

## Challenges of conducting animal based research and teaching in medical colleges of Karachi, Pakistan

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Madam, poor living conditions, such as chronic food and water deprivation and uncontrolled temperature, humidity and light/dark cycle significantly alters the results of animal based studies because they result in increased stress response, altered circadian rhythm and modulation of endocrine systems in animals.<sup>1,2</sup> There is international consensus that animal welfare needs to be ensured in order to make animal-based research and teaching acceptable and replicable. Pakistan Medical and Dental Council (PMDC) does not have detailed guidelines for animal care facilities in the research labs of medical colleges except for infrastructural needs, quote: "There shall be adequate .....space and equipment for the humane care of animals when they are used in teaching or research".<sup>3</sup> Whether the international standard of animal welfare is maintained in Pakistan has not been investigated. We conducted a telephonic and in-person survey of PMDC recognized medical colleges of Karachi, Pakistan, to identify the existence of animal houses and the challenges they faced. Only five out of fifteen recognized institutions had an animal housing facility. The major challenges faced by some of these facilities were lack of control of environmental conditions

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like temperature, humidity and lighting. Congenic line of some species were bought 10-30 years ago and since then were inter-bred without maintenance of records. However, no overcrowding was noted and general hygiene was well maintained. A veterinarian was present in all facilities. All facilities recognized that their standards should be improved. It was brought to attention that the medical colleges of Karachi cannot afford to establish and maintain international standard animal research facilities. It is imperative that all animals maintained in these institutes should be kept in conditions that conform to international standards. In this regard, PMDC should have more clear and detailed guidelines for establishment and maintenance of animal care facilities.

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### References

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