



## Appendix B – Tabulation of Allegations

The Inquiry Committee received original allegations from the following individuals and organizations:

- Office of Naval Research (ONR) (anonymous underlying source)
- Kenneth Suslick (University of Illinois)
- Lefteri Tsoukalas (Purdue University)
- Seth Puterman (UCLA)
- Brian Naranjo (UCLA)
- Joshua Walter (Purdue University)

Some persons also endorsed or adopted by reference allegations that originated from others. Several of the allegations were duplicative, overlapping, or open-ended. The Inquiry Committee organized the allegations according to the publication or event that was the primary focus of the allegation.

A. **Publication: R. P. Taleyarkhan et al., Evidence for Nuclear Emissions During Acoustic Cavitation, *Science* 295, 1868 (2002)**



1. **Allegation:** Taleyarkhan used  $^{252}\text{Cf}$  to fabricate and/or falsify his bubble fusion replication results.
  - a. **Source:** ONR
2. **Allegation:** Taleyarkhan improperly omitted a negative sonofusion result by deleting the 5-18-01 draft's reference to tritium smear data that was consistent with background contamination.
  - a. **Source:** Suslick
3. **Allegation:** During the "initial refereeing process" for Taleyarkhan's *Science* publication, Taleyarkhan suppressed a null result obtained by Saltmarsh and Shapiro in Taleyarkhan's lab using Taleyarkhan's equipment.
  - a. **Source:** Suslick
4. **Allegation:** Taleyarkhan selectively processes his experimental data in order to create a misimpression of statistical significance.
  - a. **Source:** Suslick
5. **Allegation:** Figure 3 is replicated in later publications with subtle data movements.
  - a. **Source:** Suslick; ONR



- B. Publication: R. P. Taleyarkhan et al., Additional evidence of nuclear emissions during acoustic cavitation, *Physical Review Letters* 69, 036109 (2004)**
1. **Allegation:** Taleyarkhan used  $^{252}\text{Cf}$  to fabricate and/or falsify his bubble fusion replication results.
    - a. **Source:** ONR
  2. **Allegation:** Taleyarkhan selectively processes his experimental data in order to create a misimpression of statistical significance.
    - a. **Source:** Suslick
- C. Publication: Y. Xu & A. Butt, Confirmatory experiments for nuclear emissions during acoustic cavitation, *Nuclear Engineering and Design* 135, 1317 (2005)**
1. **Allegation:** Taleyarkhan used  $^{252}\text{Cf}$  to fabricate and/or falsify his bubble fusion replication results.
    - a. **Source:** ONR
  2. **Allegation:** Taleyarkhan intentionally left his name off of the publication in order to create a misleading impression of independent confirmation of sonofusion.
    - a. **Source:** Suslick
  3. **Allegation:** Taleyarkhan managed the generation of the research reported in the NED paper.
    - a. **Source:** Tsoukalas
  4. **Allegation:** The Xu data must have been fabricated because there is no record of acquisition of previously unused deuterated acetone by personnel in the Xu/Taleyarkhan laboratory.
    - a. **Source:** Tsoukalas
  5. **Allegation:** Taleyarkhan manipulated the press characterization of the Xu research to create a misleading appearance of independent supervision by Tsoukalas.
    - a. **Source:** Tsoukalas
  6. **Allegation:** The *NED* and *NURETH-II* papers rely upon falsified and/or plagiarized calibration data.
    - a. **Source:** Tsoukalas

- D. Publication: Y. Xu et al., Bubble Dynamics and Tritium Emission During Bubble Fusion Experiments, (Oct. 2, 2005) Paper w/ abstract for 11th international topical meeting on nuclear reactor thermal-hydraulics [NURETH-11]**
1. **Allegation:** Taleyarkhan used  $^{252}\text{Cf}$  to fabricate and/or falsify his bubble fusion replication results.
    - a. **Source:** ONR
  2. **Allegation:** Taleyarkhan intentionally left his name off of the publication in order to create a misleading impression of independent confirmation of sonofusion.
    - a. **Source:** Suslick
  3. **Allegation:** Taleyarkhan manipulated the press characterization of the Xu research to create a misleading appearance of independent supervision by Tsoukalas.
    - a. **Source:** Tsoukalas
- E. Publication: R. P. Taleyarkhan et al., Bubble Nuclear Fusion Technology, *Multiphase Science & Technology* 17, 191-224 (2005)**
1. **Allegation:** *MST* data is the same as *NED/NURETH* data, lacking proper attribution to the original sources, leading to the claim that RT “was allegedly (wrongfully) presenting same results as outcome(s) of different experiments.”
    - a. **Source:** ONR
  2. **Allegation:** Taleyarkhan used  $^{252}\text{Cf}$  to fabricate and/or falsify his bubble fusion replication results as reported in *NED* and *NURETH-11*.
    - a. **Source:** ONR
  3. **Allegation:** Figure 8b of the *MST* paper plagiarizes Xu’s *NED* Figure 8 and *NURETH* Figure 6.
    - a. **Source:** Suslick
- F. Publication: R. P. Taleyarkhan et al., Nuclear Emissions During Self-Nucleated Acoustic Cavitation, *Physical Review Letters* 96, 034301 (2006)**
1. **Allegation:** Taleyarkhan’s “PRL publication improperly attributes the neutron energy spectrum to D-D fusion, despite evidence that it is inconsistent with the spectrum expected for D-D fusion and is consistent with the spectrum for  $^{252}\text{Cf}$ .”
    - a. **Source:** ONR; Suslick; Patterman

