

EXAMPLE ONLY**a) Project proposal – Paleoanthropological research at Napudet, South Turkwel, Lake Turkana, Kenya**

Description. The proposed project concerns the exploration and excavation of a newly discovered primate fossil site – Napudet - in South Turkwel, Turkana Basin, Kenya. Research at the site is led by Isaiah Nengo – paleoanthropologist, research assistant professor, and associate director of the Turkana Basin Institute (TBI) at Stony Brook University (SBU). Last year, Isaiah invited me to assist with the study and analysis of a baby ape cranium belonging to a new species - *Nyanzapithecus alesi* –recently reported in the journal *Nature*. He also invited me to participate in the analysis of a partial ape skeleton from the site (manuscript is currently in preparation), and to visit Napudet with him in January 2018 (funded by TBI and my start-up funds) for 2 weeks to prospect and work on the excavation of the ape skeleton. While in the field during January 2018, Isaiah **formally invited me to collaborate as a co-investigator of the Napudet Research Project.**

I am requesting funds to return to Napudet in Summer 2018 to continue fieldwork as the new co-investigator at Napudet. The Napudet Research Project harnesses the research power of both the TBI and the Department of Anthropology in the inception of a new partnership among SBU scholars, and will promote vertical integration among academic levels within the university (see below). The project cultivates interdisciplinary research efforts between new faculty from the Anthropology Department and the TBI. I joined Anthropology in fall 2014, and ION joined the TBI this past fall 2017; thus, this project represents the development of a collaboration that combines my expertise in comparative primate anatomy and ION’s expertise in zoology and paleoanthropology, infusing with new scholarly blood a longstanding tradition of relationships between Anthropology (and formerly Anatomical Sciences) and the TBI. The Napudet Research Project promotes SBU as an “international center of excellence in research and training in paleontology and paleoanthropology, specifically in the areas of primate and human evolution” (<http://www.turkanabasin.org/about/about-stonybrook/>).

Research at Napudet is of critical importance to the field of paleoanthropology. Since discovery of the site, field work has uncovered at least 3 taxa at the site including the recently-erected *Nyanzapithecus alesi* represented by the most complete ape cranium yet to date described above, indicating that Napudet will offer answers to questions pertaining to ape diversity. Additionally, deposits tentatively dated to 13Ma yielded the new partial ape skeleton that is currently under study (by IO Nengo, CV Ward, and GA Russo) and preliminarily represents an individual with large forelimbs. With the exception of remains from the largely contemporaneous *Equatorius* and *Nacholapithecus*, there are no other ape postcranial specimens between 15 Ma and 7 Ma in Africa. Thus, finds from Napudet will considerably improve our understanding of the adaptive range and evolution of the ape positional behaviors. Further, the Napudet locality CSF 2015-3 contains deposits from and below the base of the basin’s largest paleolake “Lake Lonyumun” that are dated to the 4.1Ma (Feibel, 2011). While there is an unconformity below the lake deposits, the underlying “red series” (not yet dated) could represent late Miocene (to early Pliocene) sediments, a time period during which we know the earliest human ancestors are represented elsewhere in Africa. Thus, Napudet may also provide a window into early human evolution, otherwise represented solely by Lothagam (>7.4 to ~3.5-3.0 Ma) in the Turkana Basin.

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To complete our work, myself and ION will return to Napudet in Summer 2018 for one month with the specific objectives of 1) continuing excavation of the ape partial skeleton, 2) collecting all fossil remains from the “red series” in hopes of identifying indicator taxa that could secure specific dates for these sediments, and 3) prospecting for new fossil localities. **Thus, the funds we request fall within the category of “travel grants for research”.** Funds are not needed for equipment, however, **funds are requested for a travel Visa, Research Affiliation Fees with the National Museums of Kenya, and a Research Permit from the National Commission for Science, Technology, and Innovation (NACOSTI) Kenya, all of which are required for conducting field work. The documents regarding the affiliation and the research permit are attached.**

I have a strong track record of publications on primate functional anatomy and evolution (e.g., Russo et al., in press; Russo, 2010, 2015, 2016; Russo and Shapiro, 2011, 2013; Russo and Kirk, 2013, 2017; Williams and Russo, 2015a,b). ION also has strong track record of publications on primate evolution and anatomy (e.g., Nengo et al., 2017; Patel et al., 2017). Our research has received funding from grant sponsors including the National Science Foundation (GAR and ION), the Leakey Foundation (GAR and ION), and National Geographic (ION) attesting to the value of the research as perceived by our peers and colleagues. **We are currently in the process of writing grants to be submitted to the Wenner Gren Foundation (due May 1 2018) and the Leakey Foundation (due July 15 2018). Funds will be requested from Wenner Gren and the Leakey Foundation to support 3 years of field work from 2019-2021. As such, funds are requested from FAHSS to support our initial season of fieldwork together, prior to our submission of grants for securing funding from external sources.**

