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Assessment of National Science Foundation (NSF) research grant output and outcome in the disciplines of biochemistry and biotechnology

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Sri Lanka has a high level of demand for scientific knowledge. Each year, financial and human resources are used in various research and development activities. However, the outputs and outcomes are not clear. This study was conducted to investigate the knowledge gaps of the biochemistry / biotechnology areas. 52 NSF grantees were sent a questionnaire and 31 of them responded recording an overall response rate of 59.6%. The study revealed that approximately LKR 23.7 million was allocated for the research grants during 1993- 2008 and LKR 21.7 million were spent. A total of 156 papers were published based on the research grants. Six patents were obtained and 75 abstract presentations were made. Eleven training programs arose out of the projects including foreign training that had helped in establishing linkages for future work. Other outputs include nine book chapters, three commercialized products and eight consultative reports. The study revealed that there was a sudden drop of the funding process after the year 2004. Each project has trained at least one undergraduate. M. Phil. degrees were prominent (19) with Ph. D. (7) and M. Sc. (7) degrees also resulting from these funds. This is an indicator that NSF grants had helped in human resource development (HRD) in the fields of biochemistry and biotechnology. Nevertheless, human resources are not just quick impacts on the society. They are long term and durable investments. The grantees well acknowledged the knowledge gained and how it has been useful to their R&D contribution. This is basically a long term impact and according to the study it's fruitful. Out of all the grants, 19 were basic academic research projects and they also have contributed towards human resource development. This study basically revealed that granting money for research and development (R&D) does give more outputs and outcomes in the long term than what are expected in the short term. Finally, the study suggests that granting money for R&D in Sri Lanka should be improved regardless of the source of funds (government, private, NGO, unknown, etc.).