

Nepthys Regatta Safety Plan

Side by Side Regatta (17th and 18th November 2017)

Overview

The Nepthys Regatta is an 800m race up-stream, from standing start. The course will comprise two buoyed lanes. The start will be at Longbridges and the finish the Cox stone.

Racing will start at 1.30pm on Friday and 10am on Saturday and continue to dusk (approximately 4pm).

Two boats will race each other at a time. Crews should boat 20mins before their race time and head straight downstream, spinning at Longbridges and awaiting further instruction from a marshal. They must be by this marshal 5 minutes before the start of their race

The circulation pattern upstream of Christ Church boathouse will be reversed. At the downstream end of Boat House Island, crews will be crossed to the towpath side by a marshal and the circulation pattern will revert to normal, as defined in OURCs' rules (see figure 1). Crews moving down river preparing to race will use a buoyed navigation channel on the city side of the river, until Christ Church boathouse, where they will cross **when instructed by a marshal** and continue down the county side until Longbridges.

Any other river traffic wishing to traverse the regatta reach during a division will be asked to wait at either the Head-of-the-River or the Isis Tavern. They will be free to move through the course during a gap in racing, keeping to the **centre** of the river. Competing crews must give way to cruisers whilst warming up and marshalling.

The regatta will be run by OULRC using the following officials:

- i. **Race Secretary** - co-ordinates racing and responsible for race safety from Race Control (based at Univ). (Dhaval Desai)
- ii. **Senior Umpire (SU)** - ensures the safe and timely start of races and oversees the race. (Jonathan Williams for Saturday, Friday Joe Hitchen)
- iii. **Incident Coordinator (IC)** – (Alexander Rowe-Jones)

The IC is to follow the Emergency Action Plan. Responsibilities to include working in close cooperation with the following people:

Injured person (if applicable) - Their welfare, liaising with the regatta medical staff, race committee, marshals and other relevant parties (e.g. EMS, family or friends of injured party, taxi) and to gather information that must be included in the incident record and possible legal reports.

Other involved persons such as witnesses and medical staff - Gather additional information that must be included in the incident record and possible legal reports.

Where applicable, to ensure the incident is duly reported to appropriate bodies/persons such as the Sports Safety Officer (David White), College (if student). British Rowing must also be notified.

iv. **Marshals** - (yellow jackets) work with race secretary and senior umpire to ensure the safe and smooth running of the event. (OULRC)

This plan details the logistics of the event and the precautions taken to ensure smooth and safe running. Precautions are made based on a “Risk Assessment” document which identifies all possible hazards and resulting risks, highlights the controls in place to reduce the risks and identifies those responsible for ensuring the controls are in place.

Entries

The regatta will be open to multiple categories of boats:

- i. Men’s open coxed eights,
- ii. Women’s open coxed eights.
- iii. Novice coxed eights.
- iv. Women’s novice coxed eights.
- v. Men’s lightweight coxed fours
- vi. Women’s lightweight coxed fours.
- vii. Men’s senior coxed fours.
- viii. Women’s senior coxed fours.
- ix. Men’s/Women’s open single sculls. *

* Small boat categories may be scratched depending on entries.

All crews except those entered in lightweight events shall represent a single Club and consist entirely of members of that Club. Members of College Boat Clubs are classified under section 1.1 of the OURCS “General Rules of Racing” (found at <http://www.ourcs.org.uk/rules/a>).

The novice categories are restricted to crews containing rowers that have never competed in a rowing event. Entries will close at 18:00 on Monday, 13th November. Payment is due on the 15th Nov at 23:59, with the scratch deadline being also the 15th Nov 23:59

OULRC and OUWLRC are keen to encourage lightweight rowing throughout the university, and are therefore running the men's and women's lightweight fours coppers events. Crews may enter as a composite of two college boat clubs. Lightweight crews will be asked to 'weigh-in' at 12:00pm on Friday, using a set of scales at Race Desk (Univ) or at Christ Church Boat House on Boat House Island. Individual crew maximum weight is 75 kg for men, or 62 kg for women. There is no requirement for an average crew weight.

The draw

The draw for the regatta will be posted on the OULRC website by Thursday 16th November, and notification will be posted on the OURCs website. Crews are responsible for checking the draw themselves at www.oulrc.org.

