February 11, 2021	Until June 3, 2021	Until September 2, 2021
Publication of the final results of the Selection Process	Until February 12, 2021	Until June 4, 2021	Until September 3, 2021
Enrollment in the Program (submission of documents)	March 8-11, 2021	June 14-17, 2021	September 13-16, 2021
Enrollment in courses (on "Portal do Aluno" (Student Portal))	To be determined.		
Validity of the Selection Process	Until the publication of a new master's degree selection process notice.		

Porto Alegre, October 19, 2021.

Professor Letícia S. Koester, PhD
 Coordinator of the Graduate Program in Pharmaceutical Sciences

ATTACHMENT 1 - List of advisors, places available and selection procedures for the 2021 Master's degree program.

ATTACHMENT 2 – Application form for the 2021 Master's degree program.

ATTACHMENT 3 – Application fee exemption request form

ATTACHMENT 4 – Advisor's acceptance letter

ATTACHMENT 5 – Data form for registration with the Graduate System (POSGRAD)

ATTACHMENT 6 – Acknowledgment of Understanding of the Regulations of the Program and Ethical Aspects

Attachments 4, 5 and 6 must be accessed in the Portuguese version of this Notice (<https://www.ufrgs.br/ppgcf/wp-content/uploads/2020/11/Edital-Mestrado-2021.pdf>)

Foreign applicants are exempt from paying applications fees; thus, they shall not fill out Attachment 3.

ATTACHMENT 1 – List of advisors, places available and selection procedures for the 2021 Master's degree program.

Advisor	Places available ^b	Selection Process ^a				
		Interview ^c	Curriculum vitae analysis	Written test	Article analysis	Research project analysis
Afonso Barth	1	3	3		4	
Alexandre José Macedo	2	3	3		4	
Aline Zimmer	2	3	3	4		
Amélia T. Henriques	3	3	4		3	
Andreas Mendez	2	3	3	4		
Andreza Martins	1	3	3		4	
Adriana Pohlmann	2	3	3			4
Bibiana V. de Araújo	1	2	3	5		
Diogo André Pilger	2	3	3			4
Eduardo Luís Konrath	1	3	4		3	
Gilsane Von Poser	2	3	4		3	
Grace Gosmann	1	3	3	4		
Helder Ferreira Teixeira	2	3	3		4	
Irene Kulkamp	2	3	3		4	
Karina Paese	2	3	3			4
Letícia S. Koester	2	3	3		4	
Lucélia Santi	1	3	3		4	
Marcelo D. Arbo	2	3	3		4	
Miriam Apel	1	3	4		3	
Renata Contri	1	3	3		4	
Ruy C. Beck	2	3	3		4	
Silvia S. Guterres	2	3	3			4
Simone C. B. Gnoatto	2	3	3		4	
Solange Cristina Garcia	1	3	3		4	
Tiana Tasca	2	3	3		4	
Valquiria Bassani	2	3	3		4	
TOTAL	44					

^a The values indicate the weights attributed to the kind of assessment to be carried out.

^b An addendum to the Notice shall be published after each selection process (admission sessions 1 and 2) in order to update the number of places available.

^c All interviews shall be carried out by at least two professors who are full members of the PPGCF.

Tests - Professors Adriana Pohlmann, Karina Paese and Sílvia Guterres

Topic to be addressed: Pharmacotechnical development of dispersed systems

Supporting bibliography:

1. Schaffazick, Scheila R.; Guterres, Sílvia S.; Freitas, L. L.; Pohlmann, A. R. Caracterização e estabilidade físico-química de sistemas poliméricos nanoparticulados para administração de fármacos. *Química Nova*, v. 26, n. 5, p. 726-737, 2003.

2. Aulton, M. E.; Taylor, K. M. G. *Delineamento de formas farmacêuticas*. 4 ed. Rio de Janeiro: Editora Elsevier, 2016.

Supplementary information: The research project, with a maximum of 10 pages, must be sent via email at the time of application. During the interview, the candidate must present their curriculum vitae (5 minutes), followed by a presentation of the project (10 minutes) and questions (interview) (10 minutes).

Tests - Professor Alexandre José Macedo

Topic to be addressed: Antibiofilm activity.

