fertilization. It will be of interest to determine if these genes are expressed in germ granules or in P-bodies from zebrafish.

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Program/Abstract # 258
Expression analysis of the rap55 homolog in the zebrafish germline
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The zebrafish is a model organism that reproduces sexually, then requires to produce specialized germ cells. Oocytes are loaded with ribonucleo-proteins and mRNA of maternal origin clustered in germ granules. During the first 10 cell cycles in early zebrafish development, transcription is absent and maternal mRNA clustered at the germ granules, is the main source for protein translation. In zebrafish some germ granules components have been described such as the protein or mRNA of the genes vasa, gel, dead end and nanos. Recently the protein Rap55/Car-1/Trailer hitch/Lsm14/Rap55 was found to be another germ granule component in organisms like Drosophila melanogaster, Caenorhabditis elegans and Xenopus laevis. This is the Scd6 homolog described in Saccharomyces cerevisiae, that is located in P-bodies (Processing bodies), therefore Rap55 is possible involved in mRNA processing. We have found three zebrafish homologous genes for Rap55 located in chromosomes 13, 23 and 25 respectively. These genes have highly conserved domains, as the Lsm domain in the amino-terminal region and the FDF domains: DFDF, FFD and TFG. They contain also RGG boxes located in glycine-rich regions in the c-termini. RGG boxes are RNA binding domains. RT-PCR analysis showed that the three homologs were expressed in all developmental stages from two cells to 5 days post-fertilization. We are currently studying the expression pattern of a GFP-fusion protein from one isoform that express in ovary, besides analyzing the effect of blocking its expression by morpholino antisense injections.

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Program/Abstract # 259
Spermatogenesis in Cuban endemic amphibians
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Amphibians in Cuba constitute 60 species of Anura with an astonishing 94.5% endemism. Bufonidae (toads) and Leptodactylidae (little frogs) are families that exhibit a great diversity and little is known about its biology. The aim of this work is to obtain a better understanding of spermatogenesis process as well as the structure of germ cells in these Cuban amphibians. Four males of Bufo fustiger, B. longinasus, Eleutherodactylus goini and E. riparius were collected in the western part of the Island of Cuba in the summer season. The specimens were anaesthetized and dissection was carried out. The gonads (in the case of toads Bidder’s organ was cut) were fixed in 4% paraformaldehyde and 2.5% glutaraldehyde and were processed by immuno-fluorescence and transmission electron microscopy. Suspensions of spermatooza of some species were also prepared and observed by Atomic Force Microscopy. In the seminiferous tubules spermatogonias, primary and secondary spermatocytes, spermatids in different stages and spermatooza, are arranged themselves in cysts. The spermatogenetic lineage cells were differentiated and identified according to the cellular and cystic morphology. The presence of numerous pigment-containing cells randomly distributed in the albuginea tunic and testicular interstitium in the gonad of B. longinasus was a peculiar characteristic. Fluorescence spots were located in spermatogonias and spermatocytes nuclei. The spermatooza features were analyzed in Bufo and Eleutherodactylus species showing conic head and undulating membrane. This investigation was conducted as a part of a WWF project.

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