SOCIETY FOR PSYCHOPHYSIOLOGICAL RESEARCH

43RD ANNUAL MEETING
CHICAGO, ILLINOIS
OCTOBER 29 – NOVEMBER 2, 2003

PROGRAM CHANGES
(As of October 21, 2003)

ADDITIONAL EXHIBITOR

ANT Software
Colosseum 2
7521 PT Enschede
The Netherlands
Contact: Monia van Burik
Email: Info@ant-software.nl
Phone: +31 (0) 53 6365175
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EXHIBITOR NAME CHANGE

Previous name: Neuroscan – A Compumedics Company

New name: Compumedics Neuroscan
(Contact information remains the same)

SPECIAL INTEREST DINNER — SCHEDULE CORRECTION

Psychophysiology and Sexual Behavior
Correct time: 6:00 – 8:00 pm
Host: Stuart Brody (stuartbrody@hotmail.com)
Sign-up sheets for this dinner will be posted near the SPR registration desk

(this event was previously listed as a Friday lunch)

Poster Session I – Thursday, October 30th

Poster 53 (Program Book Page 47; SPR Abstracts Supplement Page S66)

Correct title: Effect of alcohol on P300 sequential effects

Authors: Melanie Pearson[1], Jeffrey Sable[1], Monica Fabiani[1], Kenneth Sher[2] & Gabriele
        Gratton[1]
        [1]University of Illinois at Urbana-Champaign, [2]University of Missouri-Columbia

Descriptors: alcohol intoxication, attention, ERPs

Abstract: We hypothesized that acute alcohol intoxication leads to a reduction in working memory (WM) capacity. Squires et al. (1976) showed that the amplitude of P300 to the current stimulus is influenced by the stimuli presented on previous trials. The amplitude of P300 is likely to reflect an expectancy violation about the current stimulus, which is computed based on the most recent trials still in WM. This study examined the influence of acute alcohol intoxication on the P300 sequential effects. Sixty participants (30 women) were randomly assigned to three alcohol dose groups: placebo (mean task BAC = .00), moderate (mean task BAC = .04), and high dose (mean task BAC = .09). Participants completed an auditory discrimination task by responding to equiprobable high and low tones presented in random order in an oddball sequence. Participants receiving the placebo alcohol dose showed larger P300 sequential effects as a function of the mismatch with stimuli presented 2-back than with stimuli presented 1-back, suggesting the existence of a WM buffer. Under alcohol, however, the effect of stimuli presented 2-back declined significantly. Thus, acute intoxication impaired the ability to maintain information in WM (i.e., attention span), resulting in an over-dependence on the immediate context rather than on global probabilities. This is consistent with the Steele and Joseph theory of alcohol attentional myopia.

Student Social Event
Thursday, October 30
10:00 p.m.-12:00 midnight

Lizzie McNeill's Irish Pub
400 N. McClurg Court

(Located across the river — ask at the Bellstand in the Hyatt Regency Chicago's lobby for walking directions)

POSTER WITHDRAWN

Poster Session III - Saturday, November 1st

Poster Title: Toward the Development of a Real-Time, Psychophysiologically-
        Based Affect Recognizer [poster number 76]

SYMPOSIUM SPEAKER CHANGE

Symposium 13 - Saturday, November 1st, 8:30 - 10:30 am

<u>Symposium Title</u>: Gamma-band measures of neural activity: A new frontier in
        schizophrenia research
<u>Talk withdrawn</u>: Johanna Kissler, MEG gamma band activity in schizophrenia patients
        during mental arithmetic and at rest
<u>New speaker and presentation</u>: TBA

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        schizophrenia research
<u>Talk withdrawn</u>: Johanna Kissler, MEG gamma band activity in schizophrenia patients
        during mental arithmetic and at rest
<u>New speakers and presentation</u>: Brett Clementz and Casey Gilmore, Temporal
        integration of steady-state auditory stimuli in schizophrenia

<u>Abstract</u>: Schizophrenia patients exhibit difficulty in differentiating signal from noise in the auditory environment. Although this abnormality is frequently attributed to "poor sensory gating," an equally plausible hypothesis is that patients have an inflexible auditory registration system that is related to abnormally high auditory gain control. To partially evaluate the latter thesis, transient and sustained auditory evoked responses (AERs) were measured among schizophrenia patients. Auditory steady-state stimuli were used to determine how basic auditory sensory registration and ability to integrate auditory information over time are associated with schizophrenia-normal AER differences. Fifteen schizophrenia and 15 normal subjects were presented with 400 ms bursts of steady-state stimuli at 10, 20, 40, and 80 Hz while recording dense array (256-channel) EEG. Distributed source reconstructions and measures of coherence in source space were used to evaluate the sensitivity of left and right auditory cortex to low and high density auditory stimulation. There are four results of interest: (1) all subjects have increased P1/N1/P2 amplitudes with increasing steady-state burst frequency; (2) schizophrenia subjects have lower than normal P1/N1/P2 amplitudes at low (10 and 20 Hz) but not at high (80 Hz) burst frequencies; (3) schizophrenia subjects' steady-state responses take longer to return to baseline following offset of steady-state stimulation at burst frequencies above 20 Hz; and (4) they have lower steady-state magnitudes and phase synchronies than normal for 40 Hz stimuli.