Bibliographic references for content review: The publications suggested for study on the topic are: *Nature Biofilms and Microbiomes*, *BMC Microbiology*, *Frontiers Microbiology*, *Antimicrobial Agents and Chemotherapy*, *International Journal of Antimicrobial Agents*, *European Journal of Medicinal Chemistry*, *Chemical Biology & Drug Design*

Tests - Professors Aline Zimmer and Grace Gosmann

Topic to be addressed: Chemistry and Pharmacology of Natural Products; Drug planning and synthesis

Bibliographic references for content review:

1. Harrold M., Zavod R, *Basic Concepts in Medicinal Chemistry*, 2 ed., ASHP, 2018

2. Barreiro EJ; Fraga CAM. *Química Medicinal- As Bases Moleculares da Ação dos Fármacos*. 3. ed. ArtMed, 2015.

3. Patrick, GL. *An introduction to medicinal chemistry*. 4 ed. New York: Oxford, 2009, Cap. 13, p. 212-240.

4. Christopher P. Tinworth and Robert J. Young. Facts, Patterns, and Principles in Drug Discovery: Appraising the Rule of 5 with Measured Physicochemical Data. *Journal of Medicinal Chemistry* 63 (18), 10091-10108, 2020. DOI: 10.1021/acs.jmedchem.9b01596.

5. Saeed Alqahtani. In silico ADME-Tox modeling: progress and prospects. *Expert Opinion on Drug Metabolism & Toxicology*, 13:11, 1147-1158, 2017. DOI:10.1080/17425255.2017.1389897.

6. Amato, A et al. Natural Compounds as Beneficial Antioxidant Agents in Neurodegenerative Disorders: A Focus on Alzheimer's Disease. *Antioxidants* 2019, 8, 608; doi:10.3390/antiox8120608.

7. Von Borowski, RG et al.. Red pepper *Capsicum baccatum*: source of antiadhesive and antibiofilm compounds against nosocomial bacteria. *INDUSTRIAL CROPS AND PRODUCTS*, v. 127, p. 148-157, 2019.

8. Joaquim, AR et al.. Rapid tools to gain insights into the interaction dynamics of new 8-hydroxyquinolines with few fungal lines. *Chemical Biology & Drug Design*, v. SI, p. 1-11, 2018. <https://doi.org/10.1111/cbdd.13435>.

Tests - Professors Amélia Henriques, Eduardo Luís Konrath, Gilsane von Poser and Miriam Apel

Topic to be addressed: Pharmacognosy.

Bibliography for content review:

1. Bruneton, J. *Elementos de fitoquímica y de farmacognosia*. 2.ed. Zaragoza: Ed. Acribia, , 2001. 1081p.

2. Robbers, J.E.; Speedie, M.K.; Tyler, V.E. *Pharmacognosy and pharmacobiotechnology*. Pennsylvania: Williams & Wilkim, 1996. 337p.

3. Simões, C.M.O.; Schenkel, E.P.; Gosmann, G.; Mello, J.C.P.; Mentz, L.A.; Petrovick, P.R. *Farmacognosia: da planta ao medicamento*. 6.ed., Porto Alegre/Florianópolis: Ed. UFRGS/Ed. UFSC, 2010. 1104p.
4. Wagner, H.; Bladt, S. *Plant drug analysis: a thin layer chromatography atlas*. 2.ed., München: Springer, 1995. 384p.

Supplementary information: The publications suggested so that candidates may familiarize themselves with the topic are: Phytochemistry; Journal of Natural Products; Journal of Ethnopharmacology; Phytomedicine; Planta Medica. A review of the last 10 years on the topic is recommended.

Tests - Professors Andreas Mendez

Topic to be addressed: Pharmaceutical Quality Control.

Bibliography for content review:

1. ANVISA - Agência Nacional de Vigilância Sanitária. Resolução RDC n. 166, de 24 de julho de 2017. Dispõe sobre a validação de métodos analíticos e dá outras providências. *Diário Oficial da União*, Brasília, Poder Executivo, de 25 de julho de 2017.
2. STORPIRTIS, S., GONÇALVES, J. E., CHIANN, C., GAI, M. N. *Biofarmacotécnica*. Rio de Janeiro: Guanabara koogan, 2009. Capítulo 7.
3. THE UNITED States Pharmacopeia. 35 ed. Rockville: USP Convention, 2012. Cap. 1092 ou edição recente.
4. WATSON, D.G. 2 ed. *Pharmaceutical Analysis: a textbook for pharmacy students and pharmaceutical chemists*. Edinburgh: Churchill Livingstone, 2005. Capítulos 1, 4, 10, 12 e 15.

Supplementary information: During the analysis of a scientific article, theoretical questions about the context in question may be posed.