Kit clashes: these should be clearly indicated in writing to the race secretary as early as possible at oulsecretary@gmail.com. Where possible these will be accommodated in the draw, but this may not always be possible, especially where multiple crews are sharing the same boat, or are racing in the same category. The race committee reserves the right to not allow crews to share equipment if these clashes cannot be accommodated in the draw. Crews who are sharing equipment must still present themselves in the marshalling area in good time for their races, and failure to do so may result in them being disqualified. Competitors who choose to double up do so at their own risk, as it will not be possible to tailor the race schedule to individuals.

The course

The race will be run up-stream on the stretch of river between Longbridges and Folly Bridge. The start will be a line perpendicular to the bank, approximately 100m upstream of Longbridges house. The finish will be a line perpendicular to the river at the "Cox's stone", indicated by a semaphore "clacker" board. The approximate positions of the start and finish will be clearly marked with signs. See figure 1 for a map showing the locations of the start and finish. The two racing lanes will be separated by buoys. The navigation lane for crews moving up the course will also be marked with buoys. These buoys will be removed at the end of racing.

Circulation pattern (figure 1)

To ensure the safety of all river traffic and the smooth running of the event a strict circulation pattern will be enforced. Crews moving down river preparing to race will use a buoyed navigation channel on the city side of the river until Christ Church boathouse, where they will **cross when instructed by a marshal** and continue down on the county (towpath) side in the buoyed navigation channel to Longbridges, where they will spin in accordance to OURC's rules.

Boating

- i. When boating from rafts on the boathouse island: Crews should boat from the downstream end of boathouse island 15 mins prior to their race time (or in cases of congestion at Longbridges, whenever a marshal allows the crew to boat), with their bowball pointing downstream (left). When putting boats on the water, blades should be kept as far in as possible, so as not to obstruct the navigation channel. They should then cross over when instructed by a marshal, following the circulation pattern shown in figure 1.
- ii. When boating from the Univ rafts: Crews may boat from the downstream raft, 10 mins before their race time with the permission of a marshal, with their bowball pointing downstream (right), keeping to the towpath side of the river.
- iii. When boating from the Longbridges raft: Crew should boat 5 minutes prior to their race time, with their bowball pointing downstream (right). Crews may boat at any time the river is clear, and must, keep to the tow-path side of the river.
- iv. From Falcon Rowing Club raft and City of Oxford Rowing Club: Crews should boat 10 minutes prior to their race time (or earlier if they want to warm up, regular circulation pattern applies), with their bowball pointing upstream. Crews should row through the gut with at least 5 minutes to go before their race, and await instructions from the Top Gut marshal.

After boating, crews should make their way safely down-stream without obstructing other crews.

Warming up

Do not go race pressure above the gut. It is strongly advised to do the majority of the warm up on land, and only to boat at the recommended times above, in order to avoid congestion. Crews will not be allowed through the gut at all (unless boating from CORC or Falcon, or when queuing for racing to ease congestion)

Marshalling

Crews will race the course in pairs. The start time of each race will be posted in the draw, and it is the crews' responsibility to ensure that they have spun at Longbridges at least 5 minutes before their race time, where they will pair up for their race. Less experienced crews should make an effort to arrive in the marshalling area earlier than this to prevent any delays. Once paired, crews will be instructed to proceed to the start line, making sure to stay out of the transit lane on the towpath side. Crews must ensure they spin quickly at Longbridges, to avoid the risk of being sucked under the bridges. 2 crews will be allowed to spin at a time (in accordance with OURC's rules).

The start

Pairs of crews marshalled upstream of Longbridges will be instructed by marshals to move up towards the start. As one race sets off, the following race should be near the start line, ready to move onto the start. Crews listed first in the draw will start on the city side, crews listed second will start on the county side. At the start, crews will be placed on their stations and lined up by the senior umpire with their bows on the start line. The starting procedure will be as detailed in the BR “Rules of Racing”, section 2.4.4 (found at <http://www.britishrowing.org/sites/default/files/pages/15505/Rules%20of%20Racing%202015.pdf>). The senior umpire will introduce a stagger to make the two stations fair.

2. The race

Crews must remain in their own lanes at all times. Attempts to cut the corner of the course, or steer into another lane in any way will result in disqualification.

