



Fig. 1. SEM images of PMEMA cryogel

CONCLUSIONS

In conclusion, we found that our novel PMEMA cryogels were ideal candidate for controlled release of IBU.

REFERENCES

1. Kostova, B., Momekova, D., Petrov, P., Momekov, G., Toncheva-Moncheva, N., Tsvetanov, C. B., Lambov, N., Poly(ethoxytriethyleneglycol acrylate) cryogels as novel sustained drug release systems for oral application. *Polymer* **2011**, 52 (5), 1217–1222.
2. Takei, T., Nakahara, H., Tanaka, S., Nishimata, H., Yoshida, M., Kawakami, K., Effect of chitosan-gluconic acid conjugate/poly(vinyl alcohol) cryogels as wound dressing on partial-thickness wounds in diabetic rats. *J Mater Sci Mater Med.* **2013**, 24 (10), 2479–87.

P-226: SYNTHESIS OF NOVEL AMINOCARBO-N-THIOL PYRROLIDINE DERIVATIVES AND THEIR ANTITUBERCULOSIS ACTIVITIES

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INTRODUCTION

Pyrrolidine and aminocarbothiol pyrrolidine derivatives have been extensively studied during the last decade due to possessing biological and pharmacological properties such as antifungal, antibacterial and antimalarial activity [1-3]. Pyrrolidine ring also have important place in drug research and this structure is present in many alkaloids and drug molecules [1].

MATERIALS AND METHODS

As a part of our ongoing research work, some novel pyrrolidine and aminocarbo-N-thiol pyrrolidine derivatives were prepared by modification of literature method [4].

Antimycobacterial activity of these novel compounds were tested and performed by using Alamar Blue assay [5] against *M. tuberculosis* H37Rv strain.

RESULTS AND DISCUSSION

In this study, the novel pyrrolidine and N-thiol pyrrolidine compounds were prepared and their structures were characterized by NMR and microanalysis.

The antimycobacterial activity of these compounds were performed by using Alamar Blue assay against *M. tuberculosis* H37Rv strain. In antimycobacterial activity studies, isoniazid and ethambutol drugs were used as standard. The antimycobacterial activity were found in the range of 62.5-125 µg/mL. Isoniazid and ethambutol showed antimycobacterial activity with 1 µg/ml and 10 µg/ml respectively.

CONCLUSIONS

The synthesized novel compounds showed antimycobacterial activity against *M. tuberculosis* H37Rv strain.

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REFERENCES

1. a) Grigg, R., Prototropic route to 1,3- and 1,5-dithiolanes: Application to the synthesis of heterocyclic compounds. *Chem Soc Rev.* **1987**, 16, 49-111.
1. Ponpandian, T.; Muthusubramanian S., A new method for synthesising (+/-)-thalictroidine and (-)-thalictroidine. *Tetrahedron Letters* **2011**, 52, 1520-1522.
2. Koch, K.R., New chemistry with old ligands: N,N-dialkyl-N'-acyl(aroyl)thioureas in coordination, analytical and process chemistry of the platinum group metals. *Coordination Chem. Rev.* **2001**, 216-217, 435-475.
3. Saeeda, A.; Flörke, U.; Erbenc, M.F., A review on the chemistry, coordination, structure and biological properties of 1-(acyl/aroyl)-3-(substituted) thioureas. *Journal of Chemical Sciences* **2014**, 35(3), 318-355.
4. Döndaş, H.A.; Nural, Y.; Duran, N.; Kilner, C., Synthesis, crystal structure and antifungal/antibacterial activities of novel highly functionalized benzoylamino-substituted pyrrolidines. *Turk J. Chem.* **2006**, 30, 573-581.
5. National Committee for Clinical Laboratory Standards. Susceptibility Testing of Mycobacteria, *Nocardia* and *Thermophilic Actinomycetes*; Tentative Standard- Second Edition; NCCLS document M24-T., Pennsylvania USA (2002).



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