2. **Allegation:** Taleyarkhan was federally funded for the work reported in *Physical Review Letters* (PRL 96), and has since allegedly claimed he was not.
    - b. **Source:** ONR
  3. **Allegation:** In January 2006, after spectrum analysis was conducted allegedly proving his use of  $^{252}\text{Cf}$ , Taleyarkhan published fabricated and/or false scientific statements in his PRL: "Introduction.-Previously, we have provided evidence [1(a), 2-4] for 2.45 MeV neutron emission and tritium production during external neutron-seeded cavitation experiments with chilled deuterated acetone, and these observations have now been independently confirmed [5]." Taleyarkhan intentionally left his name off of the Xu publications in order to create a misleading impression of independent confirmation of sonofusion.
    - a. **Source:** Suslick; ONR; Tsoukalas
- G. Publication: R.P. Taleyarkhan et al., Reply, *Physical Review Letters* 97, 149404 (2006)**
1. **Allegation:** Taleyarkhan's response to the Naranjo critique was intentionally misleading.
    - a. **Source:** Naranjo; Suslick
  2. **Allegation:** In his published response to a forensic analysis by Dr. Brian Naranjo, Taleyarkhan claims to show the same fusion data but, allegedly, actually deleted some of his originally published research results data on fusion signal.
    - a. **Source:** ONR
- H. Demonstration: August 2003 demonstration at ORNL**
1. **Allegation:** In an August 2003 experiment, Taleyarkhan displayed improper experimental technique and improperly attempted to enlist Walter and Bougaev as endorsing authors of a related publication.
    - a. **Source:** Walter; Bougaev
- I. Event: Early 2004 Harassment/Intimidation**
1. **Allegation:** Taleyarkhan interfered with Walter's conduct of a cavitation cell experiment in January-February 2004 in RHPH G60.
    - a. **Source:** Walter
- J. Event: Miscellaneous intimidation**
- a. **Source:** Walter
- K. Demonstration: Demonstration in RHPH G60 on 9-19-03**
1. **Allegation:** Taleyarkhan fabricated a fusion demonstration in RHPH G60.
    - a. **Source:** Walter

- L. **Presentation: September 2005 presentation at Wayne State**
  - 1. **Allegation:** Taleyarkhan falsely cited the Xu publications as an independent confirmation of sonofusion.
    - a. **Source:** Suslick
  
- M. **Demonstration: March 2006 DARPA demonstration**
  - 1. **Allegation:** Taleyarkhan selectively published only his sonofusion signal detections and suppressed that his experiments usually yield a null result (1-in-15 produce a sonofusion signal). Taleyarkhan's failure to publish a null result from his DARPA-funded research, including the March 2006 Purdue demonstration, is suppression of lack of reproducibility.
    - a. **Source:** Suslick; Putterman
  
  - 2. **Allegation:** Taleyarkhan selectively processes his experimental data in order to create misimpression of statistical significance.
    - a. **Source:** Suslick
  
  - 3. **Allegation:** The March 2006 demonstration was a "bait and switch" designed to obstruct inquiry into replication of Taleyarkhan's published experiment configurations. Taleyarkhan obstructed inquiry into the demonstration and into archive of sonofusion equipment and data.
    - a. **Source:** ONR; Suslick
  
  - 4. **Allegation:** Taleyarkhan altered records regarding charges to the ONR/DARPA account.
    - a. **Source:** Tsoukalas
  
- N. **Event: Purdue University's handling of June 2006 Suslick communication**
  - 1. **Allegation:** In June 2006, pursuant to Dr. Suslick's allegation that Dr. RT committed fraud; Purdue University officials did not conduct an inquiry into those allegations in violation of their own process.
    - a. **Source:** ONR