Tests - Professor Afonso Barth and Professor Andreza Martins

Topic to be addressed: Bacterial Resistance and One Health.

Bibliographic references for content review:

1. Lagier J-C, Hugon P, Khelaifia S, Fournier P-E, La Scola B, Raoult D. 2015. The rebirth of culture in microbiology through the example of culturomics to study human gut microbiota. *Clin Microbiol Rev* 28:237–264. doi:10.1128/CMR.00014-14.
2. *Nat Rev Microbiol*. 2006 Jan;4(1):36-45. Antimicrobial-resistant bacteria in the community setting. Furuya EY1, Lowy FD.
3. *J Clin Microbiol*. 2010 Mar;48(3):770-8. doi: 10.1128/JCM.01796-09. Epub 2009 Dec 30. Multilocus sequence typing of *Clostridium difficile*. Griffiths D1, Fawley W, Kachrimanidou M, Bowden R, Crook DW, Fung R, Golubchik T, Harding RM, Jeffery KJ, Jolley KA, Kirton R, Peto TE, Rees G, Stoesser N, Vaughan A, Walker AS, Young BC, Wilcox M, Dingle KE.

Supplementary information: The selection process shall be carried out by posing questions based on the aforementioned articles.

Tests - Professor Bibiana Verlindo de Araújo

Topic to be addressed: Pharmacokinetic assessment of drugs or pharmaceuticals

Bibliography for content review:

1. SCHARGEL, L.; WU-PONG, S.; YU, A.B.C. *Applied Biopharmaceutics and Pharmacokinetics*. 5. ed. New York: McGraw Hill, 2005.
2. TOZER, T.N. ROWLAND, M. *Introduction to Pharmacokinetics and Pharmacodynamics: The Quantitative Basis of Drug Therapy*. Philadelphia: Lippincott Williams & Wilkins, 2006.

3. ROWLAND, M.; TOZER, T.N. Clinical Pharmacokinetics – Concepts and Applications. 3. ed. Philadelphia: Lea & Febiger, 1995.

Tests - Professor Diogo André Pilger

Topic to be addressed: Investigation of Therapeutic Targets and Biomarkers, involving one or more of the following areas: hematology, biochemistry, cytology, neoplasms.

Bibliography for content review:

1. Hanahan D, Weinberg RA. Hallmarks of cancer: the next generation. Cell 144, March 4, 2011.
2. Prada-Arismendy J, Arroyave JC, Röthlisberger S. Molecular biomarkers in acute myeloid leukemia. Blood Reviews 31, 63–76, 2017.
3. Fouad YA, Aanei C. Revisiting the hallmarks of cancer. Am J Cancer Res ;7(5):1016-1036, 2017.
4. Smith AD, Roda D, Yap TA. Strategies for modern biomarker and drug development in oncology. Journal of Hematology & Oncology, 7:70, 2014.

Tests - Professors Helder Teixeira, Letícia Koester and Valquiria Bassani

Topic to be addressed: Pharmaceutical Technology/Nanotechnology applied to natural products.

Bibliography for content review:

1. SIMÕES, C.M.O.(Eds) Farmacognosia. Do Produto Natural ao Medicamento. Porto Alegre: Artmed, 2017. 486 p.
2. NEMITZ, M.; MORAIS, R. C.; KOESTER, L. S. ; BASSANI, V. L. ; POSER, G. L. V. ; TEIXEIRA, H. F. Bioactive soy isoflavones: extraction and purification procedures, potential dermal use and nanotechnology-based delivery systems. Phytochemistry Reviews (Print), v. 14, p. 849-869, 2015.
3. CARINI, JULIANA; LEITAO, GILDA; SCHNEIDER, PAULO; SANTOS, CRISTIANE; COSTA, FERNANDA ; HOLZSCHUH, Maribete ; KLAMT, FABIO ; BASSANI, VALQUIRIA . Isolation of Achyrobichalcone from *Achyrocline satureioides* by High- Speed Countercurrent Chromatography. Current Pharmaceutical Biotechnology, v. 16, p. 66-71, 2015.
4. LUCCA, L. G.; MATTOS, C.B.; BORILLEA, B. T. ; DIAS, D. O. ; TEIXEIRA, H. F. ; VEIGA JUNIOR, V.; LIMBERGER, R.; KOESTER, L.S. Determination of β -caryophyllene skin permeation/retention from crude copaiba oil (*Copaifera multijuga* Hayne) and respective oil-based nanoemulsion using a novel HS-GC/MS method. Journal of Pharmaceutical and Biomedical Analysis (Print), v. 104, p. 144-148, 2015.
5. YATSU, F.K.J.; KOESTER, L.S.; LULA, I.; PASSOS, J.J.; SINISTERRA, R.; BASSANI, V.L. Multiple complexation of cyclodextrin with soy isoflavones present in an enriched fraction. Carbohydrate Polymers, v. 98, p. 726-735, 2013.
6. DE Vargas, B.A.; Argenta, D. F.; Borghetti, G.; KOESTER, L.S.; BASSANI, V.L.; TEIXEIRA, H.F. Validation of an LC Method to Determine Skin Retention Profile of Genistein from Nanoemulsions Incorporated in Hydrogels. Journal of Chromatographic Science, v. 50, p. 114-118, 2012.
7. ANVISA. Agência Nacional de Vigilância Sanitária. Resolução RDC n. 166 de 24 de Julho de 2017. Dispõe sobre a validação de métodos analíticos e dá outras providências.
8. ANVISA. Agência Nacional de Vigilância Sanitária. Resolução RDC n. 27 de 17 de maio de 2012. Dispõe sobre os requisitos mínimos para a validação de métodos bioanalíticos empregados em estudos com fins de registro e pós-registro de medicamentos