The finish

The winner of each race will be the crew whose bow crosses the finishing line first, at which point the finish marshal will operate the semaphore “clacker”. If a cox/coach feels there were events that unfairly affected the outcome of the race, they should inform the finish marshal by either the cox raising their hand as they cross the line, or the coach talking to the marshal. A representative of both crews may be called to Race Desk to discuss the matter further.

Crews should wind down, but not stop rowing, and proceed to the Head-of-the-River spin point. They should spin when instructed to by the marshals and return down-stream along the transit lane. Crews returning to boathouse Island should land on the upstream half of the rafts. Crews returning to Univ can cross from the top of the Island **with the permission of a marshal**, to land on the upstream raft. Crews returning to Longbridges can cross at the bottom of the Island, **with the permission of a marshal**. Crews returning to the Isis Boat House, Falcon, or City can cross at the bottom of the island **with the permission of a marshal**, and return to their boat-house using the correct circulation.

Official Warnings

Crews that disobey the circulation pattern, instructions from marshals, are late to the prerace marshalling area or are otherwise deemed to be rowing in a dangerous manner will incur an official warning. Two such warnings will lead to automatic disqualification.

Equipment

Before any crew takes to the water, its boat may be checked by a marshal to ensure that it is safe to race in (as per section 2.3.8 of the BR “Rules of Racing”). Checks will include life-jackets, bow balls, heel restraints, the integrity of any watertight compartments, coxing licenses and EA license plates. All boats must have Thames registrations of the

form 'COL001'. **It is the responsibility of the competitors to ensure their boats are safe, and any boat failing to meet the standard will be excluded.**

River Conditions

The race secretary is obliged to contact the Navigation Officer 48 hours before the event in order to discuss predicted water heights, stream flow and weather conditions. The Navigation Officer has the contact details of those manning race control (i.e. race secretaries) and their shifts so that he can contact them if he considers it necessary to take extra precautions.

Under the different flag conditions, the race will be run as follows:

- i. Green flag: crews of any experience level can race, and the courses will remain unchanged.
- ii. Blue flag: No novice coxes will be allowed. The course will be shortened (similar to the ChCh regatta short course), with the start moving to the downstream end of Boat House Island. Crews will be expected to spin well before Longbridges, approximately halfway up Greenbanks. The start marshal will assist crews on when they should spin. Note, novice crews may drift a considerable distance whilst spinning under high stream conditions – leave plenty of distance to spin.
- iii. Amber flag: novice crews may race (if coaches think their crews will be unsafe in the conditions, entry fees will be partially refunded), and no novice coxswains. The race will be shortened, with the start moving to the downstream end of Boat House Island. Crews will be expected to spin well before Longbridges, approximately halfway up Greenbanks. The start marshal will assist crews on when they should spin. (note, crews may drift a considerable distance whilst spinning under high stream conditions – leave plenty of distance to spin.
- iv. Red flag: all racing will be cancelled.

Special Measures for 2017 (to be reviewed in 2018)

TBD with regard to weather conditions present a week prior to the event and the forecast for the likely future conditions. This will be decided by consultation with, but not limited to, the Senior Umpire, the University Sports Safety Officer (David White) and the Row Sab (Oliver Hedges), and will be posted on the OULRC website at least 24 hrs in advance.

Lightning

In the event of an official sighting lightning, the guidance provided by BR will be followed. The weather will be monitored by the Race Desk and a decision on the suspension of racing will be made by the Senior Umpire in conjunction with the Race Secretary. The location of the storm will be approximated by counting the time between the thunder and the lightning and if this is 30 seconds or less, then competitors and officials will be advised to take proper shelter as soon as possible (i.e. within buildings and away from boats/trees).

High Winds

In the event that high winds cause difficulty in buoying the course without requiring racing itself to be suspended the committee may decide to either suspend racing or to conduct racing in a processional time trial format in divisions of not more than 12 boats, over the racing course. In the event that a category exceeds the 12 boat limit, the time trial will be done in multiple waves. This will ensure that there will be no non-racing crews on or around the racing course whilst racing is taking place negating the requirement for buoyed lanes. This would also require crews to use S or X status coxswains. Whilst racing, crews should keep to the coxswain's left to stick to the reverse circulation. Start and finish marshals will need to take down start and finish times to work out the speed of the racing crews.

