

**SUMMARY OF PROPOSED RESEARCH**  
(Do not exceed the space provided)

Describe clearly and concisely, in language readily understandable to a biomedical scientist who may not be a specialist in the research project's field, the broad objectives, specific aims, general procedures, and the potential significance of the research.

**Project Summary**

The incidence of male infertility is estimated to be 15% to 40% (1, 2). Evaluation of male infertility is limited to assessment of only a few aspects of sperm function (3, 4). In a majority of men who do not respond to in-vitro fertilization (IVF), spermatozoa fail to bind to zona pellucida (5, 8-9). A predictive test to determine whether spermatozoa will fertilize the egg in vitro is an elusive goal of clinical research. The aim of this study is to use mannose-stimulated acrosome test to select patients who will respond to IVF procedure. Intracytoplasmic sperm injection (ICSI), a more invasive procedure than standard IVF, will be conducted in those who fail the test. The use of this test will 1) significantly reduce the cost of IVF procedure in patients that are unlikely to benefit, and 2) minimize the indiscriminate use of ICSI and reduce the risk of genetic abnormalities.

Please provide five Key Words that best describe your project:

- (1) Acrosome reaction      (2) In-vitro fertilization      (3) Sperm capacitation  
(4) Mannose-binding receptors (5) Sperm receptor