Supplementary information: Other review or experimental articles published in the last 10 years in international journals on the topics: nanotechnology applied to natural products, formation of complex bioactive molecules with cyclodextrins, validation of analytical and bioanalytical methods.

Examples of publications/journals: Advanced Drug Delivery Reviews, Drug Development and Industrial Pharmacy, European Journal of Pharmaceutical Sciences, International Journal of Pharmaceutics,

Journal of Controlled Release, Pharmaceutical Research, Journal of Pharmaceutical Science, Industrial Crops and Products.

Professors Irene Clemes Kulkamp Guerreiro and Renata Vidor Contri

Topic to be addressed: Nanotechnology and clean technologies applied to pediatric, dermatological and cosmetic drugs

Bibliography for content review:

1. CORREA, G. A.; ZUIN, G. V. Química Verde: fundamentos e aplicações – Edufscar, 2012.
2. GIANNETTI, B.F.; ALMEIDA, C.M.V.B. Ecologia Industrial. Ed. Blucher, 2013.
3. SCHAEFER-KORTING, M. Drug delivery. Springer, 2010.
4. BECK, R.C.R.; GUTERRES, S.S.; POHLMANN, A.R. (Org.). Nanocosmetics and Nanomedicines: new approaches for skin care. Berlin: Springer, 2011, v. 1, p. 3-36.
5. MULBERG, A.E.; MURPHY, D.; DUNNE, J.; MATHIS, L.L. Pediatric drug development. Wiley Blackwell, 2013.

Tests - Professor Lucélia Santi

Topic to be addressed: Microbial virulence factors and control strategies

Bibliographic references for content review:

The publications suggested so that candidates may review this topic are: Scientific Reports; Frontiers in Microbiology; Journal of Proteome Research; Medical Mycology; Nature Microbiology; Antimicrobial Agents and Chemotherapy. A review of the last 5 years on the topic is recommended. Supplementary information: During the analysis of a scientific article, theoretical questions about the context in question may be posed.

Tests - Professors Marcelo Arbo and Solange Cristina Garcia

Topic to be addressed: Occupational Toxicology

Bibliographic references for content review:

1. Klaassen, C.D.; Watkins III, J.B. *Fundamentos em Toxicologia de Casarett e Doull*. Porto Alegre: Artmed, 2012. 2ª ed.
2. Oga, S. Camargo, M.M.A.; Batistuzzo, J.A.O. *Fundamentos de Toxicologia*. São Paulo: Ateneu. 2014. 4ª ed.

Tests - Professor Ruy R. Beck

Topic to be addressed: Pharmaceutical Nanotechnology/Microtechnology and 3D Printing applied to Pharmacy

Bibliography for content review:

1. Mora-Huertas, C. E.; Fessi, H.; Elaissari, A. Polymer-based nanocapsules for drug delivery. *International Journal of Pharmaceutics*, v. 385, p. 113-142, 2010.
2. Vauthier, C.; Bouchemal, K. Preparation and manufacture of polymeric nanoparticles. *Pharmaceutical Research*, v. 25, p. 1025-1058, 2009.
3. Otto, D. P., Otto A., Villiers, M. M. Differences in physicochemical properties to consider in the design, evaluation and choice between microparticles and nanoparticles for drug delivery. *Expert Opinion on Drug Delivery*, v. 11, n. 5, p. 763-777, 2015.
4. Sosnik, A., Seremeta, K. P. Advantages and challenges of the spray-drying technology for the production of pure drug particles and drug-loaded polymeric carriers. *Advances in Colloid and Interface Science*, v. 223, p. 40-54, 2015.