Other River Traffic

During the Nephthys Regatta, cruisers may pass through the stretch of the river used for racing. Cruisers wishing to pass through the stretch will be asked to wait at the Head-of-the-River when going down-stream, or before the gut when going up-stream, until a break in racing.

When traversing the stretch of river between Iffley lock and Folly Bridge, cruisers will be asked to stay in the middle of the river, and crews shall give way to them. Notices will be pinned up at Iffley and Osney locks to warn river users entering this stretch of water that the race is being held.

Marshals

Marshals are all issued with high visibility yellow jackets, radios, klaxons and starting orders. In addition, marshals at crossing/spinning points will have megaphones. All marshals are from OULRC and will be fully briefed and instructed in the full procedures for the event by the SU. This meeting will be conducted at 12:15 on the Friday, outside Univ. All marshals will qualify as experienced oarsmen or coxes by OURCs standards; in addition, the majority will have acted as stewards or marshals for Torpids and Summer Eights. All marshals will be given details of the circulation pattern (as detailed) and starting / finishing procedure as well as a list of contact numbers and course of action to take in an emergency (as below).

- Marshals are responsible for ensuring that all race traffic is in the right place and knows where it is going, and to advise other river traffic on navigating the reach.
- Between sets of races, the SU will radio all marshals to confirm the course is clear of non-race traffic. Marshals must notify the SU immediately if non-race traffic enters the course area during times when racing is scheduled.
- During the race itself they are observers ensuring a safe and fair contest.

Positioning of Marshals

There will be 11 marshals:

1. **Head marshal** - alert on-coming river traffic that a regatta is in progress and over- see spinning to bow side after the finish. They will also make sure that non-regatta river traffic moors at the Head between divisions. **Megaphone**.
2. **Finish marshal** - determines the order in which the crews cross the finish line and sounds the finishing clacker when the bow of the first crew passes the finish. They will also ensure that crews go well past the finish before starting their spin. They must make a note of the winner, and communicate the results of races to race desk when asked.
3. **Boathouse marshals 1 & 2** -responsible for checking life-jackets, coxing licenses, bow balls, heel restraints, the integrity of any watertight compartments, and lights (if overcast or deemed necessary by Race Secretary) and EA license plates of crews boating from the Boathouse Island. Top BH marshal – crosses crews returning to Univ raft when safe and instructed to do so by the SU.
4. **Univ marshal** - responsible for checking life-jackets, bow balls, heel restraints, the integrity of watertight any compartments and coxing licenses, also lights (if overcast or deemed necessary by Race Secretary) and EA license plates of crews boating from Univ. Also checks that course is clear before racing and reports to SU. Advises bystanders to keep clear of towpath.
5. **Crossing marshal** - stationed at ChCh boathouse, crosses crews from the Island to head down to the start, and crews returning to Longbridges or below the gut, when safe and on instruction of the SU. **Megaphone**
6. **Green Bank marshal** - ensure that racing crews are in their lanes and watch over safety of race. Encourage crews to move downstream when transiting to the start.
7. **Longbridges marshal** - responsible for checking life-jackets, coxing licenses, bow balls, heel restraints and the integrity of any watertight compartments, also lights (if overcast or deemed necessary by Race Secretary) and EA license plates of crews boating from Longbridges. Also ensures crews spin safely at Longbridges.
8. **Start marshal** - to move paired crews from the marshalling area towards the start line as the previous race is started. (SU may prefer not to have one). **Megaphone**
9. **Top Gut marshal** - Holds river traffic on the Longbridges mooring point until given permission to proceed up the course. **Megaphone**
10. **Donny Bridge marshal** – To inform racedesk about other river traffic, and relay to them that they need to moor by the Top Gut marshal. **Megaphone**

Please refer to Figure 1 for the Marshals' positions along the river.

In addition to this, the following members of the race organising team will be present:

1. **Senior Umpire** - they will decide the stagger according to conditions each day and give the starting commands “Attention, Go!” They may award a row-over to crews whose opponents are late without good reason. N.B. No false starts will be permitted – crews false-starting will be given an official warning, and may be disqualified at the discretion of the SU. **Megaphone**
2. **Safety Launch driver** - transports first-aiders to sites of emergency. Based at Longbridges boat house.
3. **Race Secretary** - responsible for co-ordinating racing, and responsible for race safety. Located at Race Control at Longbridges boat house. Also responsible for updating the results board, which will be at race desk.