Research Outcomes. The research outcomes of the proposed project are straightforward. **First**, the results of our analysis and interpretation of the ape partial skeleton will be written up and submitted to a high impact journal in our field (e.g., *Journal of Human Evolution*). Several of our previous publications (e.g., Nengo et al., 2017; Russo and Shapiro, 2013; Russo and Kirk, 2013; Russo and Williams, 2015a) have garnered interest from a number of national and international media affiliates (BBC, Nature News, etc.), including ION’s recent description of the new infant primate cranium from the Middle Miocene. Such attention demonstrates public interest in our research beyond the field of biological anthropology, and holds promise for the impact of our new research partnership. Further, as a new site that has already produced fossil finds with significance attested to by their report in *Nature* (e.g., Nengo et al., 2017), Napudet is likely to produce additional finds meaningful to the field of paleoanthropology, which may be published in like high impact journals (e.g., *Science, Nature Communications*). And, as mentioned above, we will continue to apply for funding from external sources. **Second**, my invitation to join ION as co-investigator at Napudet is critical my burgeoning research program in the Department of Anthropology at Stony Brook University. Before this invitation, I had not been formally involved in fieldwork, though I had participated as field crews as a former graduate student. **The importance of this opportunity to my future as a paleoanthropologist cannot be overstated.** Affiliation with a field site and field researchers at the TBI affords me a long-term source site of scientific inquiry critical to my current and sustained success as an paleoanthropologist.

Broader Impacts. This project will promote the vertical integration of mentorship relationships among SBU researchers at different academic levels within the institution. Specifically, ION

joined SBU as a Research Assistant Professor, with over 20 years of research, field, and teaching experience (PhD 1994, Harvard University); I more recently received my PhD (2013 University of Texas at Austin). ION and I will collaborate at all levels of research operations, and thus I will be receiving invaluable fieldwork training from a senior colleague. We will also extend mentorship opportunities to graduate students (both Kenyan from Turkana College University [TCU], and Stony Brook University [SBU]) and SBU undergraduates, thereby enhancing the research opportunities available to students. We will train TCU and SBU graduate students in the field, which will undoubtedly enrich their research experiences and improve later academic career prospects, including operating field sites of their own. Currently there are no more than 5 Kenyans with PhDs actively involved in paleontological and geological research and only two currently enrolled in postgraduate programs, attesting to the importance of this training. The FML (PI: GAR) is a research lab on SBU campus with active student involvement. I currently advise 3 IDPAS (Interdepartmental Program in the Anthropological Sciences) graduate student. Since my initial appointment, I have mentored 12 SBU undergraduates, and one high school student, in lab research activities. One UG student (Jordan Guerra) has co-authored two published conference abstracts and received a prestigious travel award (Increasing Diversity in Evolutionary Anthropology) for underrepresented minority students to attend that conference. Another undergraduate (D’Arcy Marsh) is the co-author on a paper that is currently in press for an invited publication in a special edition of *The Anatomical Record*. Should we receive FAHSS support to carry out this project, I will offer a lab research assistant opportunity to another SBU undergraduate that will help to shape their scientific research activities and accelerate their career trajectories.

Timetable of Research Activities (“Research Schedule”)

Dates	Activities
May 1 2018	Submit grant to Wenner Gren Foundation for funding for 2019-2021 field seasons
June 3 – June 30 2018	Field work at Napudet, Turkana Basin, Kenya; arrive at TBI-Tu
July 15 2018	Submit grant to Leakey Foundation for 2019-2021 field seasons
June 30 2018 – June 1 2019	Write up results and reports on Summer 2018 fieldwork

b) Budget

Item	Cost
Visa for Summer Research	\$50
NMK Research Affiliation Fee	\$200
Research Permit Fee (NACOSTI)	\$400
Hotel in Nairoboi prior to departure to field (per Expedia, roundtrip, \$100/night)	\$200
Taxi from airport to hotel (roundtrip, \$25/trip)	\$50
Airfare Lowdar-TBI transfer (1 trip x \$80 per trip) –see attached TBI cost document	\$80
Airfare Wilson (Nairobi) to Lodwar Roundtrip*	\$350
TBI researcher dorm at Turkwel prior to, and returning from, the field (6 nights at \$65 night) (see TBI doc)	\$390
NBO per diem (\$25/day x 2 days)	\$50
Field meals (\$7 day x 28 days, see TBI doc)	\$196
Total amount requested	\$1966

*GAR has used her start-up funds to pay for the flight from JFK - NBO

c) External funding (as appropriate). As mentioned, we are currently in the process of writing grants to be submitted to the Wenner Gren Foundation (due May 1 2018) and the Leakey Foundation (due July 15 2018) to support 3 years of field research from 2019-2021.