5. Ren, X., Cheng, S., Liang, Y. et al. Mesoporous silica nanospheres as nanocarriers for poorly soluble drug itraconazole with high loading capacity and enhanced bioavailability. *Microporous and Mesoporous Materials*, 305, 110389, 2020.
6. Beck, R. C. R., Chaves, P. S., Goyanes, A., Vukosavljevic, B., Buanz, A., Windbergs, M., Basit, A.W., Gaisford, S. 3D printed tablets loaded with polymeric nanocapsules: An innovative approach to produce customized drug delivery systems. *International Journal of Pharmaceutics*, v. 528, p. 268–279, 2017.
7. Li, J., Miao, X. Q., Chen, T. K., Ouyang, D. F., Zheng, Y. Preparation and characterization of pelletized solid dispersion of resveratrol with mesoporous silica microparticles to improve dissolution by fluid-bed coating techniques. *Asian Journal of Pharmaceutical Sciences*, v. 11, n. 4, p. 528-535, 2016.
8. Jamróz, W., Szafranie, J., Kurek, M., Jachowicz, R. 3D Printing in Pharmaceutical and Medical Applications – Recent Achievements and Challenges. *Pharmaceutical Research*, n. 35, 176, 2018.

Tests - Professor Simone Gnoatto

Topic to be addressed: Chemistry of Natural Products and Drug Planning and Synthesis.

Bibliography for content review:

1. Barreiro EJ; Fraga CAM. *Química Medicinal- As Bases Moleculares da Ação dos Fármacos*. 3. ed. ArtMed, 2015.
2. de Costa *et al.*, PLoS ONE 9(8) (2014), e105374; doi:10.1371/journal.pone.0105374.
3. de Oliveira *et al.*, *Molecules* 18 (2013) 11022-11032; doi:10.3390/molecules180911022.
4. Gnoatto *et al.*, *Bioorganic & Medicinal Chemistry* 16 (2008) 771-782; doi:10.1016/j.bmc.2007.10.031.
5. Patrick, GL. *An introduction to medicinal chemistry*. 4 ed. New York: Oxford, 2009, Cap. 13, p. 212-240.
6. Zimmer *et al.*, *Journal of Ethnopharmacology* 139 (2012) 228-233; doi:10.1016/j.jep.2011.11.005.

Tests - Professor Tiana Tasca

Topic to be addressed: Antiparasitic activity.

Bibliography for content review:

The publications suggested for study on the topic are: *Antimicrobial Agents and Chemotherapy*, *International Journal of Antimicrobial Agents*, *Journal of Antimicrobial Chemotherapy*, *European Journal of Medicinal Chemistry*, *Chemical Biology & Drug Design*, *Biomedicine & Pharmacotherapy* and other publications in this area. A review of the last 10 years on the topic is recommended.

ANEXO 2 (ATTACHMENT 2)

Fotografia (Photography)



FACULDADE DE FARMÁCIA

SCHOOL OF PHARMACY

PROGRAMA DE PÓS-GRADUAÇÃO EM CIÊNCIAS FARMACÊUTICAS

GRADUATE PROGRAM IN PHARMACEUTICAL SCIENCES

FICHA DE INSCRIÇÃO PARA SELEÇÃO DE MESTRADO ACADÊMICO/2021

REGISTRATION FORM FOR ACADEMIC MASTER'S DEGREE SELECTION PROCESS /2021

Professor(a) orientador(a) (Academic Advisor): _____

Primeira Opção (1st Option): _____

Segunda Opção (2nd Option): _____

Candidato (Applicant): _____

Filiação (Parents' Names): Pai (Father's Name): _____

Mãe (Mother's Name): _____

Data de nascimento (Date of Birth): ___/___/___

Sexo (Gender): () Masculino/Male () Feminino/Female

Naturalidade (Place of Birth): _____

(Cidade/City)

(Estado/State)

(País/Country)