In addition to this, the EA safety launch (light blue with a flag on the back) may be present on the course. They will be given a radio, and will be in communication with the SU. Marshals are requested not to communicate with this boat unless necessary.

The position of the marshals is shown on a map of the Isis in figure 1. In the event of any collision or obstacle (i.e. non-competition craft failing to respond and on the course) that blocks the racing line to racing crews, or if anybody (competitors or bystanders) falls in the river, attending marshals sound the safety klaxons and radio to all the others to do the same. As crews hear the klaxons they stop racing immediately.

- If someone is ejected from a boat (e.g. a crab), that boat is deemed to have lost.
- If a crew moves into the wrong lane causing an obstruction or collision, that boat is deemed to have lost
- If an obstruction is on the course, or someone not involved in racing falls into the river, the crew in the lead when the klaxon is sounded is deemed to have won.

In any event, once the obstruction is cleared the SU will contact the marshals over the radio, and crews on the course will be asked to move to the Head and spin as normal, remaining in their lanes.

In the event of there being a shortage of marshals the minimum number required for the entire course and spinning areas to be covered by a line of sight is 10 (in the case of blue or amber flag, this number will be 11 (the start marshal)).

These marshals are:

1. **Head marshal**
2. **Finish marshal**
3. **Boathouse marshals A + B**
4. **Univ marshal**
5. **Crossing marshal**
6. **Green Bank marshal**
7. **Longbridges marshal**
8. **Top Gut marshal**

9. Donny Bridge marshal

If the number of marshals present drops below this minimum then **there will be no racing.**

Safety Boats

Two Safety Launches will be used during the event. The launches are equipped and driven at all times by RYA qualified personnel. One of the launches will act as a safety boat for the quick transport of the First Aid team and stay docked at Univ, while the other will be used to remove debris from the racing line. The launches will not be used either to umpire races or to transport bystanders/rowers across the river. Participants will be advised that there is no ferry. They will be stationed at Univ. They will not carry a first-aider unless needed in the event of an accident.

Competitor Safety

All competitors (rowers and coxes) must have passed a swim-test before they are allowed to compete. You will not be allowed to enter if you are unable to swim, rowers will not be allowed to row in a lifejacket. Furthermore, those competing in the single scull event must have completed a capsize test. All boats will be checked for the following before being allowed on the water: Secure bowball, properly fitted heel restraints, closed buoyancy hatches where fitted, in accordance with the ARA "RowSafe" document, and "Rules of Racing" 2-3-8. Coxswains will be briefed on the safety procedure regarding klaxons, and other emergencies, via the "Notes for competitors" document on the OULRC website. Any boat not fulfilling the required safety standards will be immediately disqualified and reported to the Area Safety Officer. Participating clubs will be directed to the online safety plan and Risk Assessment, as well as the circulation patterns in the 'Notes for competitors' document. All crews boating after 14:30 will need to have white lights fitted to their stern and bows, and clearly visible from 360°.

First Aid

First Aid will be provided by qualified professionals (Epione Medical Services), and will be available at Longbridges Boathouse, in addition to a unit in the safety boat. Safety on the river is the primary concern of the marshals. First Aid and safety information will be posted on the regatta website, and included in all competitors instructions.

Emergency Access

The emergency services, in particular the Ambulance service, will be advised as to where the Emergency Access points are. For incidents upstream of Longbridges, they should go to ChristChurch and for incidents downstream of Longbridges they should go to Falcon.

Falcon Rowing & Canoe Club (by Donnington Bridge), the number to call is 07792 007876.

Christ Church Meadows for Boathouse Island incidents, via the north-west corner by Schools Quad. Permission should, and will be, requested from Christ Church College prior to the event. The Lodge will need to be contacted for the barriers to the Meadows to be raised, they can be contacted on 01865 276150.

Associates

Up to 2 associates will be allowed in an 8+, and 1 associate in 4+ (this does not include coxes). Whether or not the associates will be allowed to race will be at the discretion of the race secretary.

Public Safety

Due to the low number of bystanders at this type of event, the handling of spectator safety will rest with the Marshals. All members of the public have a right to use the towpath as a public right-of-way and OULRC will not impede this in any way. Marshals will be briefed to report to the SU and Race Desk if they believe that the safety of members of the public may be compromised, particularly in the build-up of spectators along the towpath. If for some reason a member of the public ends up in the water and is in imminent danger, the nearest marshal is to be made aware immediately and the klaxon is to be sounded to bring racing to an immediate halt.

