



UNIVERSIDADE FEDERAL DE OURO PRETO  
NÚCLEO DE PESQUISAS EM CIÊNCIAS BIOLÓGICAS

PROGRAMA DE DISCIPLINA

Descrição DESENHOS EXPERIMENTAIS E BOAS PRÁTICAS NOS ESTUDOS PRÉ-CLÍNICOS	Código NUP683
Descrição em Inglês EXPERIMENTAL DRAWINGS AND GOOD PRACTICES IN PRECLINICAL STUDIES	Carga Horária 30H
Descrição em Espanhol DISEÑOS EXPERIMENTALES Y BUENAS PRÁCTICAS EN ESTUDIOS PRECLÍNICOS.	Créditos 2

Ementa A disciplina abordará em uma perspectiva teórica: (1) os conceitos relacionados ao uso de modelos animais de doenças mentais no contexto da pesquisa translacional, e (2) as técnicas experimentais aplicadas as boas práticas nos estudos pré-clínicos experimentais nas ciências básicas.
Ementa em Inglês The course will address in a theoretical perspective: (1) the concepts related to the use of animal models of mental illnesses in the context of translational research, and (2) the experimental techniques applied to good practices in preclinical experimental studies in the basic sciences.
Ementa em Espanhol El curso abordará desde una perspectiva teórica: (1) los conceptos relacionados con el uso de modelos animales de enfermedades mentales en el contexto de la investigación traslacional, y (2) las técnicas experimentales aplicadas a las buenas prácticas en los estudios experimentales preclínicos en las ciencias básicas.
Bibliografia A bibliografia dependerá das atividades que os alunos inscritos estiverem desenvolvendo, sendo composta de artigos recentes da literatura relevantes aos trabalhos em questão e as questões levantadas pelos objetivos da disciplina conforme acima. A bibliografia básica recomendada está detalhada a seguir. 1. Belzung C, Lemoine M. Criteria of validity for animal models of psychiatric disorders: focus on anxiety disorders and depression. Biol Mood Anxiety Disord. 2011 Nov 7;1(1):9. doi: 10.1186/2045-5380-1-9 2. Berton O, Hahn CG, Thase ME. Are we getting closer to valid translational models for major depression? Science. 2012 Oct 5;338(6103):75-9. doi: 10.1126/science.1222940. Review. 3. Deacon RM1. Housing, husbandry and handling of rodents for behavioral experiments. Nat Protoc. 2006;1(2):936-46. 4. Deacon RM. Burrowing in rodents: a sensitive method for detecting behavioral dysfunction. Nat Protoc. 2006;1(1):118-21. 5. When mice mislead. Science ULRICH DIRNAGL - Commentary 6. Deacon RM. Assessing hoarding in mice. Nat Protoc. 2006;1(6):2828-30. 7. Holman C, Piper SK, Grittner U, Diamantaras AA, Kimmelman J, Siegerink B, Dirnagl U. Where Have All the Rodents Gone? The Effects of Attrition in Experimental Research on Cancer and Stroke. PLoS Biol. 2016 Jan

- 4;14(1):e1002331. doi: 10.1371/journal.pbio.1002331. eCollection 2016.
8. Ioannidis JPA (2005). Why most published research findings are false. *PLoS Med* 2: e124.
  9. Kenakin T, Bylund DB, Toews ML, Mullane K, Winqvist RJ, Williams M. Replicated, replicable and relevant-target engagement and pharmacological experimentation in the 21st century. *Biochem Pharmacol*. 2014 Jan 1;87(1):64-77. doi: 10.1016/j.bcp.2013.10.024. Epub 2013 Nov 19. Review.
  10. Kimmelman J, Mogil JS, Dirnagl U. Distinguishing between exploratory and confirmatory preclinical research will improve translation. *PLoS Biol*. 2014 (5):e1001863. doi: 10.1371/journal.pbio.1001863. eCollection 2014 May.
  11. Mullane K, Winqvist RJ, Williams M. Translational paradigms in pharmacology and drug discovery. *Biochem Pharmacol*. 2014 Jan 1;87(1):189-210. doi: 10.1016/j.bcp.2013.10.019. Epub 2013 Oct 30. Review.
  12. Assessing the translatability of drug projects: what needs to be scored to predict success?
  13. Marcus R. Munafo, Brian A. Nosek, Dorothy V. M. Bishop, Katherine S. Button, Christopher D. Chambers, Nathalie Percie du Sert, Uri Simonsohn, Eric-Jan Wagenmakers, Jennifer J. Ware and John P. A. Ioannidis, A manifesto for reproducible Science
  14. Mark Yarborough, Annelien Bredenoord, Flavio D'Abramo, Nanette C. Joyce, Jonathan Kimmelman, Ubaka Ogbogu, Emily Sena, Daniel Strech, Ulrich Dirnagl; The bench is closer to the bedside than we think: Uncovering the ethical ties between preclinical researchers in translational neuroscience and patients in clinical trials