CPF (Individual Taxpayer Registration): _____

Identidade nº (ID Number): _____

Órgão exp. (Issuing Authority): _____ Data (Date): _____

Estado civil (Marital Status): _____

Endereço residencial (Residential Address): _____

Bairro (District): _____ Telefone celular (Mobile Number): _____

Telefone (Telephone Number): _____

Cidade (City): _____ CEP (Zip Code): _____ Estado (State): _____

E-mail: _____

FORMAÇÃO ACADÊMICA (Undergraduate formation):

Curso de graduação (Undergraduate program):

Título obtido (Title obtained): _____ Conclusão (Year of Conclusion): _____

Faculdade (School): _____ Universidade (University): _____

Cursos de pós-graduação (Graduate programs):

Título obtido (Title obtained): _____ Conclusão (Year of Conclusion): _____

Faculdade (School): _____ Universidade (University): _____

Título obtido (Title obtained): _____ Conclusão (Year of Conclusion): _____

Faculdade (School): _____ Universidade (University): _____

ATIVIDADES PROFISSIONAIS ATUAIS (Current Professional Activities)

1 – Docência (Teaching):

Instituição (Institution): () UFRGS () Outra IES/another IES () Escola Particular/Private School

() Escola Municipal/Municipal School () Escola Estadual/State School

Nível (Level): () Superior () 2º Grau () 1º Grau () Técnico () Outros/Others

Nome do empregador (Employer's Name): _____

Endereço (Address): _____

Cidade (City): _____ CEP (Zip Code): _____ Estado (State): _____

Fone (Phone Number): _____ Código DDD (Phone code): _____

Tempo de exercício nesta atividade (employment time): _____

Horário de trabalho (Work Schedule): _____

2 - Outras atividades profissionais atuais (Other current professional activities):

Quais (Specify): _____

3 - Manterá vínculo de trabalho durante o curso?

(Will you maintain employment bond during the course?)

() Sim/Yes () Não/No

4* - Pretende realizar seu curso com dedicação exclusiva?

(Do you intend to take exclusive dedication during the course?)

() Sim/Yes () Não/No

5 - Pretende candidatar-se a bolsa de estudos junto ao PPG em Ciências Farmacêuticas (CAPES/CNPq)?

(Do you intend to apply for a scholarship with the PPG in Pharmaceutical Sciences –CAPES/CNPq-?)

() Sim/Yes () Não/No

6 - Pretende realizar o curso mesmo na eventualidade de não ser contemplado com bolsa de estudos?

(Do you intend to take the course even if not being awarded a scholarship?)

() Sim/Yes () Não/No

7 - Declara alguma necessidade especial de acessibilidade para realização das provas? (**Enquadramento nas categorias discriminadas no Artigo 4º do Decreto nº 3298 de 20/12/1999**).

{Do you declare any special needs for accessibility to take the tests?

() Sim/Yes () Não/No

Especificar e justificar (Specify and justify):

Obs: O atendimento à necessidade especial especificada será feito levando em consideração as possibilidades, a razoabilidade do pedido e as disposições deste Edital, quanto aos critérios de seleção específicos dos professores orientadores. A homologação da inscrição estará condicionada a este atendimento.

(Note: The specified special needs will be met taking into account the possibilities, the reasonableness of the request and the provisions of this Notice, regarding the specific selection criteria of the academic advisor. The registration approval will be conditioned to this attendance.)

8 – Declara alguma necessidade especial por ser *(Do you declare any special needs for being)*

() idoso/elderly, () gestante ou/pregnant or () lactante/nursing mother?

Especificar e justificar (Specify and justify):

Obs.: A seleção dos candidatos para ingresso neste PPG não está vinculada à concessão de bolsas. Este Edital não trata de distribuição de Bolsas de Estudo, cujos critérios serão definidos e publicados em Edital específico.

(Note: The selection of candidates for admission to this PPG is not linked to the granting of scholarships. This Public Notice does not deal with the distribution of Scholarships, whose criteria will be defined and published in a specific Public Notice.)

Porto Alegre, ____ de _____ de 20__.

*4. Quando for o caso, apresentar declaração da Instituição, com a qual possui vínculo empregatício (inclusive se vinculado à UFRGS), concordando com a realização do curso por um período mínimo de 12 meses e máximo de 24 meses, a contar da primeira matrícula no curso.

*(*4. When applicable, submit a statement from the Institution, with which you have an employment relationship (including if linked to UFRGS), agreeing with the course for a minimum of 12 months and a maximum of 24 months, from the first enrollment in the course.)*