In the event of a serious incident, the Emergency Action Plan is to be followed.

Notices about the Regatta will be placed at entry points on the Isis for the benefit of water and towpath users. Further signs warning about cyclists will be placed along the towpath. **ALL TOW PATH USERS, IN PARTICULAR BANK RIDERS, NEED TO BE AWARE OF THEIR SURROUNDING ENVIRONMENT.** All bikes used by Bank Riders should be suitably equipped with bells and also lights. Bank riders will also be advised that they should not undertake any filming whilst cycling.

Numbers of cyclists accompanying divisions will be strictly controlled. One coach only shall accompany each boat, with sanctions being applied to clubs that disobey this rule. Cyclists must not interfere with the public enjoyment of the public right of way.

Occasional permission may be granted for an additional cyclist to accompany a crew by a Race Committee member or the SU – for example to assist in the training of a novice cox.

In the event of unsafe or disruptive behaviour by spectators, Marshals will report to the Race Desk, who may postpone the start of a division or contact the Police as appropriate.

First aid will be provided on the towpath side, and may be carried by the safety launch in emergency. First Aid personnel will not be prevented from attending to members of the public. The safety launch will not be used to take people from one side of the river to the other. Participants will be advised that there is no ferry.

Cyclists: There will be a limit of one cyclist permitted to accompany each racing crew. Marshals shall be responsible for reporting unsafe behaviour of accompanying cyclists. Captains will be made aware that they are responsible for the conduct of their coaches. Dangerous, thoughtless or imprudent behaviour by cyclists will lead to the crew they are accompanying being punished with time penalties or, most likely, disqualification. Cyclists should make sure that their bikes are in good repair, particularly their brakes, and having a bell is highly recommended. Cyclists must give way to pedestrians and are solely responsible for any accidents they cause.

Terrorism/unlawful actions involving firearms, knives, bomb threat:

Firearms/Knives Incidents – All parties should **run** away, warning others, and **hide** from individual(s) who may be using firearms/knives against other people. Nobody should confront the persons carrying out such acts. Once hidden, turn radios/phones to silent and safe to do so, **call** 999. If it is not possible to hide, keep heading away. Incident Coordinator to be made aware asap.

Bomb Threats (whether suspicious object found or threat received via text, phone or social media). Nobody should touch or move object. Move to at least 100m away and behind solid material if possible. Don't use mobile phones or radios near to object. Implement Emergency Action Plan. Incident Controller to be sole point of contact with Police and Security Services.

Lockdown/Invacuation – Secure building including all external doors and windows. Noone to leave building until to do so by Police or Security Services. Implement Emergency Action Plan, including informing Incident Controller who should be sole point of contact with EMS unless another person in the building(s) affected by any lockdown.

Alcohol: unlike Summer Eights or Torpids, there is not a tradition and history of drinking at this type of event as it is predominantly a training event.

Marshals will be stationed around the boathouses to keep bystanders away from the river and manage any seemingly dangerous behaviour. Clubs who are deemed to be acting dangerously can be disqualified.

By no means will marshals or any race officials (including the First Aid cover) be allowed to consume alcohol. Excepting casualties, no one under the influence of alcohol will be allowed on the safety launch.

Communications

Two-way radios are used for communication between race control and the marshals and medical personnel. These are distributed as follows:

18 radios for the use of the race committee, including one each for the EA, the Iffley Lock Keeper, the safety boat, the First Aid unit, race control and the Senior Umpire, with the rest for the use of remaining marshals.

In addition to radio communication, we will have the use of some mobile phones held by: race control, the Senior Umpire and First Aid. The Iffley lock keeper also has a land line (01865 777277). All marshals are asked to bring their own mobile phones in case of emergency communication. A list of mobile numbers of all marshals will be held at race control.

Prizes

We are using a Victor Ludorum system, with a trophy for the overall winner. We are using the scoring system as follows:

- Winning a regular race (Heats + QF) = 1 points
- Winning a semi-final = 2 points
- Winning the final = 3

The college with the highest **overall** score over all categories will win the trophy (which we will engrave).

Figure 1.

