of *DFFRY*. We examined the ubiquitin-specific protease (UBP) activity of *DFFRY* that contains so called the Cys and His domain.

Materials and Methods: The UBP activity of *DFFRY* was tested with both bacterial and mammalian systems.

Results: We first assayed the UBP activity of *DFFRY* in the bacterial system. The results revealed that both *DFFRY* and Fam, the mouse Dffrx protein, possess the UBP activity. We next assayed the UBP activity in mammalian cell. Ectopic expression of *DFFRY* in COS7 cells resulted in removal of ubiquitins from conjugated proteins but not of NEDD8, a ubiquitin-like molecule.

Conclusion: The present study showed that *DFFRY* possesses a protease activity specific to ubiquitin. These results suggest that, through de-ubiquitination, *DFFRY* might stabilize a specific target protein that is important for the male germ cell development.

P-3 A Sperm Factor Inducing Second Polar Body Formation in Mouse Secondary Oocyte

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Baground: A sperm factor(s) for oocyte activation during fertilization has not been clearly identified.

Objectives: This study was carried out to elucidate an oocyte activation factor(s).

Materials and Methods: Mouse sperm were sonicated and ultra-filtered with a 30 kilo-Daltons (KD) cutoff membrane and the ultra-filtrate was then sequentially fractionated over Superose 12 column and Superdex column. The recovered fractions were micro-injected into MII mouse oocytes and second polar body formation (PBF) was examined.

Results: Superose fraction RV2.10 prepared from sperm extract significantly increased PBF. Of Superdex fractions re-separated from Superose fraction RV2.10, fraction RV2.12 also had the strongest PBF activity. By analyzing with micro-reverse phase column (*u*RPC), the Superdex fraction RV2.12 appeared to be glutamic acid. In microinjection test, glutamic acid significantly increased PBF.

Conclusion: This study suggests that glutamic acid should be a type of sperm factor for second polar body formation related to oocyte activation.